

UNCITRAL

Legal Guide on Drawing Up International Contracts for the Construction of Industrial Works

Prepared by
the United Nations Commission on International Trade Law
(UNCITRAL)



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Foreword

This *Guide* was drafted within the Working Group on the New International Economic Order of the United Nations Commission on International Trade Law (UNCITRAL), which is composed of all 36 member States of UNCITRAL. Representatives of many other States and international organizations attended sessions of the Working Group as observers and participated actively in the work on the *Guide*. Mr. Leif Sevón of Finland served as chairman of all sessions of the Working Group devoted to the drafting of the *Guide*. In drafting chapters for consideration by the Working Group, the Secretariat consulted with practitioners and other experts in the field of international works contracts. In addition, it consulted numerous sources, including publications, articles and other textual materials, as well as model forms of contract, general conditions of contract and actual contracts between parties. Such sources are too numerous to be able to acknowledge them individually; however, recognition is hereby given to their contribution in the preparation of the *Guide*.

After being approved by the Working Group, the *Guide* was finalized and adopted by UNCITRAL at its twentieth session in August 1987 by the following resolution:

"The United Nations Commission on International Trade Law,

"Recalling its mandate under General Assembly resolution 2205 (XXI) of 17 December 1966 to further the progressive harmonization and unification of the law of international trade, and in that respect to bear in mind the interests of all peoples, and in particular those of developing countries, in the extensive development of international trade,

"Taking into consideration the resolutions adopted by the General Assembly on economic development and the establishment of the new international economic order,

"Considering that legally sound, balanced and equitable international contracts for the construction of industrial works are important for all countries, and in particular for developing countries,

"Being of the opinion that a legal guide on drawing up international contracts for the construction of industrial works, identifying the legal issues to be dealt with in such contracts and suggesting solutions of those issues, will be helpful to all parties, in particular those from developing countries, in concluding such contracts,

"1. Adopts the UNCITRAL Legal Guide on Drawing Up International Contracts for the Construction of Industrial Works;

"2. Invites the General Assembly to recommend the use of the Legal Guide by persons involved in drawing up international contracts for the construction of industrial works;

"3. *Requests* the Secretary-General to take effective measures for the widespread distribution and promotion of the use of the Legal Guide."*

Readers may wish to communicate to the Secretariat, at the address below, their comments on the use of the *Guide*, and suggestions as to matters to be taken into consideration when the *Guide* is reissued at an appropriate time in the future.

UNCITRAL Secretariat
Vienna International Centre
P. O. Box 500
A-1400 Vienna, Austria

*Report of the United Nations Commission on International Trade Law on the work of its twentieth session, *Official Records of the General Assembly, Forty-second Session, Supplement No. 17* (A/42/17), para. 315.

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Introduction

A. Origin, purpose and approach of the *Guide*

1. In 1974 and 1975, the United Nations General Assembly adopted a number of resolutions dealing with economic development and the establishment of a new international economic order.¹ As one of the organs of the United Nations, UNCITRAL was called upon by the General Assembly to take account of the relevant provisions of those resolutions. It responded by including in its programme of work the topic of the legal implications of the new international economic order,² and considered how, having regard to its special expertise, and within the context of its mandate, it could most effectively advance the objectives set forth in the General Assembly resolutions. In doing so, it also took into account a recommendation of the Asian-African Legal Consultative Committee (AALCC) that the Commission should deal with the topic.³

2. To assist it in defining the nature and scope of possible work in this area, in 1978 the Commission established a Working Group on the New International Economic Order and charged it with the task of making recommendations as to specific topics which could appropriately form part of the programme of work of the Commission.⁴ The Working Group reported to the Commission its conclusion that a study of contractual provisions commonly occurring in international industrial development contracts would be of special importance to developing countries, in view of the role of industrialization in the process of economic development.⁵ Based upon the discussions and conclusions of the Working Group, the Commission decided in 1980 to accord priority to work related to contracts in the field of industrial development. In 1981 it instructed the Working Group to prepare a *Legal Guide on Drawing up International Contracts for the Construction of Industrial Works*.⁶

3. Contracts for the construction of industrial works are typically of great complexity, with respect both to the technical aspects of the construction and to the legal relationships between the parties. The obligations to be performed by contractors under these contracts normally extend over a relatively long period of time, often several years. In these and other ways, contracts for the construction of industrial works differ in important respects from traditional contracts for the sale of goods or the supply of services. Consequently, rules of law drafted to govern sales or services contracts may not settle in an appropriate manner many issues arising in contracts for the construction of industrial works. It may be desirable or advisable for the parties to settle these issues through contract provisions.

4. The preparation of the *Guide* was largely motivated by an awareness that the complexities and technical nature of this field often make it difficult for purchasers of industrial works, particularly those from developing countries, to acquire the necessary information and expertise required to draw up

appropriate contracts. The *Guide* has therefore been designed to be of particular benefit to those purchasers, while seeking at the same time to take account of the legitimate interests of contractors.

5. The *Guide* seeks to assist parties in negotiating and drawing up international contracts for the construction of industrial works by identifying the legal issues involved in those contracts, discussing possible approaches to the solution of the issues, and, where appropriate, suggesting solutions which the parties may wish to incorporate in their contract. The discussion in the *Guide* and the suggested solutions are written in the light of the differences between the various legal systems in the world. It is hoped that one result of the *Guide* will be to promote the development of an international common understanding as to the identification and resolution of issues arising in connection with those contracts.

6. As conceived in the *Guide*, an industrial works is an installation which incorporates one or more major pieces of equipment and a technological process to produce an output. Examples of industrial works include petrochemical plants, fertilizer plants and hydroelectric plants. The *Guide* deals with contracts in which the contractor assumes the obligation to supply to the purchaser equipment and materials to be incorporated in the works, and either to install the equipment or to supervise such installation by others. For brevity, these contracts are referred to in the *Guide* as "works contracts". In addition to the obligations just mentioned, which are the essence of a works contract, a contractor often assumes other important obligations, such as the design of the works, the transfer of technology, and the training of the purchaser's personnel. Works contracts may therefore be distinguished from other types of contracts from which one or more of the elements mentioned above are absent, for example, contracts exclusively for building or for civil engineering.

7. The term "works contract" is used in the *Guide* merely to indicate the type of contract to which the discussion in the *Guide* is directed, rather than to delimit precisely the scope of application of the *Guide*. Although certain parts of the discussion in the *Guide* may be irrelevant to or inappropriate for contracts other than works contracts (for example, the discussion of performance tests in chapter XII, "Inspections and tests during manufacture and construction", may be irrelevant for contracts exclusively for building), persons involved in the negotiation and drafting of contracts other than works contracts may also derive some assistance from the *Guide*.

8. The *Guide* has been designed to be of use to persons involved at various levels in negotiating and drawing up works contracts. It is intended for use by lawyers representing the parties, as well as non-legal staff of and advisers to the parties (e.g., engineers) who participate in the negotiation and drawing up of the contracts. The *Guide* is also intended to be of assistance to persons who have overall managerial responsibility for the conclusion of works contracts, and who require a broad awareness of the structure of those contracts and the principal legal issues to be covered by them. Such persons may include, for example, high-level officials of a Government ministry under the auspices of which the works is being constructed. It is emphasized, however, that the *Guide* should not be regarded by the parties as a substitute for obtaining legal and technical advice and services from competent professional advisers.

9. The *Guide* does not have an independent juridical status; it is intended merely to assist parties in negotiating and drafting their contract. The various.

solutions to issues discussed in the *Guide* will not govern the relationship between the parties unless they expressly agree upon such solutions and provide for them in the contract, or unless the solutions result from legal rules under the applicable system of law. In addition, the *Guide* is intended only to assist the parties in negotiating and drafting their contract; it is not intended to be used for interpreting contracts entered into before or after its publication.

B. Arrangement of the *Guide*

10. The *Guide* is arranged in two parts. Part one deals with certain matters arising prior to the time when the contract is drawn up. These include the identification of the project and its parameters through pre-contract studies (chapter I); the various contracting approaches which the parties may adopt (chapter II); the possible procedures for concluding the contract (i.e., tendering, or negotiation without prior tendering), and the form and validity of the contract (chapter III). The discussion of these subjects has two aims: to direct the attention of the parties to important matters which they should consider prior to commencing to negotiate and draw up a works contract, and to provide a setting for the discussion of the legal issues involved in the contract.

11. Particular notice may be taken of the discussion in chapter II, "Choice of contracting approach". The settlement of certain issues in the contract may depend upon the contracting approach which is adopted by the parties. Throughout the *Guide*, whenever appropriate, the discussion points out that different situations or solutions may apply under different contracting approaches.

12. Part two of the *Guide* deals with the drawing up of specific provisions of a works contract. It discusses the issues to be addressed in those provisions and in many cases suggests approaches to the treatment of those issues (see paragraph 16, below). Part two is thus the core of the *Guide*. Each chapter in part two deals with a particular issue which may be addressed in a works contract. To the extent possible, the chapters have been arranged in the order in which the issues dealt with in those chapters are frequently addressed in works contracts.

13. An analytical index is included at the end of the *Guide*. This, in addition to serving the usual functions of an index, has been designed in particular to enable the reader to locate the meanings of terminology used in the *Guide*. Where terms are expressly defined in chapters of the *Guide*, the index refers the reader to those definitions. In some cases, however, terms do not lend themselves to concise definitions; rather, the significance and scope of the terms must be gained from the entire chapters in which they are discussed. In those cases, the reader will be assisted by the index in locating the various aspects of the discussions relating to the terms.

C. Chapter summaries

14. Each chapter of the *Guide* is preceded by a summary. The summaries are designed to serve the needs of non-legal management or other personnel who need to be aware of the principal issues covered by a particular type of contract

clause, but who do not require a discussion of the issues in the depth or detail contained in the main text of a chapter. Those readers might obtain information which they require about the settlement of issues arising in the contract as a whole or in particular types of clauses by reading the summaries alone. To assist such readers who find that they would like further information on particular points, cross-references are provided to paragraphs in the main text of the chapter where points referred to in the summary are discussed. Persons directly involved in drawing up works contracts, for whom the main text of each chapter is principally designed, might find that reading the summaries provides a useful overview of the subject-matter and issues covered by each chapter. They might also use the summaries as a check-list of issues to be addressed in negotiating and drawing up contractual provisions.

D. "General remarks"

15. The main text of each chapter begins with a section entitled "General remarks". This is intended to serve as an introduction to the subject-matter of the chapter, and to cover certain matters which are applicable to the chapter as a whole so as to avoid repeating them in each section of the chapter where they are relevant. In some cases, the section also deals with points which do not easily fit elsewhere within the structure of the chapter. The section often refers readers to the other chapters where related issues are discussed.

E. Recommendations made in the *Guide*

16. Where appropriate, the *Guide* contains suggestions as to ways in which certain issues in a works contract might be settled. Three levels of suggestion are used. The highest level is indicated by a statement to the effect that the parties "should" take a particular course of action. It is used only when that course of action is a logical necessity or is legally mandated. This level is used sparingly in the *Guide*. An intermediate level is used when it is "advisable" or "desirable", but not logically or legally required, that the parties adopt a particular course of action. A formulation such as "the parties may wish to provide", "the parties may wish to consider", or the contract "might" contain a particular provision, is used for the lowest level of suggestion. Occasionally, the wording used to denote a particular level of suggestion is, for editorial reasons, varied somewhat from that just indicated; however, it should be clear from that wording which level is intended.

F. Illustrative provisions

17. Some chapters contain one or more "illustrative provisions" set forth in footnotes. They are included in order to make issues discussed in the text of a chapter easier to understand. They also serve to illustrate how certain solutions discussed in the text might be structured, particularly those that are complex or may otherwise present difficulties in drafting. It is emphasized, however, that illustrative provisions should not necessarily be regarded as models of provisions that should be included in particular contracts. The precise content of a clause and language to be used in it may vary with each contract. In

addition, there is usually more than one possible solution to an issue, even though only one of those possible solutions is presented in an illustrative provision. The illustrative provisions have been designed to fit within the overall scheme followed and approaches taken in the *Guide*. It is therefore important that parties who draft a provision for their contract based upon an illustrative provision carefully consider whether the provision fits harmoniously within their own contract. In general, illustrative provisions have not been included where an understanding of an issue and guidance to drafting is clearly obtainable from the text of the chapter, or where a provision dealing with an issue cannot be drafted in isolation from the particular contract in which it is to appear.

Footnotes to Introduction

¹See Charter of Economic Rights and Duties of States, General Assembly resolution 3281 (XXIX), *Official Records of the General Assembly, Twenty-ninth Session, Supplement No. 31* (A/9631); also, Resolutions adopted by the General Assembly during its sixth special session, *Official Records of the General Assembly, Sixth Special Session, Supplement No. 1* (A/9559); Resolutions adopted by the General Assembly during its seventh special session, *Official Records of the General Assembly, Seventh Special Session, Supplement No. 1* (A/10301).

²Report of the United Nations Commission on International Trade Law on the work of its eleventh session, *Official Records of the General Assembly, Thirty-third Session, Supplement No. 17* (A/33/17), paras. 67(c)(vi), 68, 69 (*Yearbook of the United Nations Commission on International Trade Law* (hereinafter referred to as *UNCITRAL Yearbook*), Volume IX: 1978, Part One, II, A, paras. 67(c)(vi), 68, 69 (United Nations publication, Sales No. E.80.V.8)).

³This recommendation is set forth in Recommendations of the Asian-African Legal Consultative Committee: note by the Secretary-General, A/CN.9/155, Annex (*UNCITRAL Yearbook*, Volume IX: 1978, Part Two, IV, B); see, also, *Legal Implications of the New International Economic Order: Note by the Secretariat*, A/CN.9/194 (*UNCITRAL Yearbook*, Volume XI: 1980, Part Two, V, D (United Nations publication, Sales No. E.81.V.8)).

⁴Report of the United Nations Commission on International Trade Law on the work of its eleventh session, fn. 3, above, para. 71; Report of the United Nations Commission on International Trade Law on the work of its twelfth session, *Official Records of the General Assembly, Thirty-fourth Session, Supplement No. 17* (A/34/17), para. 100 (*UNCITRAL Yearbook*, Volume X: 1979, Part One, II, A, para. 100 (United Nations publication, Sales No. E.81.V.2)).

⁵Report of the Working Group on the New International Economic Order on the work of its session, A/CN.9/176, paras. 31 and 32 (*UNCITRAL Yearbook*, Volume XI: 1980, Part Two, V, A, paras. 31 and 32).

⁶Report of the United Nations Commission on International Trade Law on the work of its fourteenth session *Official Records of the General Assembly, Thirty-sixth Session, Supplement No. 17* (A/36/17), para. 84 (*UNCITRAL Yearbook*, Volume XII: 1981, Part One, A, para. 84 (United Nations publication, Sales No. E.82.V.6)).

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Part One

Chapter I. Pre-contract studies

SUMMARY

Pre-contract studies assist the purchaser in deciding whether to proceed with an industrial works project and in determining the nature and scope of the works. They are in most cases carried out by or on behalf of the purchaser (paragraphs 1 to 5).

Pre-contract studies may include opportunity studies (paragraph 6), preliminary feasibility studies (paragraphs 7 and 8), feasibility studies (paragraphs 9 to 11) and detailed studies (paragraph 12).

If the purchaser does not have within his own staff the expertise necessary to perform the pre-contract studies, he may wish to consider engaging an outside consulting firm in which he has confidence. The consulting firm may be selected by means of selection procedures designed to promote competition among prospective consulting firms (paragraph 13).

As a general proposition, the pre-contract studies should not be conducted by a firm which may be engaged as a contractor to construct the works, due to the potential of a conflict of interest; although in some highly specialized fields it may be necessary for the studies to be conducted by a potential contractor. However, it may be acceptable to the purchaser for the firm which conducted the pre-contract studies merely to supervise the construction of the works by other firms (paragraphs 14 and 15).

On the other hand, in some cases it may be advantageous to the purchaser for the firm which performs the pre-contract studies to be engaged subsequently to supply the design or to serve as the consulting engineer in connection with the construction. However, the purchaser may wish to consider the possibility of a conflict of interest in that case (paragraph 16).

A. General remarks

1. A purchaser contemplating investment in an industrial works will have to acquire and analyse a large amount of technical, commercial, financial and other information in order to be able to decide whether to proceed with the investment, and to determine the nature and scope of the works. That information is acquired and analysed in the context of one or more studies, referred to in the *Guide* as "pre-contract studies".¹ Pre-contract studies are in most cases carried out by or on behalf of the purchaser. Sometimes, however, they are carried out by the contractor (see paragraph 15, below). In some countries, particularly those in the process of industrialization, pre-contract studies may also constitute an element of the country's overall planning process by enabling the authorities to compare and evaluate various potential industrial projects in order to determine national investment priorities.

2. Pre-contract studies are not only essential decision-making tools for the purchaser, they are often required by lending institutions which provide financing for the construction of industrial works. Those institutions sometimes even participate in or carry out pre-contract studies themselves.

3. A party who performs or procures pre-contract studies should make available to the other party information derived from those studies. The works contract may deal with the responsibility of the party who makes the information available for the accuracy and sufficiency of that information. Contractual provisions in this regard are discussed in chapter VII, "Price and payment conditions", paragraph 43.

4. Purchasers may note that it is not necessarily desirable to reduce costs by restricting the scope of pre-contract studies. To do so could result in insufficient or misleading information, and contribute to an unwise investment decision, or necessitate varying the design of the works or construction methods during construction in order to conform to circumstances which were not known or were erroneously forecast. This could ultimately result in greater cost to the purchaser.

5. Pre-contract studies are often carried out in stages, the results of the study in one stage providing the basis for a decision whether to proceed to the study in the next stage and serving as the foundation for that study. The nature and sequence of those studies are typically as set forth in the following paragraphs.

B. Opportunity studies

6. Opportunity studies are often carried out by or on behalf of countries in the process of industrialization, and are a valuable source of information to purchasers. They are designed to identify potential investment opportunities within the country to be pursued either by the Government itself or to be proposed to potential independent investors in investment promotion programmes. The studies may explore, for example, various possibilities for constructing works to manufacture a particular product which the Government is interested in producing locally, and the potential market for the product. They may explore possibilities for constructing works to make use of locally available resources or to promote industrialization in a particular region. Opportunity studies usually deal only with the principal economic and technical aspects of various potential investment opportunities, without attempting to define the parameters of a particular project in detail. Certain international organizations will assist countries in the performance or procurement of opportunity studies; in some countries they are performed by governmental organs.

C. Preliminary feasibility studies

7. When the purchaser has begun to focus upon a particular project, he will engage in studies aimed at ascertaining the technical and financial viability of the project. Full-scale feasibility studies (discussed in paragraphs 9 to 11, below) are often costly; in some cases, therefore, the purchaser may wish to engage in a preliminary feasibility study in order to determine whether a full-scale feasibility study is warranted.

8. The preliminary feasibility study should enable the purchaser to determine on a general basis the viability of the project. It will often investigate many of the same matters and address many of the same issues as does the feasibility study (see paragraph 10, below), although in less detail. The preliminary feasibility study will often enable the purchaser to evaluate various options concerning the scope and the manner of execution of the project. It may also point out particular matters requiring more detailed investigation and help to determine the nature of investigations and tests to be conducted within the context of the feasibility study. On the basis of the findings of the preliminary feasibility study the purchaser might approach potential sources of financing for the project. The purchaser may wish to do so at that stage, and prior to the full-scale feasibility study, because some lenders wish to have their terms of reference incorporated in the feasibility study, and sometimes to have their own experts involved in that study.

D. Feasibility studies

9. The feasibility study should be designed so as to provide the purchaser with the information which he needs in order to decide whether to invest in the project and, if he decides to do so, to settle upon the parameters of the works to be constructed (e.g., its size, location, cost, production capacity, and perhaps the possible technologies which may be used), the source and method of financing, the contracting approach to be used (see chapter II, "Choice of contracting approach"), and the method of obtaining offers from contractors (e.g., by tender or by negotiation: see chapter III, "Selection of contractor and conclusion of contract"). The lending institution which is to finance the construction of the works may collaborate in the making of these decisions on the basis of the feasibility study.

10. The exact scope and contents of the feasibility study will depend on the project concerned. However, feasibility studies typically cover the following matters and issues: the potential market size and potential market price for the product to be produced by the works; the capacity of the works; raw materials, power and other inputs for the manufacturing process; the location and site of the works; transport and other elements of infrastructure; civil, mechanical and electrical engineering; technology; organization of the works and overhead costs; kinds and amount of manpower needed to construct the works; and legal constraints (e.g., land-use requirements and environmental controls). It is advisable for the feasibility study to contain an analysis of the financial viability of the works, including the total investment required, possibilities concerning the financing of construction and the commercial profitability of the works. It may also evaluate the project in relation to the national economy. The feasibility study will usually also include an investigation of the site to determine its topography and geological characteristics and climatic conditions.

11. Feasibility studies typically assume the existence of certain situations or facts, and therefore incorporate an element of uncertainty. The purchaser should be able to ascertain from the study the assumptions which have been made and the extent of the uncertainty. Sometimes feasibility studies include "sensitivity studies", which vary some of the assumptions on which the feasibility study is based to determine the effect of those changes in assumptions on the feasibility of the project.

E. Detailed studies

12. Once the feasibility of a project has been confirmed, a detailed study is sometimes conducted to provide more refined and detailed information needed for the design of the works and to settle other aspects of the project (e.g., the nature and number of contracts to be entered into, and the construction methods to be used).

F. Specialists performing pre-contract studies

13. In many cases, it may be desirable for pre-contract studies to be made by a team of specialists in various relevant disciplines, e.g., economists, financial experts, geologists, engineers and industrial management experts. The purchaser may wish to consider whether there exists within his own staff the expertise necessary to perform the studies. If not, he may wish to consider engaging an outside consulting firm in which he has confidence to perform the studies. In choosing such a firm, it would be desirable for the purchaser to consider not only the price to be charged by it (bearing in mind that the least expensive firm is not always the best choice), but also such other factors as its reputation and expertise. The purchaser may wish to consider selecting a consulting firm by means of selection procedures designed to promote competition among prospective consulting firms with respect to the services to be performed and the price to be charged. A purchaser who is unable to identify a suitable firm or firms may obtain assistance in doing so from sources such as lending institutions, international organizations and professional bodies.²

14. The purchaser may wish to consider whether the pre-contract studies should be conducted by a firm which is eligible to be engaged subsequently as the contractor under the works contract, or either to perform limited services, such as supplying the design for the works or serving as the consulting engineer in connection with the construction (see chapter X, "Consulting engineer"). The purchaser may view these two possibilities differently.

15. As a general proposition, the pre-contract studies should not be conducted by a firm which may be engaged as a contractor to construct the works. Such a firm might be tempted to produce studies which are more encouraging to the purchaser to proceed with the project than is justified. Some lending institutions will not allow the entity which conducted the pre-contract studies to be engaged subsequently to construct the works. However, in some highly specialized fields, it may be necessary for the pre-contract studies to be conducted by a potential contractor, since there may exist no independent consultants with the required expertise in the field to perform the studies. It may be noted that while the pre-contract studies should not be conducted by a firm which may be engaged as a contractor to construct the works, it may be acceptable to the purchaser for the firm which conducted the pre-contract studies merely to supervise the construction of the works by other firms.

16. On the other hand, in some cases, it may be advantageous to the purchaser for the firm which performed the pre-contract studies to be engaged subsequently to supply the design or to serve as the consulting engineer. When these functions are performed by different firms, the supplier of the design or the consulting engineer may have to spend time examining the pre-contract

studies in detail, and perhaps even to duplicate some investigations made for the studies, resulting in higher cost to the purchaser. However, in considering whether the same firm should be eligible to serve in both capacities, the purchaser may wish to consider the possibility of a conflict of interest similar to that discussed in paragraph 15, above.

Footnotes to chapter I

¹For a discussion of the content and methodology of pre-contract studies, see United Nations Industrial Development Organization, *Manual for the Preparation of Industrial Feasibility Studies* (United Nations publication, Sales No. E.78.II.B.5).

²See United Nations Industrial Development Organization, *Manual on the Use of Consultants in Developing Countries* (United Nations publication, Sales No. E.72.II.B.10).

Chapter II. Choice of contracting approach

SUMMARY

A purchaser who intends to contract for the construction of industrial works has a choice of entering into a single contract with a single enterprise or a group of enterprises, which will be responsible for performing all obligations needed for the completion of the construction, or dividing the obligations among several parties entering into an individual contract with each party. In addition, the purchaser may construct a portion of the works. Which technique he adopts may depend on several factors (e.g., whether the technology to be used in the works is the exclusive property of a single supplier, or whether the purchaser has the capability to co-ordinate the performances of several parties). Within each of these techniques, there are different possible approaches to contracting (paragraphs 1 to 3).

The contractual approach whereby a single contractor is engaged to perform all obligations needed for the completion of the entire works is referred to in the *Guide* as the "turnkey contract approach". Where competitive tenders to construct the works are solicited from potential turnkey contractors, each tender will be based on the individual design of the tendering contractor, and the purchaser will be able to choose the design which is most responsive to his requirements. However, comparison of the different designs may sometimes be difficult. A turnkey contractor may sometimes be motivated more by a desire to offer an attractive price than by the need to ensure the durability, reliability and ease of maintenance of the works. On the other hand he usually has no incentive to over-design the works (paragraphs 4 to 6).

In some cases, a single contractor, in addition to assuming the obligations of a turnkey contractor, may undertake to ensure that after the works is completed it can be operated and achieve agreed production targets by the purchaser's own personnel, using raw materials and other inputs specified in the contract. This approach is referred to in this *Guide* as the "product-in-hand contract approach" (paragraph 7).

Since a single contractor bears a high degree of risk in performing all the obligations needed for the completion of the works, and must incur costs to guard against this risk, the total price of the works may be lower if several contractors are engaged than if a single contractor is engaged (paragraph 8).

The construction of a large-scale industrial works may be beyond the technical or financial means of a single enterprise. Accordingly, the purchaser may contemplate entering a contract with a group of enterprises able, jointly, to provide the necessary resources and expertise with which to construct the works. One means of doing so is for the purchaser to enter a contract with a single enterprise which subcontracts for the performance of certain of its obligations under the works contract (paragraphs 9 and 10). Another approach is for the purchaser to enter a

contract with a group of enterprises which has combined to perform the obligations of the contractor. It may be advisable for the contract to describe the responsibilities and liabilities undertaken by such a group or its members in a clear manner to avoid implying certain legal consequences which may arise under the applicable law by the use of a particular term (paragraph 11).

Depending on whether or not the group takes the form of an independent legal entity, different considerations will apply. If the group has not integrated into an independent entity, it is desirable for the contract to resolve the question of whether each member of the group is to be liable for the performance of the obligations of all of the members or only of those which that member is to perform. It may also be desirable for the contract to deal with other issues arising in the use of such an arrangement (paragraphs 12 to 16).

Where the purchaser divides all the obligations needed for the completion of the works among two or more parties, he must co-ordinate the scope and the time of the performances under each contract so as to achieve his construction targets. An approach involving several contracts may facilitate the use by a purchaser of local contractors to construct portions of the works. The way in which the construction is to be apportioned among the various parties will depend upon the nature and size of the works and the national policy followed by the country of the purchaser (paragraphs 17 to 20).

The risks borne by the purchaser in connection with the co-ordination of several contracts could be considerably reduced by employing a consulting engineer to advise the purchaser on how to achieve a proper co-ordination. Alternatively, the purchaser may engage a construction manager with a wider scope of responsibility. Another technique is to have one of the contractors assume responsibility for some part of the co-ordination (paragraphs 21 to 23).

The purchaser may also reduce the risks connected with engaging more than one contractor by providing that one of the contractors is to be responsible for the transfer of the technology, the supply of the design for the entire works and the construction of a vital portion of the works. This contractor may also be responsible for handing over to the purchaser at an agreed time completed works which are capable of operating in accordance with the contract, unless he is prevented from doing so by the failure of another party engaged by the purchaser (paragraph 24). Another approach available to the purchaser is to enter into a works contract with a single contractor for the construction of the entire works in accordance with technology and a design supplied to that contractor (paragraph 25).

The construction of the works may be effected in the context of a joint venture entered into between the contractor and the purchaser. A joint venture has certain advantages and disadvantages for each party (paragraphs 26 to 29). The joint venture may be based on a variety of legal relationships. When creating a joint venture, the parties should take into account the relevant rules of the applicable law, which are often mandatory (paragraphs 30 and 31).

A. General remarks

1. A purchaser who intends to contract for the construction of industrial works has a choice of entering into a single contract with a single enterprise or a group of enterprises, which will be responsible for performing all the obligations needed for the completion of the construction (see section B,

below), or dividing the obligations among several parties, entering into an individual contract with each party (see section C, below). In addition, the purchaser may construct a portion of the works. Within each of these two techniques there are different possible approaches to contracting, as discussed below. These approaches differ in important respects, for example, as to the extent of the responsibility of the contractor, the extent to which the purchaser must co-ordinate construction, and, in many cases, the total cost to the purchaser.

2. Whether it is advisable for the purchaser to enter into a single contract or several contracts may depend upon several factors. Entering into a single contract places the responsibility for the entire construction on a single party; if several contracts are entered into, and the works upon completion is defective, it may sometimes be difficult to determine which contractor is liable. If the technology is highly specialized or is the exclusive property of a single supplier, the entire works may have to be designed and constructed by the supplier of the technology. The purchaser may wish to enter into different contracts for, e.g., the transfer of technology, the supply of the design, and construction of different portions of the works only if he has the ability to co-ordinate and evaluate the performance by several contractors of their obligations.

3. Mandatory legal regulations in the country of the purchaser may require that a certain contracting approach be used by the purchaser. For example, those regulations may require that enterprises in the purchaser's country be engaged for certain aspects of the construction (e.g., civil engineering) in order to develop the technological capability of the country and to conserve foreign exchange. In such cases, the purchaser will have either to contract with a single contractor who is prepared to engage the local enterprises as subcontractors, or to enter into several contracts, including contracts with the local enterprises. In addition, the extent of the contractor's liability to taxation may influence the contracting approach to be chosen by the parties. The parties may wish to obtain expert advice on the issue of taxation.

B. Approaches involving single contract

4. The contractual approach whereby a single contractor is engaged to perform all obligations needed for the completion of the entire works, i.e., the transfer of the technology, the supply of the design, the supply of equipment and materials, the installation of the equipment and the performance of the other construction obligations (such as civil engineering and building), is referred to in this *Guide* as the "turnkey contract approach". This approach requires the contractor to co-ordinate the entire construction process, and, in principle, results in the contractor's liability for any delay in completion of the construction or for defects in the works.

1. General considerations

5. Where the purchaser chooses the turnkey contract approach, and decides to solicit competitive tenders to construct the works from potential contractors (see chapter III, "Selection of contractor and conclusion of contract"), each tender made by a potential turnkey contractor will be based (within the

parameters set in the invitation to tender) on an individual design. The purchaser will thus be able to choose the design which is most responsive to his requirements. In addition, since the turnkey contractor is himself to supply equipment and to construct pursuant to the specifications contained in the design included in his tender, that design may reflect manufacturing and construction economies and techniques available to the contractor, and thus result in construction which is economical and efficient. On the other hand, it may sometimes be difficult for the purchaser to evaluate and compare the different designs and different combinations of construction elements and methods contained in offers by different potential turnkey contractors. It is therefore advisable for the purchaser, when soliciting competitive offers, to invite all potential contractors to set forth the specific advantages of the design, methods and construction elements of their offers.

6. In preparing his design and construction methods and selecting his subcontractors, a turnkey contractor may sometimes be motivated more by a desire to offer an attractive price than by the need to ensure the durability, reliability and ease of maintenance of the works. However, a turnkey contractor usually has no incentive to over-design the works (i.e., to include in the design unnecessary features and technical safeguards to ensure that the works performs in accordance with the contract), since over-designing would make a turnkey contractor's offer uncompetitive. If the design is supplied by a separate designer, there may exist some incentive to over-design.

7. In some cases, a single contractor, in addition to assuming the obligations mentioned in paragraph 4, above, may undertake to ensure that after the works is completed, it can be operated and achieve agreed production targets using the purchaser's own personnel, and the raw materials and other inputs specified in the contract. This approach is referred to in the *Guide* as the "product-in-hand contract approach". It may be used by the purchaser as a means of making the contractor responsible, not only for the completion of the entire works, but also for an effective transfer to the purchaser's personnel of the technical and managerial skills and knowledge required by the purchaser's personnel for the successful operation of the works. In contrast to the case where the contractor merely undertakes to train the purchaser's personnel in the operation of the works (see chapter VI, "Transfer of technology", paragraphs 26 to 32), this approach requires the contractor to ensure that his training is successful. Accordingly, the contract should specify the results which the contractor is obligated to achieve through his training. The contract may provide that the training must enable the purchaser's personnel to operate the works during an agreed test period under the guidance of the contractor's managerial personnel. The contract might impose greater responsibility on the contractor by providing that the training must enable the purchaser's personnel to operate and manage the works independently during the test period. The product-in-hand contract approach is to be distinguished from cases where the contractor undertakes in the contract to assist with his own personnel in the operation of the works after its completion (see chapter XXVI, "Supplies of spare parts and services after construction", paragraphs 3 and 37 to 39).

8. A single contractor bears a high degree of risk in performing all the obligations needed for the completion of the works. He may insure against this risk, or provide some financial reserves to cover the risk. The cost of adopting these measures is usually reflected in the calculation of the price. The total price

of the works may be lower if several contractors are engaged than if a single contractor is engaged, since, under the approach involving several contracts, the purchaser himself effects the co-ordination of the construction process which under the single contract approach is effected by the contractor. Since, under the product-in-hand contract approach, the contractor not only assumes extensive training obligations but also bears the risk of failing to achieve the agreed training results, the price charged by him under that approach is likely to be higher than that charged under the turnkey contract approach. The final choice by the purchaser among the various approaches may be guided by considerations that go beyond simply the financial costs of the construction. Alternatives to both the turnkey and production-in-hand approaches may add to the staffing needs and the risk costs of the purchaser.

2. *Contracting with group of enterprises*

9. A purchaser may contemplate entering into a contract with a group of enterprises, rather than with only one enterprise. This *Guide* does not deal in depth with the legal issues connected with arrangements of that type.¹ The purpose of the discussion of these arrangements in the present section is to bring them to the attention of the parties and to point out some of the principal issues associated with them which the parties may wish to consider.

10. The construction of complex and large-scale industrial works may be beyond the technical or financial means or the experience of a single enterprise. This may be the case, in particular, where all or a substantial part of the works is to be constructed under a single contract, such as in a product-in-hand contract or a turnkey contract (see paragraphs 4 to 8, above). In such instances one possibility may be for a single enterprise to enter into the contract as the contractor, and to engage subcontractors to perform those obligations which it cannot itself perform (see chapter XI, "Subcontracting"). Another possibility may be for a group of enterprises to combine to perform the obligations of a contractor. A group of enterprises may be created not only for the purpose of pooling the experience and the technical and financial means of the members of the group but also to satisfy eligibility requirements (e.g., those concerning the nationality of the contractor) which may be imposed by law, by the purchaser or by a financing institution, or in order to take advantage of financial or fiscal benefits available to contractors meeting certain requirements.

11. The terminology used to describe a group of enterprises which has combined to perform the obligations of a contractor is not uniform in all legal systems. For example, the terms "joint venture" and "consortium" may sometimes describe the same types of arrangements, while at other times different types of arrangements are implied by the terms. Furthermore, the use of a term in a contract may carry with it certain legal consequences under some legal systems. Accordingly, where the purchaser is entering into a contract with a group of enterprises, it may be advisable for the contract to describe clearly the responsibilities and liabilities undertaken by the group or its members.

12. In some cases, the members of a group of enterprises which have combined to perform the obligations of the contractor under a works contract may form an independent legal entity. In such cases, the contractual provisions of the works contract will be the same as those in a contract between the

purchaser and a single enterprise. The entity itself will be fully responsible for the performance of all the obligations of the contractor under the works contract. Whether the individual members of the group will be responsible for the performance of those obligations, and if so, to what extent they will be individually responsible, will depend upon the nature of the legal entity. Some legal systems may have mandatory rules governing contracts entered into by a purchaser with a group of enterprises integrated into an independent legal entity and the parties may need to take those rules into account in negotiating the contract.

13. In other cases, and these are the more common, the members of the group do not integrate into an independent legal entity. In such instances there are matters which it would be advisable for the works contract to address which do not arise in contracts with a single enterprise or with a group of enterprises integrated into an independent legal entity. Firstly, it would be advisable for all members of the group to become parties to the works contract. Secondly, it would be advisable for the works contract to set out the responsibilities and liabilities of the members of the group to the purchaser in the performance of the contractor's obligations. Under one approach, the works contract may allocate specific obligations to each member of the group and make him liable for the performance only of the obligations allocated to him. In this case, the legal positions of the parties will be similar to those connected with an approach involving several contracts (see paragraphs 17 to 25, below). Under a second approach, the works contract may allocate specific obligations to each member of the group, but make the members of the group jointly and severally liable to the purchaser for the performance of all the obligations of the contractor under the contract.

14. From the purchaser's point of view, it may be desirable for each of the members of the group to assume joint and several liability for the performance of all the obligations of the members, instead of each member assuming liability only for obligations to be performed by him. With joint and several liability, the purchaser would be able to claim performance against any one or a combination of the members of the group without having to attribute the failure of performance to a particular member, and each member would be personally liable for any such failure. In the event of a successful claim, the purchaser would be able to execute his award against the combined assets of the members against whom he claimed. It may be noted that the purchaser may protect himself against the effects of a failure of performance by obtaining performance guarantees from the members of the group (see chapter XVII, "Security for performance", paragraphs 10 to 12).

15. It may be advisable for a purchaser who is contemplating entering into a single contract with a group of contractors who have not integrated into an independent legal entity to obtain legal advice in respect of the possible consequences or difficulties which may arise by the use of such an arrangement. In addition to the matters mentioned in paragraphs 13 and 14, above, there are a number of other issues which the purchaser may wish to consider when entering into a contract with a non-integrated group of enterprises:

(a) How the difficulty of bringing a claim against enterprises from different countries, should a dispute arise, may be overcome;

(b) How the settlement of disputes clause may be formulated so as to enable any dispute between the purchaser and several or all the members of the group to be settled in the same arbitral or judicial proceedings (see chapter XXIX, "Settlement of disputes", paragraph 4);

(c) How guarantees to be given by third parties as security for performance and quality guarantees to be given by members of the group are to be structured;

(d) How the financial arrangements between the purchaser and the group may be settled, including such questions as the manner of payment of portions of the price to members of the group;

(e) What ancillary agreements may have to be entered into by the purchaser;

(f) Whether there are any mandatory rules of the applicable law governing contracts of this type.

16. Should the group not be integrated into an independent legal entity, it may be to the advantage of all the parties for the purchaser not to have to deal with each member of the group in matters arising during the course of performance of the contract. The members of the group may therefore designate one of their number to be spokesman for the group in their dealings with the purchaser. Thus, notices to be exchanged between the parties could be exchanged between the purchaser and the designated spokesman. It may be advisable for the authority of such a spokesman to be specified in the contract. The purchaser will need to know whether the spokesman is acting merely as a means of passing information between the purchaser and the group or whether he has any authority to take decisions binding on all the members of the group. The group of enterprises may extend the spokesman's authority so as to enable him to act on behalf of the group, as for instance, in defending a claim by the purchaser.

C. Approaches involving several contracts

17. Where the purchaser divides all the obligations needed for the completion of the works among two or more parties, he may adopt different approaches to contracting. The approach chosen by the purchaser will affect the extent of the risk borne by him in connection with the construction.

18. The purchaser may divide the construction of the works among two or more contractors. The transfer of technology and the supply of the design may also be effected by one or more of these contractors, or may be effected by other enterprises. The purchaser must co-ordinate the scope and the time of the obligations to be performed under each contract so as to achieve his construction targets. The purchaser may bear the risk of delay in construction or defects in the works resulting from his failure to determine appropriately in each contract the equipment, materials and construction services to be supplied by the different contractors, and the time-schedules to be observed by them (see, however, paragraphs 21 to 25, below).

19. In addition to resulting in a lower price (see paragraph 8, above), the engagement of several contractors for construction could facilitate the use by purchasers from developing countries of local contractors to construct portions of the works, perhaps under the supervision of an experienced foreign

contractor. The use of local contractors in this manner may save foreign exchange and facilitate the transfer of technical and managerial skills to enterprises in the purchaser's country.

20. When several contracts are entered into for construction, the supply and installation of equipment and the supply of materials are often effected under one or more contracts, and building and civil engineering under other contracts. The equipment may in some cases be installed by the purchaser's personnel or by a local enterprise under the supervision of the contractor (see chapter IX, "Construction on site", paragraphs 27 to 30). However, the way in which the construction is to be apportioned among the various contractors will depend upon the nature and the size of the works, and the national policy followed by the country of the purchaser. In general, the less complex the works, the smaller the number of contractors required and the easier it is for the purchaser to co-ordinate the scope and the time of the construction obligations under the different contracts. The risks connected with co-ordination increase when a large number of parties participate in the construction.

21. The risks borne by the purchaser in co-ordinating the scope and the time of the performance of the obligations of several contractors could be considerably reduced by employing a consulting engineer to advise the purchaser as to how to achieve proper co-ordination. A consulting engineer may be employed even if the single-contract approach is used, though his function in such cases may be primarily to check the quality and the progress of the construction to be effected by the single contractor. The possible role of a consulting engineer is discussed in chapter X, "Consulting engineer".

22. The purchaser may, as is increasingly the practice, engage a construction manager (sometimes called a managing contractor) with a wider scope of responsibility instead of, or in addition to, a consulting engineer. The construction manager might be the designer of the works, or an expert with management capabilities. The responsibility of the construction manager need not be limited to giving advice, but may include integrated construction management (e.g., inviting tenders or negotiating and concluding different contracts for the various portions of the works for and on behalf of the purchaser, co-ordinating all site activities and controlling the construction process). If the construction manager is not the designer, the contract may obligate him to check the design and to assume responsibility for design defects which he could reasonably have discovered. He might also be obligated to advise the purchaser on the selection of contractors. The fee paid for the services of a construction manager is usually higher than the fee of a consulting engineer because of the wider scope of the construction manager's responsibility. The parties might agree that the fee is to be reduced according to a specified formula if the works is completed late or if the cost of the construction is higher than a target cost, and increased if the works is completed early or the cost is less than the target cost (see chapter VII, "Price and payment conditions", paragraph 15).

23. Another technique which the purchaser might wish to adopt in order to reduce his risks in co-ordination is to have one of the contractors assume responsibility for some part of the co-ordination. This contractor may, for example, be obligated to define the scope of the construction to be effected by other contractors to be engaged by the purchaser, and to provide a time-

schedule for that work. He may also be obligated to check the construction effected by the other contractors and to notify the purchaser of defects in the construction which he could reasonably have discovered. However, in considering this approach, the purchaser should take into account the possible conflict of interest which it might create for the co-ordinating contractor, since he has to evaluate the performances of fellow contractors who might be participating closely with him in the construction. Accordingly, the purchaser may wish to adopt this technique only in exceptional circumstances.

24. A further approach which the purchaser might wish to adopt in order to reduce his risks in co-ordination is to provide that one of the contractors is to be responsible for the transfer of the technology, the supply of the design for the entire works and the construction of a vital portion of the works. This contractor may also be obligated to define the scope of the construction to be effected by other contractors to be engaged by the purchaser, and to provide a time-schedule for that work. The contractor may be obligated to hand over to the purchaser at an agreed time a completed works capable of operation in accordance with the contract, unless he is prevented from doing so by the failure of another party engaged by the purchaser to perform his construction obligations in accordance with the design, specifications or time-schedule provided by the contractor to the purchaser. An advantage of this approach for the purchaser is that the responsibility for the transfer of the technology, the supply of the design and the construction of a vital portion of the works is concentrated in one contractor.

25. Another approach available to the purchaser is to conclude a works contract with a single contractor for the construction of the entire works in accordance with technology and a design to be supplied to that contractor, and to engage one or more enterprises other than the contractor to transfer the technology and supply the design for the works. The design is usually obtained by the purchaser before the tendering procedure or negotiations in respect of the works contract commence, in order that tenders to construct may be solicited on the basis of the design. Since the contractor under this approach is responsible for the construction of the entire works in accordance with the design supplied by the purchaser, his responsibilities for co-ordinating the construction process and constructing the entire works are the same as those of a turnkey contractor. The contract may obligate the contractor to notify the purchaser of inherent defects in the design of which he is aware.

D. Joint venture between contractor and purchaser

26. The contracts drawn up under the different contracting approaches described above have as their principal objective the construction of the works in return for the payment of the price. The legal relationship between the contractor and the purchaser essentially comes to an end with the completion of construction by the contractor and the acceptance of the works and the payment of the price by the purchaser, except, for example, as to the rights and obligations of the parties under a quality guarantee (see chapter V, "Description of works and quality guarantee", paragraph 26), and other obligations which are to take effect after that time (e.g., with respect to the supply of spare parts or certain services after acceptance of the works (see chapter XXVI, "Supplies of spare parts and services after construction")). In general, the commercial

risks connected with the management and operation of the works (e.g., a decrease in the market price of the products of the works) will, after that time, be borne solely by the purchaser.

27. In contrast, the construction of the works may be effected in the context of a joint venture, i.e., an association between the contractor and the purchaser whose objectives may include, in varying degrees, the transfer of technology, the pooling of financial resources or other assets, the sharing of the costs, control and management of the operation of the works, the marketing of the products of the works, and the sharing of the profits and losses resulting from the operation of the works. The contractor and the purchaser may agree to form a joint venture for the construction of works; but, more often, they may enter into a contract for the construction of the works with the understanding that they will form a joint venture for the operation of the works or for distribution of the products upon completion of the construction.

28. A joint venture between the contractor and the purchaser may offer certain advantages to the purchaser. When the construction is effected by the contractor in the context of a joint venture which includes the marketing of the output of the works, the contractor has an economic interest in the timely completion of construction of the works and its proper functioning which goes beyond that which arises under a works contract. The joint venture would create an incentive in the contractor to impart to the purchaser technology, including improvements in the technology and the technology used in the industrial process, and managerial skills possessed by the contractor; in addition, the output of the works might be sold in markets to which the contractor has access. Furthermore, the losses resulting from the joint venture would be borne by both the purchaser and the contractor. The disadvantages to the purchaser of a joint venture may lie in the need to share the profits resulting from the operation of the works, and the fact that the purchaser loses to some degree managerial control over the operation of the works.

29. To the contractor, a joint venture with the purchaser may present the advantages of, for example, facilitating access to the markets in the country or region of the purchaser, or to markets which favour purchasing from the country of the purchaser, and the opportunity to participate in the profits obtained from the operation of the works. The costs to the contractor of these advantages arise principally from his sharing of the risks associated with the joint venture.

30. The joint venture may be based on a variety of legal relationships. The parties may wish to establish for the purposes of the joint venture a corporate body with independent legal personality which is owned and controlled by both parties (this is usually called an equity joint venture). The works may be operated by this corporate body. Alternatively, the parties may wish to agree on a joint venture without creating a body with independent legal personality, the association between the parties being based purely on contractual arrangements between them (this is usually called a contractual joint venture). The works may be jointly operated by both parties, and be either owned jointly by them or solely by the purchaser.

31. When creating a joint venture, the parties should take into account the rules of the applicable law, which are often mandatory, dealing specifically with the creation of joint ventures, and with the rules regulating the creation of

corporate bodies with independent legal personality. The contractual arrangements entered into between the parties for creating and implementing the joint venture will be distinct from those entered into for constructing the works. The contractual arrangements for creating joint ventures are outside the scope of the *Guide*, and accordingly are not dealt with herein.²

Footnotes to chapter II

¹Issues relating to groups of firms acting as contractors are discussed in Economic Commission for Europe, *Guide for Drawing up International Contracts between Parties Associated for the Purpose of Executing a Specific Project* (United Nations publication, Sales No. E.79.II.E.22) and in Economic Commission for Europe, *Guide on Drawing up Contracts for Large Industrial Works* (United Nations publication, Sales No. E.73.II.E.13).

²The creation of joint ventures between contractors and purchasers is discussed in *Manual on the Establishment of Industrial Joint-Venture Agreements in Developing Countries* (United Nations publication, Sales No. E.71.II.B.23).

Chapter III. Selection of contractor and conclusion of contract

SUMMARY

There are two basic approaches to the conclusion of a works contract. Under the first approach, the purchaser invites tenders from enterprises to construct the works, and the contract is concluded on the basis of the tender selected by the purchaser through formal tender procedures. Under the second approach, the purchaser negotiates the contract with enterprises selected by him without formal tender procedures. The purchaser may not have complete freedom to choose the approach he wishes to adopt in concluding the contract (paragraphs 1 to 3).

The tendering approach may be implemented through the open tendering system or the limited tendering system. Tenders may be restricted to those of enterprises which have been qualified by the purchaser in accordance with pre-qualification procedures. The open tendering system, under which all interested enterprises are invited to submit tenders for the construction of the works, provides competition among enterprises but may also be the most formal and costly of the procedures for the conclusion of a works contract. The limited tendering system, where only certain enterprises are invited to submit tenders, allows for some competition, but usually less than under the open tendering system. Negotiation of the works contract with a number of potential contractors or with only one such contractor may avoid the need to adopt the formalities of the tender procedures (paragraphs 5 to 9).

The legal rights and obligations of parties engaging in tendering procedures may be regulated by mandatory rules of the applicable law or by the rules of a lending institution financing the project (paragraph 10).

When the open tendering approach is adopted, it may be appropriate to require potential tenderers to pre-qualify in order to limit the number of tenders to be considered. An enterprise applying to be pre-qualified may be required to complete a questionnaire which seeks to elicit relevant information about the enterprise. On the basis of the replies to the questionnaire, the purchaser may select enterprises in accordance with criteria for pre-qualification which have been established by him (paragraphs 11 to 14).

When the purchaser has sufficient information about the works to be constructed, he may invite tenders from those enterprises whose tenders are solicited. Under the open tendering system, the invitation is communicated by means of an advertisement, which may be circulated internationally or more restrictedly. Under the limited tendering system, the invitation to tender is sent individually to enterprises selected by the purchaser, accompanied by a full set of documents to be provided to prospective tenderers (paragraphs 15 to 18).

The documents to be provided to prospective tenderers usually include instructions to tenderers conveying information with respect to the preparation, contents, submission and evaluation of tenders, and model

forms of the documents which are to be submitted by the tenderer with his tender (paragraph 19). The instructions may specify all the purchaser's requirements in respect of the tenders, including the criteria they must meet to be successful. Where model forms of the tender documents are not supplied by the purchaser to tenderers, the purchaser's requirements in their regard may be set out in the instructions. It is desirable for the purchaser to prepare the contractual terms that are to form the basis of the works contract and to supply them to tenderers. The purchaser may wish to consider requiring tenderers to submit a tender guarantee meeting specified criteria (paragraphs 20 to 30).

Tenders are usually opened in the presence of the tenderers or their representatives or in public. A private opening, without the tenderers being present, may be justified by exceptional circumstances. After tenders are opened, they are compared and evaluated with a view to identifying the tender which complies with the purchaser's requirements and is most acceptable to him. The purchaser then proceeds to select the successful tenderer. The purchaser may, in certain circumstances, reject all tenders (paragraphs 31 to 43).

Under the negotiation approach, the purchaser contacts one or more enterprises which he judges to be capable of constructing the works, informs them of his requirements, and requests offers. Documents describing the scope of the construction and main technical characteristics of the works required and containing the contractual terms required by the purchaser may be submitted to the enterprises. No formalities are usually required for making or evaluating the offers, or for negotiating the contract. In certain circumstances the purchaser may be able to combine the tendering and negotiation approaches (paragraphs 44 to 47).

The parties may find it advisable to reduce their agreement to writing. The parties may also wish to agree on when contractual obligations between them are to arise, either on their entering into the contract or as from the date when a specified condition is fulfilled (paragraphs 49 and 50).

A. General remarks

1. There are, in practice, two basic approaches that may be used for concluding a works contract. Under the first approach, the purchaser may, through formal tender procedures, invite enterprises to submit tenders to construct the works, evaluate the tenders and enter into a contract with the tenderer selected by him in accordance with the tender procedures. Tenders are usually based upon contractual terms and technical factors stipulated by the purchaser. One aspect of the formality of tender procedures, especially when the purchaser is a public entity, is that the purchaser and the tenderers may be subject to certain legal obligations and liabilities, for example, concerning the submission, withdrawal and selection of tenders.

2. Under the second approach, the purchaser enters into negotiations with one or more enterprises with a view to entering into a contract with one of those enterprises. This approach does not involve formal tender procedures and participants in negotiations are not subject to the strict obligations and liabilities to which participants in tender procedures are subject. However, it requires the purchaser to do certain preparatory work and it may be necessary for the parties to the negotiations to agree upon certain rules to be followed in the negotiations (see paragraphs 44 to 46, below).

3. The purchaser may not have complete freedom of choice with respect to the approach to be used in concluding the contract. Procurement laws and regulations in the country of the purchaser will often limit the purchaser's choice of the approach to be adopted and the detailed procedures to be followed. Such laws and regulations may apply to all purchasers in that country, or they may be directed only to State or public enterprises, giving private enterprises greater freedom to choose the approach and procedures they wish to adopt. The procurement laws may require that preference be given to tenders received from local enterprises or enterprises from a particular region. A purchaser may also have to conform to the requirements of international lending or other institutions financing the project concerning the approach and procedures to be followed. Those requirements are usually designed to achieve efficiency, economy and fairness in the procurement process. In many cases, these institutions require equipment, materials and services financed by them to be procured on the basis of international competitive tendering, in order to promote competition among a wide range of enterprises. They may also require that enterprises from all the member countries of the institution be given an opportunity to participate in the tendering procedures on the basis of equality of opportunity. In other cases, these institutions may allow the purchaser to employ more restrictive procedures than international competitive tendering. In particular, they often recognize the desirability of allowing a margin of preference for enterprises from the country or region of the borrower. The parties may also note that, where a contracting approach involving several contracts is adopted (see chapter II, "Choice of contracting approach", paragraphs 17 to 25), different approaches to concluding the contract or different procedures may be used in respect of each contract.

4. Where the applicable law or a financing institution does not require any particular approach or procedure to be followed, the purchaser is free to adopt the approach or procedure most suitable to his needs. He may, for example, choose to adopt the formal procedures under the tendering approach or he may adopt the negotiation approach, or he may combine various features of both these approaches (see paragraph 47, below).

5. Within the tender approach, there are two basic systems: the open tendering system, under which all interested enterprises are invited, by means of an advertised notice, to submit tenders for the construction of the works, and the limited tendering system, under which only certain selected enterprises are invited by the purchaser to submit tenders. Different features of the two basic systems may be combined as required by the applicable law or the rules of a financing institution or to satisfy the needs of the purchaser.

6. The principal advantage of the open tendering system is that it enables a broader range of enterprises to compete in tendering for the construction of the works. The purchaser may benefit from this extensive competition by obtaining a lower price, a better design, or other more favourable conditions relevant to the construction of the works. On the other hand, the open tendering system may be the most formal and costly of the procedures for the conclusion of a works contract. It usually involves the preparation of a number of formal tender documents, international or other wide advertisement of the invitation to tender, public opening of tenders and evaluation of the sometimes numerous tenders which may be submitted. It also demands strict adherence to time-limits and other procedural requirements. In addition, the open tendering system sometimes

attracts tenders from unqualified enterprises that submit unrealistically low tenders in order to be awarded the contract, and that later seek variations of the contract resulting in an increase of the contract price (see chapter XXIII, "Variation clauses", paragraphs 20 to 22). In such cases the purchaser faces the difficulty and expense of investigating and eliminating such tenders.

7. Under a variant of the open tendering system, the opportunity to submit tenders may be restricted to enterprises which have qualified in accordance with pre-qualification procedures (see paragraphs 11 to 14, below). The opportunity to pre-qualify may be given to all interested enterprises worldwide, or may be restricted to those from a particular region. The use of pre-qualification enables the purchaser to limit participation in tendering to reputable enterprises that are technically and financially capable of constructing the works. It may also enable the purchaser to assess, prior to the commencement of tendering procedures, the degree of real interest in the project that exists among contractors.

8. In contrast to the open tendering system, the limited tendering system confines the tender process to enterprises which the purchaser invites to tender. This system may be particularly suitable where the technology to be incorporated in the works can be supplied, or the construction can be effected, only by a limited number of enterprises. While the limited tendering system offers competition among the tendering enterprises that are given the opportunity to participate in the tendering process, it usually offers less competition than under the open tendering system. To the extent that the purchaser informally discusses with prospective tendering enterprises the scope of the construction and the technical characteristics of the works to be constructed, the documents to be provided to prospective tenderers (see section B. 3, below) may be simplified as compared with those required under the open tendering system. However, the limited tendering system also entails certain formalities, although they may be somewhat less onerous than under the open tendering system. It should be noted that international financing institutions may not permit the use of the limited tendering system in some cases.

9. Under the negotiation approach, the purchaser negotiates the works contract with a number of potential contractors or with only one such contractor without the formalities of tender procedures. The negotiation approach may be used when the applicable law or an institution financing the project does not require tender procedures. It may be appropriate, for instance, where a limited number of potential contractors have a satisfactory record of constructing works similar to the works to be constructed for the purchaser, and where no advantages are to be gained by inviting tenders from other enterprises. The approach may also be appropriate where the equipment or technology to be incorporated in the works can be obtained only from certain enterprises. The extent to which the purchaser will benefit from competition in respect of the price, design and other key factors relating to the construction will depend in part on whether he negotiates with more than one enterprise. Occasionally, the need for early completion of the works may make it preferable for the purchaser to engage a contractor without prior tendering, as the conclusion of the contract under tendering procedures would in most cases take longer than under the negotiation approach. In certain exceptional cases the purchaser may find it appropriate to negotiate the contract with only one enterprise. For example, when an existing works is to be extended or modified in conformity with the technological process or equipment already in use, it may be appropriate to negotiate only with the contractor who constructed the works.

B. Tendering

10. A purchaser wishing to adopt tender procedures and tenderers participating in such procedures should consider whether they must conform to any rules regarding the invitation, submission and acceptance of tenders imposed by mandatory rules of the applicable law or by the rules of a lending institution financing the project (see paragraphs 3 and 4, above). Such rules may provide, for example, that neither an invitation to tender, nor a tender, may be withdrawn unless certain conditions are fulfilled. Furthermore, they may compel the purchaser to accept a tender so long as the criteria specified in his invitation to tender are satisfied (see paragraph 43, below). Other legal systems, however, may view the invitation to tender as a mere solicitation of offers to construct the works and the tender itself may be regarded only as an offer, capable of being withdrawn or modified by the tenderer unless it is accepted by the purchaser.

1. *Pre-qualification*

11. The purpose of pre-qualification is to eliminate at the outset those potential tenderers who would not be suitable contractors and to narrow down the number of tenders which must ultimately be evaluated by the purchaser. In order to be pre-qualified, an enterprise may be required to demonstrate its capacity to perform the contract. In assessing that capacity, the purchaser may consider, for example, the enterprise's experience and past record of performance, its ability to supply the necessary technology, equipment, materials and services, its financial status and existing construction commitments, and its capability to meet the purchaser's safety requirements. State enterprises or financing institutions may keep a list of enterprises which are pre-qualified for all contracts of a particular type. They may up-date this list regularly, requiring enterprises to furnish information or reply to a questionnaire (see paragraphs 13 and 14, below) at stated intervals. Where the purchaser does not already have a list of pre-qualified tenderers he may wish enterprises to pre-qualify before accepting tenders for the works contract.

12. The first step in the pre-qualification process is the advertisement of an invitation to apply for pre-qualification. The factors to be considered in respect of the advertisement are similar to those to be considered in respect of the advertisement of an invitation to tender (see paragraphs 15 and 18, below).¹

13. To enable the purchaser to decide whether to pre-qualify an enterprise it is desirable for him to require enterprises applying for pre-qualification to complete a questionnaire. Such a questionnaire may be sent by the purchaser to enterprises applying to be pre-qualified, and may be so formulated as to elicit information relevant to the considerations referred to in paragraph 11, above.² The questionnaire sent to enterprises may be accompanied by instructions for its completion, including directions as to the language to be used in completing the questionnaire, the currency in which financial information is to be expressed, and the date by which the completed questionnaire must be submitted, as well as by information about the project.

14. The replies to the questionnaire submitted by enterprises should then be evaluated by the purchaser in accordance with criteria for pre-qualification established by him. Such criteria may have to conform to the applicable law or

to the requirements of a financing institution. Thus, the purchaser may be prohibited from denying pre-qualification to an enterprise for reasons unrelated to the capacity of the enterprise to perform the contract. After evaluating the replies to the questionnaire, the purchaser should notify non-successful enterprises that they have not pre-qualified, and may send all enterprises which have pre-qualified notices informing them of their pre-qualification and inviting them to submit tenders. At the same time, the purchaser may send to enterprises which have pre-qualified a full set of the documents for prospective tenderers (see paragraph 19, below).

2. Invitation to tender

15. Once the purchaser has sufficient information about the works to be constructed (e.g., in the case of a turnkey contract, when the output requirements and other performance parameters are known or, in other cases, when the design of the works is completed or almost completed), he will be in a position to formulate the terms of the invitation to tender. The purpose of the invitation to tender is to provide potential tenderers with basic information about the proposed works and to solicit from enterprises offers to construct the works in accordance with the tender documents. The information to be provided by the purchaser in the invitation may include, for example, a general description of the works, specifying the scope of the construction and the technical characteristics of the required equipment, materials and construction services, the date for completion of construction, the date for submission of tenders, the date and place of opening of tenders, the address to which requests for tender documents and other information should be sent, and the cost of tender documents. It may also state any eligibility requirements for tenderers (e.g., a requirement of a financing institution that participation in the tendering process is restricted to enterprises from member States of that institution).³ Where this information has been provided in the invitation for pre-qualification it may be unnecessary to issue a formal invitation to tender. In many cases, the invitation to tender may be prepared with the assistance of the purchaser's consulting engineer.

16. Under the open tendering system, the invitation to tender may be required to be advertised internationally in such a manner as to give an opportunity to all potentially interested and eligible enterprises to participate in the tender process. With respect to the media in which the advertisement is to appear, the applicable law may require advertisement in certain media (e.g., the official gazette of a country). The purchaser may also consider advertising in local newspapers, foreign newspapers circulating in the major commercial centres of the world, technical journals and trade publications. If the construction is being financed by a financing institution, the purchaser may have to comply with the advertisement requirements, if any, of that institution, which may include advertisement in a specified periodical, such as the business edition of *Development Forum*.⁴

17. Under the limited tendering system, the invitation to tender is sent individually to the enterprises selected by the purchaser. Where pre-qualification procedures have been used, the invitation may be sent only to enterprises which have pre-qualified. In some cases, the invitation may be accompanied by a full set of the documents needed by prospective tenderers in order to

formulate and submit a tender (see section B, 3, below). In other cases, it may only indicate the address to which requests for the tender documents and other information should be sent.

18. It is advisable for the invitation to tender to specify clearly the date by which enterprises must submit their tenders to the purchaser, since tenders may be invalid under the tender procedures if they are submitted late. The amount of time after the advertisement of the invitation to tender, or its delivery to enterprises, allowed for the submission of tenders, may depend upon the accessibility of the site for inspection by prospective tenderers, the scope and complexity of the construction to be effected, and whether there was pre-qualification. In order for all enterprises to have approximately the same amount of time to obtain the documents to be provided to prospective tenderers and to prepare and submit their tenders, it is desirable for the timing of the advertisement of the invitation to tender or the delivery of the invitation to enterprises to be carefully co-ordinated. Thus, the timing of the advertisement in the various media may take into account the fact that different media may publish at different intervals (e.g., daily, monthly, quarterly), and the timing may be such that the advertisement appears at approximately the same time in all the media.

3. *Documents to be provided to prospective tenderers*

19. In many cases, it will be desirable for the documents to be provided to prospective tenderers to be prepared by an engineer on the purchaser's staff or by a consulting engineer engaged by the purchaser (see chapter X, "Consulting engineer"). The documents may consist, *inter alia*, of the following: the instructions to tenderers (see paragraphs 20 to 25, below); a model form of tender (see paragraph 26, below); the contractual terms required by the purchaser (see paragraph 27, below); the technical specifications and drawings (see chapter V, "Description of works and quality guarantee", paragraphs 10 to 19); a model form of tender guarantee (if such guarantee is required by the purchaser; see paragraphs 28 to 30, below); if a performance guarantee is to be required of the contractor (see chapter XVII, "Security for performance", paragraphs 10 to 12), a model form of that guarantee; and evidence of authority (certifying that persons signing the tender have the necessary authority to do so; see paragraph 22, below). The technical specifications which the purchaser may be required to provide (depending on the contractual approach adopted) will be of particular importance to prospective tenderers. The provision of model forms of the documents which are to be completed and submitted by the tenderer with his tender will assist the purchaser in comparing and evaluating tenders. Where there have been no pre-qualification procedures, the purchaser may also supply prospective tenderers with a questionnaire, similar to a pre-qualification questionnaire (see paragraph 13, above), for completion by the tenderer and submission with his tender. It may be advisable for the documents to be made available in at least one language customarily used in international commercial transactions.

(a) *Instructions to tenderers*

20. The purpose of the instructions is to provide guidance for the preparation of tenders and to convey information on matters relating to the evaluation of tenders. It is advisable for the instructions to inform tenderers of the purchaser's requirements in regard to the preparation, contents and submission

of tenders. Where model forms of the tender, of the contractual terms and of any required tender and performance guarantees are not supplied by the purchaser to the tenderer, it is advisable for the purchaser's requirements in regard to the tender and guarantees to be fully set out in the instructions (see paragraphs 26 to 30, below). The instructions may list the documents which are to be submitted with a tender (these should include, among others, all documents, duly completed, of which model forms were provided to tenderers). The instructions may indicate whether an enterprise may submit a tender with alternative offers and, if so, the item or items in respect of which alternatives are acceptable (e.g., transportation arrangements, insurance, or the design of less important items of equipment). The instructions may also specify whether tenders in respect of only portions of the construction are acceptable. In addition, the instructions may set out the general criteria by which the purchaser will evaluate the tenders (e.g., the weight to be given to the tender price and to other factors). The instructions may state that the purchaser reserves the right not to select any tender (see paragraph 43, below).

21. The instructions may inform the tenderers of the date or the time within which tenders are to be submitted, and the place for submission, as well as the number of copies of the tender documents to be submitted. They may inform tenderers of any particular requirements concerning the manner in which tenders are to be submitted. For example, the purchaser may wish to require tenderers to prepare their tenders in accordance with the "two-envelope" system whereby two documents are submitted. The first document details the technical elements proposed for the construction by the tenderer, but does not mention the price. The second document contains the tender price (see paragraph 35, below).

22. The instructions may specify the language or languages that may be used in completing the tender documents. They may also set out any requirements of the purchaser as to how the tender price or, in the case of cost-reimbursable contracts, the costs, are to be expressed. For example, they may specify the currency in which the costs and price are to be quoted, and may specify that portions of the price that are allocated to certain aspects of the construction must be shown separately. The purchaser may wish to require in the instructions that all documents submitted with the tender are to be typed or written in indelible ink and that all erasures in a document are to be signed or initialled by the persons signing the document. Further, he may wish to require that all signatures on the tender documents are to be those of persons who are authorized to sign on behalf of the tenderer, and that their authority is to be evidenced in the manner required by rules of the applicable law.

23. The procedures according to which the tenders will be opened and the tenderers notified of the outcome of the evaluation of tenders may be specified in the instructions. So, too, may the procedure envisaged for entering into the contract (see section D, below). The instructions may set out the purchaser's requirements regarding the eligibility of tenderers. They may also require a tenderer who has been pre-qualified (see section B.1, above) to update the information contained in the questionnaire previously completed by him in connection with his pre-qualification. The purchaser may wish to specify that the costs of preparing and submitting tenders are to be borne by the tenderers.

24. The instructions may specify a date up to which the tender must remain in effect after the date for submission of tenders has passed. In this regard, the purchaser may wish to ensure that sufficient time is allowed to permit the tenders to be evaluated, for the successful tenderer to be selected and notified, for any necessary discussions between the purchaser and the successful tenderer to take place prior to the conclusion of the contract, for any required approvals or licences to be obtained from the purchaser's Government or from a lending institution, and for the submission of a performance guarantee by the successful tenderer. The purchaser may wish to reserve the right, if necessary, to extend the validity period of the tender by notifying all the tenderers of the extension and its length. The instructions may provide that tenderers who agree to such an extension must prolong their tender guarantees, if any, to cover the period of the extension, and that tenderers who do not so agree will be deemed to have withdrawn their tenders, but without forfeiting their tender guarantees. The instructions may provide that tenderers are not permitted to change the terms of their tenders or withdraw their tenders after they have been submitted, including any period of extension. Alternatively, they may specify the circumstances in which tenders may be modified or withdrawn.

25. The instructions may set out the means by which a prospective tenderer can inspect the site. The instructions may also set out the procedures by which a prospective tenderer may obtain clarification of the documents provided to him. The instructions may describe the circumstances, if any, in which the purchaser may be permitted to alter the tendering procedure, and the rights of prospective tenderers consequent upon such alteration.

(b) Model form of tender

26. The model form of tender may require the offer of the tenderer to construct the works, as expressed in his tender, to conform to the contractual terms, technical specifications and drawings supplied by the purchaser. Furthermore, it may contain a consent by the tenderer to be bound by all the requirements, terms and conditions set out in the instructions to tenderers. It may also require the tenderer to detail in his offer all matters in respect of which the tenderer's offer is solicited. These may include, for example, the price and details of the conditions of payment (see chapter VII, "Price and payment conditions"); factors such as the anticipated costs of operating and maintaining the works; a time-schedule for the completion of the construction; and details of the services after construction which the contractor is prepared to supply (see chapter XXVI, "Supplies of spare parts and services after construction").

(c) Contractual terms

27. It is desirable for the purchaser to draft the contractual terms on the basis of which a works contract is to be entered into with the successful tenderer and to supply these terms to prospective tenderers with the other tender documents (see paragraph 19, above). Unless this is done, it will be difficult for the purchaser to compare and evaluate tenders, as each tender may be submitted on the basis of different contractual terms. Many aspects of the contractual terms prepared by the purchaser are not usually the subject of

negotiations between the purchaser and a tenderer (although the purchaser may allow certain details to be discussed); rather, in determining his tender price, the tenderer will take into account the terms proposed and the allocation of costs, risks and liabilities reflected in them. Part two of this *Guide* makes recommendations as to the various issues which may be addressed in these contractual terms, and the ways in which these issues may be dealt with.

(d) *Tender guarantee*

28. The purchaser may wish to consider requiring a tenderer to submit with his tender a tender guarantee in a specified amount. A tender guarantee may be required by the applicable law. The guarantee may provide that the amount of the guarantee is recoverable by the purchaser without proof of loss if, within the validity period of the guarantee, the tenderer withdraws his tender before the purchaser has selected a tenderer with whom to enter into a contract or if, having been selected as the successful tenderer, he fails to enter into a works contract with the purchaser in accordance with his tender or fails to provide the required performance guarantee. The tender guarantee should indicate whether it is payable on demand or whether the purchaser will need to prove the tenderer's liability before being entitled to payment.

29. In determining the required amount of the tender guarantee, the purchaser may consider such questions as what amount would constitute an adequate deterrent to the tenderer from withdrawing his tender or from failing to enter into a works contract in accordance with his tender or to provide the required performance guarantee and what amount would be sufficient to compensate the purchaser for the loss which he may suffer upon such a withdrawal or failures. For example, the purchaser may wish to be compensated for the cost of any new tender procedures that may be necessary and for the difference between the defaulting tenderer's price and the often higher price of a tender selected by the purchaser in the same or in new tender procedures, as well as for losses arising from any postponement in the commencement of construction due to the necessity of enagaging in new tender procedures. The amount of the tender guarantee may be set forth as a specific amount or as a percentage of the tender price.

30. The purchaser may require the tender guarantee to remain in force for a specified period beyond the date to which the tender is to remain in effect (see paragraph 24, above) in order to permit the purchaser to claim against the guarantor. The purchaser may require the tenderer who is chosen as the contractor, or with whom a contract is concluded, to extend the validity of the tender guarantee until the required performance guarantee is provided. He may require the guarantee to be of a particular type and may require the guarantee amount to be payable in a particular currency. Possible types of tender guarantee may include a standby letter of credit, a bank guarantee, or a guarantee issued by an insurance or bonding company. The purchaser may wish to specify the institutions acceptable to him for the purposes of issuing a guarantee (see, also, chapter XVII, "Security for performance", paragraphs 14 to 16). To ensure that the tender guarantee submitted is acceptable, the purchaser may wish to provide prospective tenderers with a model form of a tender guarantee.

4. *Opening of tenders and selection of contractor*

(a) Opening of tenders

31. The purchaser should determine whether he must conform to any procedures for the opening of tenders required by mandatory rules of the applicable law or by an international institution financing the project. For example, tenders are often required by the laws or regulations in the country of the purchaser, and by international financing institutions, to be opened in the presence of the tenderers or their representatives. If the purchaser so wishes, even persons who have not tendered may be permitted to be present at a public opening (cf. paragraph 35, below).

32. There may be exceptional circumstances in which the private opening of tenders, without tenderers being present, may be justified, such as when the works to be constructed is related to national security. As this procedure can lead to abuses, many lending institutions will not permit it. However, when tenders are to be opened in private, confidence in the opening procedures might be enhanced if individuals of recognized integrity (e.g., auditors or senior civil servants) were asked to participate in them.

(b) Evaluation of tenders

33. The purpose of tender evaluation is to compare the tenders submitted to the purchaser in order to identify the one which most closely complies with the purchaser's requirements, taking into account all relevant factors. The criteria for evaluating tenders may be governed by mandatory rules of the applicable law or the rules of an institution financing the project. The evaluation procedure, unlike the opening of tenders, is usually conducted without the tenderers being present. It is not necessary for the same persons to both open and evaluate the tenders.

34. In evaluating the tenders, the purchaser will need to compare the terms proposed in the tenders with his own requirements and consider how well these coincide. The tender price need not necessarily be the most important criterion in choosing amongst the tenderers. For example, the purchaser will need to be satisfied that, if chosen, a particular tenderer will be able to fulfil all his obligations within a certain time limit. The purchaser may, during the evaluation period, seek from a tenderer any clarification needed to evaluate a tender.

35. When the "two-envelope" system of tendering is used (see paragraph 21, above), the envelopes containing the technical elements are opened first, often in private, without the tenderers or their representatives being present, and the technical elements compared and evaluated to determine whether they comply with the purchaser's requirements. Thereafter, the envelopes containing the tender prices submitted by those tenderers whose technical proposals comply with the purchaser's requirements are opened in the presence of the tenderers or their representatives or at a public session, and the tenders in their entirety are evaluated in greater detail. This procedure may lead to a more objective evaluation of the technical elements, because these elements are assessed on their merits without a consideration of the tender price. On the other hand, the system may have the disadvantage that a tender which departs from the technical requirements set forth by the purchaser in the tender documents but

which could result in significant cost savings and could be otherwise acceptable to the purchaser would be rejected before the second envelope (containing the tender price) is opened. Accordingly, where the purchaser's technical requirements are flexible, this system may not be appropriate.

36. The process of evaluating tenders may take place in stages: preliminary screening, detailed evaluation, and discussions with the most acceptable tenderer.

(i) Preliminary screening

37. A preliminary screening of tenders may be used to determine whether the tender complies with the purchaser's requirements as to the tender itself and the accompanying documents. This may involve examining:

(a) Whether all the required documents, including any model forms supplied, have been submitted duly completed;

(b) Whether the tenderer has met any eligibility requirements, e.g., whether he is on the list of qualified contractors (if pre-qualification procedures were used) or whether he meets the requirements, if any, laid down by a financing institution;

(c) Whether the tender substantially complies with the contractual terms and technical requirements set out in the invitation to tender and the instructions to tenderers;

(d) Whether the tender has been signed by an authorized representative of the tenderer.

38. The documents may also be checked for arithmetical or clerical errors at this stage, and tenderers who have submitted tenders which appear to contain such errors may be contacted and given an opportunity to correct them. The process of screening may enable the purchaser to place the tenders in different categories. Some tenders may contain substantial deviations from the requirements of the purchaser, and will not need to be considered further. Others may contain deviations which appear to be inadvertent (e.g., omission of required documents). In such cases the purchaser may contact the tenderer to inquire whether he wishes to rectify the deviation. Yet other tenders may contain minor deviations or alternatives which the purchaser is prepared to consider, but which have to be quantified in financial terms and assessed when a detailed evaluation is being made of the tenders. Tenders may also contain reservations and qualifications to particular contractual terms proposed by the purchaser in the tender documents. The purchaser may decide to accept some of these, and may wish to discuss others with the tenderer (see paragraph 40, below). Any reservations or qualifications accepted by the purchaser will have to be quantified and assessed during the evaluation of the tenders.

(ii) Detailed evaluation

39. The general criteria to be considered in the detailed evaluation and comparison of tenders will usually have been set out in the instructions to tenderers. As has been mentioned, the tender with the lowest price need not necessarily be the most acceptable (see paragraph 34, above). The purchaser may also take into account other contractual obligations concerning which offers were solicited by the purchaser (see paragraph 27, above), as well as the

likelihood of the tenderer being able to fulfil his obligations (taking into account, for example, the tenderer's financial status, his past record, and his other contract commitments). Depending on the nature of the contract, further criteria (e.g., the extent of the transfer of technology to the purchaser, the nature of the skilled personnel allocated by the tenderer to the performance of the contract, the scope of the training of the purchaser's personnel proposed, the extent to which work is to be sub-contracted) may be considered in assessing the tenders. In the detailed evaluation, any deviations, qualifications or alternatives (see paragraph 38, above) stated by a tenderer must be evaluated in terms of their direct and indirect costs and benefits to the purchaser in order to determine which is the most acceptable tender.

(iii) *Discussions with most acceptable tenderer*

40. The purchaser may hold discussions with the most acceptable tenderer in order to consider any deviations in the tender from the purchaser's design or specifications, or alternatives in the tender to the contractual terms accompanying the invitation to tender (see paragraph 38, above). Through these discussions the parties may seek to resolve any differences there may be between the purchaser's requirements and the terms of the tenderer's offer. Mandatory rules of the applicable law or of a lending institution financing the construction may permit only details and qualifications or alternatives in respect of minor matters to be open to alteration once the tender has been received or opened by the purchaser. In that case, the purchaser's discussion with the most acceptable tenderer will be limited to those minor issues or details. But where the law of the purchaser's country and the rules of any relevant lending institution so permit, the discussions the purchaser may have with the most acceptable tenderer may be of a broader scope (see, also, paragraph 47, below).

(c) *Post-qualification and selection of successful tenderer*

41. The purchaser must be satisfied that the most acceptable tenderer is able to perform the contract. If a pre-qualification procedure has been used or a questionnaire as to his qualifications has been completed by the tenderer, the purchaser may need only to make certain that the tenderer's ability to perform has not deteriorated between the time of pre-qualification or the completion of the questionnaire and the time of the decision to select him. If these procedures have not been used, the purchaser may wish to require the tenderer to complete a questionnaire such as the one described in relation to pre-qualification (see paragraph 13, above).

42. Once the purchaser is satisfied that the most acceptable tenderer is able to perform the contract, he will notify the successful tenderer of his selection. The purchaser's written acceptance of the tender may of itself be sufficient to convert the tender into a concluded contract. Usually, however, the terms contained in the tender are incorporated in a formal, detailed contract entered into by the parties. The parties, or one of them, must prepare the contract incorporating all the terms of the tender and any changes or additions to which they may have agreed in their discussions (as to the drafting of the contract, see chapter IV, "General remarks on drafting"). Once the successful tenderer has entered into a contract and has furnished the required performance guarantee,

the tender guarantees of unsuccessful tenderers may be returned, unless they have already expired (see paragraph 30, above; cf. chapter XVII, "Security for performance", paragraph 37).

(d) Rejection of all tenders

43. If, under the applicable tender laws or regulations he is permitted to do so, the purchaser may reject all tenders received by him. Some international financing institutions, however, may require purchasers borrowing from them to conform to guidelines which limit the right of the purchaser to reject all tenders. Furthermore, the applicable law may contain mandatory rules requiring the purchaser to accept a tender which meets certain conditions.

C. Negotiation

44. Under this approach, the purchaser contacts one or more enterprises which he judges to be capable of constructing the works and negotiates with them with a view to concluding a contract with the enterprise which offers the best terms. The negotiations need not take place within a formal procedural framework. Nevertheless, it may be advisable for the negotiating parties to agree upon a certain basic framework for the negotiations. For example, at the outset of the negotiations, the parties may wish to agree, where there is no general obligation of confidentiality, that certain types of information (e.g., in respect of technological processes) disclosed by a party during the course of negotiations are to be kept confidential by the other party. In addition, they may wish to stipulate that no contractual obligations exist between the parties until such time as a written contract has been entered into between them (see paragraph 49, below).

45. It is desirable for the purchaser to furnish the enterprise or enterprises with which he is negotiating with documents describing the scope of the construction to be effected and the main technical characteristics of the works required and also containing the contractual terms proposed by the purchaser. Those documents may serve as a basis for the negotiations between the parties, and may contribute to the smooth progress of the negotiations. It may be useful to keep minutes of the negotiations as they progress, and those minutes may be authenticated on behalf of each party.

46. Where the purchaser negotiates with only one enterprise he may wish to require the tenderer in his offer to itemize the price in such a way as will enable the purchaser to compare the prices for different items and services with those he knows to have been paid for similar items or services. The absence of competition when the purchaser is negotiating with one enterprise means that only by such a comparison will the purchaser be able to evaluate the reasonableness of the price sought by the potential contractor.

47. In certain circumstances (see paragraph 4, above), the purchaser may be able to combine the tendering approach with the negotiating approach. For example, the purchaser may invite enterprises to submit tenders and, on receipt of their tenders, negotiate with the more acceptable tenderers. However, there may be reasons why the purchaser, even though he is free to do so, may not wish to employ such a combined approach. For instance, under this approach

tenderers may submit a higher tender price than they would if strict tendering were adopted in order to allow themselves a margin by which to reduce their tender price during negotiations to that which they would have submitted under strict tendering.

D. Entering into contract

48. In drafting and entering into the contract, the parties should take account of the applicable legal rules governing the formation and validity of the contract. Some of these rules may be of a mandatory nature.

1. Form of contract

49. Whichever approach to concluding the contract is adopted, the law governing the formation of the contract may require a works contract to be in a written form. Even where such a requirement does not exist it is advisable for the parties to reduce their agreement to writing to avoid later disputes as to what terms were actually agreed upon. It is also advisable for the contract to provide that it may be modified or terminated only by agreement in writing. Recommendations as to the drafting of the contract are contained in chapter IV, "General remarks on drafting".

2. Validity and entry into force of contract

50. In some cases, the parties may wish to provide that contractual obligations between them are to arise from the date the contract is entered into. In other cases, however, the parties may wish to provide that the contract is to enter into force on a date subsequent to the date on which the contract is entered into. For example, the parties may wish to agree that contractual obligations are to arise only from the date when a specified pre-condition is fulfilled (e.g., the date on which a required licence is obtained).

Footnotes to chapter III

¹Illustrative sample of invitation to apply for pre-qualification

"The purchaser is a [] having its principal office at [] and carries on the business of []. The purchaser proposes to construct works for the manufacture of []. The works to be constructed should comply with the following requirements: [here insert technical description of the works]. The purchaser intends entering into a contract with a contractor for the supply of the technology, equipment, materials, civil engineering, building and other construction services [here state the purchaser's requirements in the construction of the works], necessary for the construction of the aforementioned works. It is desired to have these works completed by the [] day of [] or within [] days of the conclusion of the tendering procedures. The anticipated date for the entering into of the contract is [] day of [].

"Tenders for the supply of the aforementioned technology, equipment, materials and civil engineering, building and other construction services will be considered only if they are submitted by parties considered qualified to tender on the basis of their replies to the pre-qualification questionnaire prepared in respect of this project.

"Copies of this questionnaire can be obtained from []. Completed questionnaires should be submitted to the purchaser at the address given above on or before the [] day of []."

²*Illustrative questionnaire to be given to enterprises that wish to be pre-qualified*

"The purchaser requires information regarding the following matters from enterprises that desire to be pre-qualified to tender for the construction of the works described in the invitation to pre-qualify. On the basis of the information supplied in response to this questionnaire, the purchaser will determine which parties are qualified to tender for the construction.

"The information required is as follows:

- "1. A description of the enterprise applying for pre-qualification, including details of its structure and organization and the extent of its experience as a contractor;
- "2. A financial statement certified by a qualified, independent person showing the assets and liabilities of the enterprise, and its working capital;
- "3. Bankers' references;
- "4. Details of the numbers, categories and, where available, the names and *curricula vitae* of supervisory staff and other key personnel proposed to be employed in the construction and their experience in the construction of industrial works;
- "5. A description of the source and nature of the main items of equipment and materials proposed to be used in the construction, the names of the principal subcontractors proposed to be employed in the construction, and the aspects of the construction for which they will be used;
- "6. A list of projects of comparable size and complexity which the enterprise has completed in the previous five years; the identities of the purchasers and the consulting engineers in those projects; the final contract price and the final costs for each of those projects; if the final contract price for a project was higher than the original contract price, the reasons therefor; whether each project was completed satisfactorily; and similar information on the performance record of the principal subcontractors proposed to be employed;
- "7. Information regarding the failure, if any, of the enterprise to complete work under a construction contract to which it was a party;
- "8. The enterprise's existing and anticipated work commitments;
- "9. The nature and amount of the enterprise's existing insurance coverage;
- "10. The name and address of the enterprise's performance bonding company for the past five years and, if different, the name of the bonding company from which the enterprise intends to secure performance bonds for future work;
- "11. Any types of business other than construction in which the enterprise is financially interested;
- "12. Any other information which the enterprise believes will be relevant to a decision to engage it for the construction."

³*Illustrative invitation to tender*

"The purchaser is a [] having its principal office at [] and carries on the business of []. The purchaser proposes to construct works for the manufacture of []. The works to be constructed should comply with the following requirements: [here insert technical description of the works]. The purchaser intends entering into a contract with a contractor for the supply of the technology, equipment, materials, civil engineering, building and other construction services [here state the purchaser's requirements in the construction of the works] necessary for the construction of the aforementioned works.

"Any enterprises interested in tendering for the supply of all or any of the aforementioned technology, equipment, materials and civil engineering, building and other construction services should complete the tender documents which are available from [] and submit them in sealed envelopes. The fee for the supply of these documents is []. The tender documents must be delivered to the purchaser at the above given address before the hour of [] on the [] day of [].

"A tender guarantee in an amount of [] is required. Evidence of such a guarantee must be submitted with the completed tender documents.

"This project is being financed by []. Accordingly, before a tender can be accepted, the eligibility criteria of the said financing institution(s) must be fulfilled by the tenderer".

⁴*Development Forum* is published by the Division for Economic and Social Information of the United Nations Department of Public Information, and the United Nations University.

Part Two

Chapter IV. General remarks on drafting

SUMMARY

Each party may find it desirable to establish for himself a procedure setting out the steps which it is necessary to take in negotiating and drawing up a works contract. When tendering procedures are adopted prior to entering into the contract, it is necessary for a first draft to be prepared by the purchaser to be submitted to prospective tenderers with the invitation to tender. If the contract is entered into on the basis of negotiations, a first draft may be prepared by one of the parties after negotiations have taken place on the main technical and commercial issues. Each party may find it useful to designate one person to be primarily responsible for supervising the preparation of the contract documents (paragraphs 1 to 3).

In drawing up the contract the parties should take into account the law applicable to the contract. They should also take into account the different types of relevant mandatory legal rules of an administrative, fiscal or other public nature in the country of each party (paragraphs 4 and 5). The parties may find it useful to examine standard forms of contract, general conditions, standard clauses or previously concluded contracts as aids to drafting, though their provisions should not be adopted without critical examination (paragraph 6).

The contract may be drawn up in only one language version, or in the two languages of the parties where those languages differ. If the contract is drawn up in two language versions, it is advisable to specify which version is to prevail in the event of a conflict between the versions. If the parties provide that both versions are to have equal status, they should attempt to provide guidelines for the settlement of disputes arising out of a conflict between the versions (paragraphs 7 and 8).

The parties may wish to identify and describe themselves in a document which is designed to come first in logical sequence among the contract documents, and to perform a controlling role over the other documents. That document should set forth the names of the parties, their addresses, the subject-matter of the contract, and also record the date on which and the place at which the contract was signed. Parties to works contracts are usually legal entities, and the parties may wish to investigate prior to entering into the contract such issues as the capacity of the entity to enter into the contract and the authority of an official to bind the entity (paragraphs 9 to 10).

The contract should be reduced to writing. It may, in addition, be desirable for the documents forming the contract to be clearly identified, and rules provided for resolving inconsistencies between contract documents (paragraphs 11 and 12). The parties may wish to clarify the extent to which oral exchanges, correspondence and draft documents which came about during the negotiations may be used to interpret the contract documents (paragraph 13).

The parties may wish to provide that headings and marginal notes used in the contract to facilitate its reading are not to be regarded as affecting their rights and obligations. If considered desirable, recitals may be included in the controlling document to describe the object of the contract, or the context in which it was entered into (paragraphs 14 and 15).

Works contracts frequently require a party to notify the other party of certain events or situations. It is desirable to require that all notifications be given in writing. The parties may determine the time when a notification is effective: either upon dispatch by the party giving the notification, or upon delivery to the party to whom the notification is given (paragraphs 18 to 21). The parties may wish to specify in their contract the legal consequences of a failure to notify (paragraph 22).

The parties may find it useful to define certain key words or concepts which are used in their contract. If a definition is to apply throughout a contract, it may be included in the controlling contract document. In formulating definitions relevant to their contract, the parties may find it useful to consider the definitions given in this chapter, and descriptions of concepts contained in other chapters of this *Guide* (paragraphs 23 to 26).

A. General remarks

1. A works contract is usually the end product of extensive exchanges between the parties, including oral communications and correspondence (see chapter III, "Selection of contractor and conclusion of contract"). Each party may find it desirable to establish for himself a procedure setting out the necessary steps to be taken in negotiating and drawing up the contract. Such a procedure, which may include suggestions made in this chapter, could be used as a checklist so as to reduce the possibility of omissions or errors occurring in the steps taken prior to entering into the contract. The purchaser may also wish to consider whether he needs legal or technical advice in drawing up the contract to supplement his own capabilities.

2. When tendering procedures are adopted, it is necessary for a first draft to be prepared by the purchaser to be submitted to prospective tenderers, since they will need to know the terms they are expected to meet when they submit their tenders. The preparation of a first draft may enable the purchaser to clarify his objectives and to determine his negotiating stance. However, if the contract is to be entered into on the basis of negotiations without the use of tendering procedures, it may be preferable for negotiations on the main technical and commercial issues to take place before a first draft is prepared, and for the parties to agree thereafter that one of them is to submit a first draft which reflects the agreement reached during the negotiations. A first draft may be discussed, refined and elaborated, resulting in a preliminary set of contract documents which, after final review, will become the contract between the parties.

3. A contract may need to be administered at a time long after the negotiations have taken place by persons who have not participated in the negotiations which resulted in the contract. Accordingly, the parties may wish to take particular care to ensure that the contract terms as expressed in writing are unambiguous and will not give rise to disputes, and that the relationship between the various documents comprising the contract is clearly established. To this end, each party may find it useful to designate one person, either on his

staff or specially retained for this purpose, to be primarily responsible for supervising the preparation of the contract documents. It is advisable for that person to be a skilled draftsman familiar with international works contracts. To the extent possible, it is advisable for that person to be present during important negotiations. Each party may find it useful to have the final contract documents scrutinized by a team having expertise in the areas of knowledge reflected in the documents in order to ensure accuracy and consistency of style and content.

4. The law applicable to the contract (see chapter XXVIII, "Choice of law", paragraph 1) may affect the contract in different ways. For example, that law may contain rules on the interpretation of contracts and may contain presumptions as to the meaning of certain words or phrases. It may also contain mandatory rules regulating the form or validity of contracts which it is advisable to take into account in drawing up the contract. In certain circumstances, the applicable law may contain non-mandatory rules regulating the contract in regard to certain issues, for instance, in regard to the quality of the goods and services to be supplied. One approach is for the applicable law to be determined at a very early stage of the relationship between the parties. Thus, where tendering procedures are adopted, the applicable law may be stipulated in the invitation to tender, or where those procedures are not adopted, that law may be agreed to at the commencement of negotiations. The contract may then be negotiated and drawn up taking that law into account. Another approach is for the parties to determine the applicable law only after negotiations have taken place on the main technical and commercial issues and have resulted in a measure of agreement between the parties (see paragraph 2, above). They may thereafter review the first draft of the contract, which reflects that agreement, in the light of the applicable law to ensure that the terms of the draft take account of the regulation by that law.

5. In drawing up the contract, the parties should take into account, in addition to the law applicable to the contract, the different types of relevant mandatory legal rules of an administrative, fiscal or other public nature in the country of each party. They should also take into account such mandatory legal rules in other countries when those rules are relevant to the performance of the contract. Certain rules may concern the technical aspects of the works or the manner of its construction (e.g., rules relating to environmental protection, or safety standards to be observed during construction), and the terms of the contract should not conflict with those rules. Other rules may concern export, import and foreign exchange restrictions, and may be taken into account when formulating the rights and obligations of the parties arising out of the export and import of equipment and materials, the supply of services and the payment of the price (e.g., the contract may provide that certain rights and obligations are not to arise until export or import licences have been granted). Legal rules in the country of the supplier of technology, whether he be the contractor or a third person, may regulate the terms upon which the technology can be transferred. Legal rules relating to taxation may be a factor influencing the contracting approach to be chosen (see chapter II, "Choice of contracting approach", paragraph 3, and chapter VII, "Price and payment conditions", paragraph 5) and may determine whether provisions are to be included in the contract dealing with liability for tax. Furthermore, the parties may wish to take into consideration treaties on the avoidance of double taxation which may have been concluded between their countries.

6. The parties may find it useful to examine standard forms of contract, general conditions, standard clauses, or previously concluded contracts as aids to facilitate the preparation of contract documents. Such aids may clarify for the parties the issues which are to be addressed in their negotiations. However, it is inadvisable to adopt their provisions without critical examination. Those provisions may, as a whole, reflect an undesirable balance of interests, or the various terms of the forms, conditions or contracts examined may not accurately reflect the terms agreed to by the parties. The parties may find it advisable to compare the approaches adopted in the forms, conditions or contracts examined by them with the approaches recommended in this *Guide*, and to refer to the illustrative provisions set forth in the various chapters of the *Guide* as aids to drafting (see also "Introduction", paragraphs 16 and 17).

B. Language of contract

7. The contract may be drawn up in only one language version (which need not be the language of either of the parties), or in the two languages of the parties where those languages differ. Drawing up the contract in only one language version will reduce conflicts of interpretation in regard to contractual provisions. On the other hand, each party may understand his rights and obligations more easily if one version of the contract is in his language. If one language only is to be used, the parties may wish to take the following factors into account in choosing that language: that it is advisable for the language chosen to be understood by the senior personnel of each party who will be implementing the contract; that it is advisable for the language to contain the technical terms necessary to reflect the agreement of the parties on technical issues; that it is advisable for the contract to be in a language commonly used in international commerce; that the settlement of disputes might be facilitated if, where the contract contains a jurisdiction clause (see chapter XXIX, "Settlement of disputes", paragraph 51) the language chosen is the language in which proceedings are conducted in the selected court, and where the contract does not contain a jurisdiction clause, the language chosen is one of the languages of the country of the applicable law.

8. If the parties do not draw up the contract in a single language version, it is advisable to specify in the contract which language version is to prevail in the event of a conflict between the two versions. For example, if the negotiations were conducted in one of the languages, they may wish to provide that the version in the language of the negotiations is to prevail. A provision that one of the language versions is to prevail would induce both parties to clarify as far as possible the prevailing language version. The parties may wish one language version to prevail in respect of certain contract documents (e.g., technical documents) and another language version in respect of the remainder of the documents. Alternatively, the parties may provide that both language versions are to have equal status. In that case, however, the parties should attempt to provide guidelines for the settlement of disputes arising out of a conflict between the two language versions. For example, they may provide that the contract is to be interpreted according to the understanding of a reasonable person, due consideration being given to all the relevant circumstances of the case, including any practices which the parties have established between themselves and usages regularly observed in inter-

national trade by parties to international works contracts. The parties may also wish to provide that where a term of the contract in one language version is unclear, the corresponding term in the other language version may be used to clarify that term.

C. Parties to and execution of contract

9. Where the contract consists of several documents, the parties may wish to identify and describe themselves in a principal document which is designed to come first in logical sequence among the documents, and to perform a controlling role over the other contract documents. Where the contract consists of a few documents, and their interrelationship is clear, this controlling role may be reduced. The document should set forth, in a legally accurate form, the names of the parties, indicate their addresses, record the fact that the parties have entered into a contract, briefly describe the subject-matter of the contract, and be signed by the parties. It should also set forth the date on which, and the place where, the contract was signed, and the time at which it is to enter into force. Subsequent reference in the contract to the parties would be facilitated if the phrases "hereinafter referred to as the purchaser" and "hereinafter referred to as the contractor" are added after the names of the purchaser and contractor respectively. The construction of works is sometimes undertaken by two or more enterprises acting in collaboration (sometimes referred to as a consortium: see chapter II, "Choice of contracting approach", paragraphs 9 to 16). In such cases, the names and addresses of each enterprise may be set out. A party may have several addresses (e.g., the address of its head office, the address of a branch through which the contract was negotiated) and it may be preferable to specify in the document the address to which notifications directed to a party may be sent.

10. Parties to works contracts are usually legal entities. In such cases the source of their legal status (e.g., incorporation under the laws of a particular country) may be set out in the contract. There may be limitations on the capacity of legal entities to enter into contracts. Therefore, unless satisfied of the other party's capacity to enter into the contract, each party may wish to require from the other some proof of that capacity. If a party to the contract is a legal entity, the other party may wish to satisfy himself that the official of the entity signing the contract has the authority to bind the entity. If the contract is entered into by an agent on behalf of a principal, the name, address, and status of the agent and of the principal may be identified, and evidence of authority from the principal enabling the agent to enter into the contract on his behalf may be annexed (unless sufficient evidence of authority has already been provided with the tender documents: see chapter III, "Selection of contractor and conclusion of contract", paragraph 22).

D. Contract documents, hierarchy and interpretation

11. It is desirable that the terms of the works contract be certain, and the documents which form the contract be clearly identified. The parties should in the first place reduce to writing the terms agreed upon between them. In addition, the contract should provide that any modification to such terms is also to be effected in writing. The documents forming the contract (e.g.,

documents setting out contract terms, drawings and specifications) may be attached as annexes to the principal document (see paragraph 9, above), with the principal document making clear through a definition of "the contract" (see paragraph 24, below) or otherwise, that the principal document and the annexes constitute the contract. When a draft document produced at an early stage of the negotiations is later intended to be a contract document, it is advisable to make this clear in the principal document. Some provision in the contract is desirable for the inclusion of new documents, such as drawings, specifications, variation orders, training or maintenance documents and schedules, which will only be produced after the contract is signed, but which will become part of the contract documents at some time through a pre-arranged contract mechanism. Where, for reasons of convenience, a single contract document is physically divided into parts, the parts may be identified as together constituting a single document.

12. Despite the best efforts of the parties to achieve consistency, it may be discovered during the performance of a contract that provisions in two documents, or even within the same document, appear to be inconsistent. It may be advisable to provide a method of determining which provision is to prevail in such cases. Parties may wish to provide that, where the principal contract document is inconsistent with other documents, it should always prevail. In particular, the contract should clarify that the obligations of the contractor with regard to the required type and operational capability of the works should, in the event of a conflict, prevail over the scope of the construction as indicated in the specifications and drawings. Where specifications and drawings are inconsistent, which document is to prevail may depend on the aspect of the construction involved. For example, it is often provided that in respect of civil engineering drawings are to prevail over specifications. A possible approach may be to provide that, unless the contract provides otherwise in respect of any special aspect of the construction, specifications should prevail over drawings. This approach may be justified on the basis that written terms may be considered a more reliable reflection of the agreement between the parties than data contained in drawings. As regards other documents, parties may wish, to the extent possible, to determine and indicate in the contract the order of priority among them. Where it is not possible to indicate an order of priority, the contract should provide that any dispute between the parties as to priority should be settled in dispute settlement proceedings (see chapter XXIX, "Settlement of disputes").

13. The parties may wish to clarify the relationship between the contract documents on the one hand, and the oral exchanges, correspondence and draft documents which came about during the negotiations leading to the contract, on the other. The parties may wish to provide that those communications and documents are not part of the contract. They may further provide that those communications and documents cannot be used to interpret the contract, or, alternatively, that they may be used for this purpose to the extent permitted by the applicable law. Under the law applicable to the contract, oral exchanges and correspondence might in some cases be relevant to the interpretation of the contract even if they come about after the contract is entered into. The parties may also wish to clarify in the manner described above the relationship between those communications and documents and the contract documents.

14. Contract documents, or groups of related provisions within a single document, may be introduced by headings. Furthermore, short marginal notes

may also be sometimes placed by the side of contract provisions indicating the substance of those provisions. Since headings and side notes are generally inserted only to facilitate the reading of the contract, the parties may wish to provide that they are not to be regarded as setting out or affecting the contractual rights and obligations of the parties.

15. The parties may wish to consider whether the principal contract document is to contain introductory recitals. The recitals may set forth representations made by one or both parties which induced the parties to enter into the contract. The recitals may also set out the object of the contract or describe the context in which it was entered into. The extent to which recitals are used in the interpretation of a contract varies under different legal systems, and their impact on interpretation may be uncertain. Accordingly, if the contents of recitals are intended to be significant in the interpretation or implementation of the contract, it may be preferable to include those contents in contract provisions.

16. When a contracting approach involving several contracts is adopted, the time-schedules for the performance by two or more contractors of their respective obligations in regard to different aspects of the construction are often interdependent (see chapter IX, "Construction on site", paragraphs 20 and 21). Thus, delay by one contractor may result in a second contractor being unable to commence his part of the construction on the appointed date. The second contractor may be entitled to recover compensation for loss arising out of the delay from the purchaser and the purchaser will wish, in turn, to be indemnified by the delaying contractor. In order to prevent the delaying contractor from later denying that he failed to foresee the possible consequences of his delay, it may be advisable for each contract to mention the relationship of its time-schedule to related time-schedules of other contracts, and to indicate that delay in performance may cause delay in the performance of other contracts (see chapter XX, "Damages", paragraphs 9 and 10). If a time-schedule integrating the performances of the various separate contracts has been prepared, it may be sufficient to annex this integrated time-schedule to the different contracts. Similarly, plans indicating the interdependency of the various aspects of the construction can be annexed to the contracts.

17. The parties should be aware that the successful implementation of the contract will depend on co-operation between them in that implementation. While it may be impossible for the contract to enumerate instances in which co-operation should occur, it may be desirable for the contract generally to obligate each party to both co-operate with the other party to the extent needed for the performance of the other party's obligations and avoid conduct which would interfere with that performance.

E. Notifications

18. Works contracts frequently require a party to notify the other party of certain events or situations. Such notifications may be required for one or more of the following purposes: to enable co-operation in the performance of the contract (e.g., a notification by the contractor that tests will be held on a specified date: see chapter XII, "Inspections and tests during manufacture and construction", paragraph 13); to enable the party to whom notification is given to take action (e.g., a notification by the purchaser of defects discovered by him

in the works, in order to give the contractor an opportunity to remedy the defects: see chapter XVIII, "Delay, defects and other failures to perform", paragraph 44); as the prerequisite to the exercise of a right (e.g., notification by a party to the other of the existence of an exempting impediment, such notification being a prerequisite to the right of the notifying party to rely on an exemption clause: see chapter XXI, "Exemption clauses", paragraph 27); or as the means of exercising a right (e.g., when the contract requires termination to be in writing: see chapter XXV, "Termination of contract", paragraph 2). The parties may wish to address and resolve in their contract certain issues which arise in connection with such notifications.

19. In the interests of certainty, it is desirable to require that all notifications referred to in the contract be given in writing, although in certain cases requiring immediate action the parties may wish to provide that notification can be given orally in person or by telephone, to be followed by confirmation in writing. The parties may wish to define "writing" (see paragraph 24, below) and to specify the means of conveying written notifications (surface mail, airmail, telex, telegraph, facsimile, electronic data transmissions) that are acceptable. They may also wish to specify the language in which notifications are to be given, e.g., the language of the contract or, in technical matters, the language used by the consulting engineer. With regard to the time when a notification is to be effective, two approaches are available to the parties. They may provide that a notification is effective upon its dispatch by the party giving the notification, or after the lapse of a fixed period of time after the dispatch. Alternatively, they may provide that it is effective only upon delivery of the notification to the party to whom it is given (see paragraph 25, below). Under the former approach, the risk of a failure to transmit or an error by the transmitting agency in transmission of the notification rests on the party to whom the notification is sent, while under the latter approach it rests on the party dispatching the notification. The parties may find it advantageous to select a means of transmitting the notification which provides proof of the dispatch or delivery, and of the time of dispatch or delivery. Another approach may be to require the party to whom the notification is given to acknowledge receiving the notification.

20. It may be convenient for the contract to provide that, unless otherwise specified, one or the other approach with respect to when a notification becomes effective (on dispatch or delivery) is to apply to notifications referred to in the contract. Exceptions to the general approach adopted may be appropriate for certain notifications. Thus, when a general rule is adopted that a notification is to be effective upon dispatch, it may nevertheless be provided, for example, that a notification to be given by a party who has failed to perform is to be effective upon delivery. When a general rule is provided that a notification is to be effective upon delivery, it may nevertheless be provided, for example, that where a purchaser who fails to notify the contractor of the existence of defects in the works loses his remedies in respect of those defects, a notification of defects is to be effective upon dispatch. The contract may obligate the purchaser to maintain a representative on site, who is authorized to give and receive notifications on his behalf.

21. Since the contractor will sometimes have a representative in the country where the works is being constructed, the contract may provide that notifications by the purchaser to the contractor may be given to that

representative, and also that the representative is authorized to give notifications on behalf of the contractor. The uncertainties of foreign transmission of notifications may thereby be reduced. All notifications of a routine character required in the course of the performance of the contract may be given to the representative. If the representative is present on site, a written record of the notifications (e.g., a correspondence log) may be jointly maintained on site by the representatives of the purchaser and the contractor. The contract may also provide that notifications which are not of a routine character (e.g., notifications of suspension of obligations, or termination of the contract) are to be given only to the head office of the parties.

22. The parties may wish to specify in their contract the legal consequences of a failure to notify. The possible legal consequences of a failure to notify by a party who is obligated to give a notification are dealt with in chapter XVIII, "Delay, defects and other failures to perform" (paragraph 65). Certain chapters of this *Guide* refer to notifications which may be needed, or be appropriate, in particular contexts, and deal with the legal consequences which may be appropriate in those contexts for a failure to notify. In some cases, a party to whom a notification is given may be required to give a response to that notification. The parties may wish to specify the consequences of a failure to respond. For example, they may provide that a party to whom drawings or specifications are sent for approval who does not respond within a specified period of time is deemed to approve them.

F. Definitions

23. The parties may find it useful to define certain key words or concepts which are frequently used in their contract. A definition ensures that the word or concept defined is understood in the same sense whenever it is used in the contract, and dispenses with the need to clarify the intended meaning of the word or concept on each occasion that it is used. A definition is advisable if a word which needs to be used in the contract is ambiguous. Definitions contained in a contract are sometimes made subject to the qualification that the words defined bear the meanings assigned to them, "unless the context otherwise requires". Such a qualification deals with the possibility that a word which has been defined has inadvertently been used in a context in which it does not bear the meaning assigned to it in the definition. The preferable course is for the parties to scrutinize the contract carefully to ensure that the words defined bear the meanings assigned to them wherever they occur, thereby eliminating the need for such a qualification.

24. Since a definition is usually intended to apply throughout a contract, a list of definitions may be included in the controlling contract document. Where, however, a word which needs definition is used only in a particular provision or a particular section of the contract, it may be more convenient to include a definition in the provision or section in question.

25. Such words as "contract", "site", "contractor's machinery and tools", "dispatch of notification", "delivery of notification" and "subcontractor" may usefully be defined in the contract. The parties may wish to consider the following definitions and to draw guidance from them in formulating definitions relevant to their contract:

“The contract”: “The contract” consists of the following documents, and has that meaning in all the said documents:

(a) This document

(b) ...

(b) ...

etc.

“Writing”: “Writing” includes statements contained in a telex, telegram or other means of telecommunication which provides a record of such statements.

“Dispatch of a notification”: “Dispatch of a notification” by a party occurs when it is properly addressed and conveyed to the appropriate authority for transmission by a mode authorized under the contract.

“Delivery of a notification”: “Delivery of a notification” to a party occurs when it is handed over to that party, or when it is left at an address of that party at which, under the contract, the notification may be left.

26. The parties may find it useful, when formulating their own definitions, to consider the descriptions contained in the *Guide* of the various concepts commonly used in works contracts. Those descriptions can be located by the use of the index to this *Guide*.

Chapter V. Description of works and quality guarantee

SUMMARY

It is essential that the contract precisely describe the works or portion of the works to be constructed. The contracting approach chosen by the purchaser, and the procedure adopted for concluding the contract, may determine which party is to prepare the documents describing the construction to be effected (paragraphs 1 and 2). The scope of construction and the technical characteristics of the works may be reflected in the principal contract document, and in specifications, drawings and standards. The parties should clearly identify the descriptive documents which form part of the contract (paragraphs 3 and 4). The technical characteristics of the works, or equipment to be incorporated in the works, may be described in terms of operating capability rather than by reference to designs, materials and workmanship. However, in respect of some items (e.g., materials) technical characteristics may need to be described by reference to appropriate requirements as to the quality (paragraphs 8 and 9).

Specifications may describe in technical language the scope of the construction to be effected, and the technical characteristics of the equipment and materials to be incorporated in the works (paragraph 10). Specifications may have general and special provisions (paragraphs 11 and 12). The character of specifications may differ in respect of various elements of the construction (paragraph 13).

The technical characteristics of certain aspects of the construction may be defined by reference to standards. The specified standards should be internationally accepted and widely used. The standards to be applied should be clearly identified in the contract (paragraphs 14 to 16).

Drawings show in diagrammatic form the various component parts of the works. In some cases the purchaser supplies basic drawings, with the contractor being obligated to prepare detailed drawings which elaborate the technical ideas already contained in the basic drawings. The contract may provide that the detailed drawings are to be submitted to the purchaser for his approval (paragraphs 17 to 19).

Specifications and drawings may be inaccurate or insufficient, or inconsistent with one another. It is advisable to determine which party is to bear the costs occasioned by the supply of inaccurate, insufficient or inconsistent specifications and drawings (paragraphs 20 to 22).

The contract may determine the extent to which a party is to treat as confidential technical documents supplied by the other party, and the consequences of a breach of confidentiality. The contract may provide for the transfer to the purchaser of ownership of technical documents supplied by the contractor, but limit the purposes for which they may be used by the purchaser (paragraphs 23 to 25).

It is advisable to provide for a quality guarantee under which the contractor assumes liability for defects discovered and notified before the

expiry of a guarantee period specified in the contract. The parties may wish to provide for certain limitations to the contractor's liability under the guarantee (paragraphs 26 and 27). Various factors may be taken into account in determining a reasonable length for the guarantee period. It is advisable to determine when the guarantee period commences to run, and the circumstances in which the period may be extended (paragraphs 28 to 31).

A. General remarks

1. It is essential that a works contract precisely describe the works or portion of the works to be constructed. Whether a contractor has failed to perform his construction obligations will be decided by reference to that description (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 1). The description may specify the type of the works (e.g., power station), the scope of the construction (i.e., the entire works or aspects of the construction, such as civil engineering, building or the supply and installation of equipment) and the technical characteristics of the works, equipment, materials and construction services.

2. The contracting approach chosen by the purchaser (see chapter II, "Choice of contracting approach") and the procedure adopted for concluding the contract (see chapter III, "Selection of contractor and conclusion of contract", paragraph 1) may determine which party is to prepare the documents describing the construction to be effected. For example, if the purchaser solicits tenders for the construction of the entire works on a turnkey contract basis, he will describe in his invitation to tender the main technical features and operational capabilities which he requires in the works to be constructed. Tenderers may be obligated to prepare and submit specifications and drawings (see paragraph 3, below) describing, in conformity with the invitation to tender, the technical characteristics of the works that they are prepared to construct. If a contracting approach involving several contracts is chosen by the purchaser, and the design for the works is to be supplied by him, he may need to prepare and supply the specifications and drawings in respect of the construction to be effected by each separate contractor. The totality of the specifications and drawings provided to all the contractors should cover without overlap or omission the entire works to be constructed.

B. Determination in contract documents of construction scope and technical characteristics of works

3. The scope of construction and the technical characteristics of the works may be reflected in different types of contract documents. The principal contract document (see chapter IV, "General remarks on drafting", paragraph 11) may identify the type of works to be constructed, and contain a general description of the scope of the construction to be effected and the technical characteristics of the works. In addition, this document may also indicate the major elements of the scope of the construction to be effected (e.g. building, civil engineering, or the major items of equipment to be installed). A detailed description of the scope of construction, the technical characteristics of the works, and the nature of construction processes to be used may be contained in contract documents usually entitled "specifications" (see section E,

below) and "drawings" (see section G, below). Specifications describe the technical characteristics, and drawings depict the intended use, of equipment, materials and construction services. When civil engineering and building are involved, contracts often contain another type of document which sets forth further details of the scope of the construction to be effected. The contract may also specify technical standards to be observed in the construction (see section F, below).

4. Some of the documents mentioned above focus primarily on legal issues, while others focus on technical aspects and engineering details. Nevertheless, all these documents are legally important because together they determine the scope of construction and the technical characteristics of the works. The parties should therefore clearly identify them as contract documents (see chapter IV, "General remarks on drafting", paragraph 11).

5. In preparing contract documents describing the construction to be effected, the parties should take into account any mandatory rules of an administrative or other public nature in force in the country where the works is to be constructed, or in the country in which equipment and materials are to be manufactured, which regulate technical aspects of the works, equipment, materials and construction processes (see chapter XXVIII, "Choice of law", paragraphs 22 and 23). Such rules are often promulgated to secure the safe operation of the works, environmental protection and proper working conditions for personnel operating the works. Apart from relevant local, national and international legal rules and the provisions of the contract, there may exist local, national and international standards or codes of practice concerning health, safety and environmental conservation. It is advisable for the parties to agree that the contractor will comply with these requirements.

C. Scope of construction

6. In the case of a turnkey contract or product-in-hand contract (see chapter II, "Choice of contracting approach", paragraphs 4 to 8), the general description of the scope of construction (see paragraph 3, above) may be complemented by an additional contractual provision obligating the contractor to effect all construction which, although not specifically described, is nevertheless necessary or usual, having regard to the agreed operational capabilities of the works. Such a provision may avoid disputes as to who is to supply small items of material or perform minor items of construction either forgotten during the negotiations or not considered worthy of special mention. The mere use of the term "turnkey" or "product-in-hand" may not be sufficient to impose such an obligation on the contractor (see chapter II, "Choice of contracting approach", paragraphs 4 to 8).

7. Where more than one contractor is engaged to effect the construction, the purchaser may sometimes wish to add to the description of the construction to be effected by each contractor an enumeration of the construction to be effected by other contractors. Although it is not essential to enumerate construction not to be performed by a contractor, such a negative identification sometimes makes for certainty. Where one contractor is to design the entire works, that contractor may be obligated to describe the construction to be effected by other contractors to enable the purchaser to include that description in the contracts concluded with those contractors (see chapter II, "Choice of contracting approach", paragraph 18).

D. Technical characteristics of works, equipment, materials and construction services

8. The technical characteristics of the works or equipment to be incorporated in it may be described in terms of operation capability rather than by reference to designs, materials and workmanship. By employing this approach, the contractor would be liable for a failure of the works or equipment to reach the agreed capability without a need for the purchaser to prove that the failure resulted from defective design, materials or workmanship. This approach is particularly advisable when the purchaser enters into a turnkey or product-in-hand contract. However, this approach may also be used where several contractors are engaged for the construction, and the portion of the works to be constructed or the equipment to be supplied and installed by each contractor can be described in terms of operation capability. Depending upon the type of works to be constructed, operation capability may be expressed by reference to the quantity and quality of products to be produced by the works, consumption of raw-materials by the works, consumption of power, and other factors.

9. In respect of some items, in particular, materials to be incorporated in the works, a description in terms of operation capability may not be possible, and the characteristics of the materials or construction services may need to be described in technical language, by reference to some appropriate requirements as to the quality (e.g. the strength of steel). The use of terms such as "first class", "the best quality" or "most suitable" to indicate a level of excellence may result in uncertainty. However, the use of certain terms (such as "new and at least of regular commercial quality") may be justified if they have acquired a degree of settled meaning in commercial practice, or under the law applicable to the contract.

E. Specifications

10. Some specifications may describe in technical language the scope of the construction to be effected, and the technical characteristics of the equipment and materials to be incorporated in the works. Other specifications may, in addition, describe the construction processes to be used and how the equipment and materials are to be utilized in the construction processes. In many cases, the specifications are a combination of both approaches.

11. Specifications may have general provisions and special technical provisions. The general provisions in specifications, while corresponding in content to the general description of the construction in the principal contract document (see paragraph 3, above), may be more elaborate. No guidelines applicable in all cases can be laid down for the drafting of these provisions in specifications. However, the generally technical nature of specifications will result in these provisions containing more technical data and being more technically precise and elaborate than the descriptive provisions of the principal contract document. It is advisable for the parties to compare the description of the construction contained in the principal contract document with that contained in the specifications in order to prevent any inconsistency.

12. The special provisions of specifications may contain a detailed technical description of each element of the construction. These provisions may describe the types and kinds of equipment and materials to be used, their physical

properties and performance characteristics, their sizes and dimensions. In some cases these provisions specify the techniques to be used in manufacture, and indicate other technical data which reflect agreed technical characteristics. In some instances, it may be useful for the provisions to specify the construction processes to be used by the contractor, or a special sequence to be followed during the construction process.

13. The character of specifications may differ in respect of various elements of the construction. The specifications for building may need to be more detailed than those for civil engineering due to the multitude of smaller items contained in the building component of the construction. In specifications for equipment, where the emphasis is likely to be on the operation capability of the equipment, the specifications will necessarily have to leave considerable latitude to contractors in selecting the proper design, manufacturing techniques and materials to achieve the required capability. In regard to materials, their technical characteristics may in some cases have to be defined in terms of outward appearance, while in others they may have to be defined in terms of physical or chemical properties. The contract may require specified inspections and tests to be conducted in respect of certain materials in order to ensure that they are of the required quality (see chapter XII, "Inspections and tests during manufacture and construction").

F. Standards

14. Professional engineering institutions and trade associations often specify criteria with which equipment, materials and construction processes may be required to comply. These criteria are referred to in this chapter as "standards". The parties may find it convenient to define the technical characteristics of various elements of the construction (e.g. civil engineering, equipment, materials) by reference to specified standards.

15. Some standards have become internationally accepted and are widely used in international tendering and contracting. Such standards may relate to matters such as the quality, contents, dimensions, form, weight, composition, packing, and testing of certain equipment or materials. As a rule, the use of such standards is advisable, because the standards give tested and verified criteria in respect of the matters which they regulate, and provide an assurance of quality through uniform testing and inspection procedures.

16. Standards to be applied should be clearly identified in the contract, e.g. by reference to the body which issued the standard and the date on which the standard was issued. The parties should make sure that the standards chosen by them are appropriate for the type of works to be constructed, since the use of inappropriate standards may lead to defects in the works. Standards specified in an invitation to tender (see chapter III, "Selection of contractor and conclusion of contract", paragraphs 15 to 18) should be both internationally accepted and familiar in the purchaser's country. Specifying standards which are not internationally accepted may preclude contractors from certain regions from tendering; specifying standards which are not familiar in the purchaser's country may reduce the possibility of engaging subcontractors or using materials from that country.

G. Drawings

17. Drawings show in diagrammatic form the various component parts of the works and, in some cases, the appearance of the whole works. In cases where the purchaser is responsible for supplying the drawings, it may often occur that drawings supplied by the purchaser before the contract is entered into (e.g. together with the invitation to tender) will not be sufficient for the execution of the construction, and that further drawings become necessary. In such cases the purchaser may be obligated to supply further and more detailed drawings after the contract is entered into. Such further drawings should be consistent with earlier drawings, as otherwise the new drawings may be considered a variation order (see chapter XXIII, "Variation clauses", paragraph 3).

18. In some cases, although the purchaser is to supply basic drawings, the contractor may be obligated under the contract to prepare detailed or "shop" drawings (drawings which contain detailed elaboration of the technical ideas already contained in the basic drawings). The contract may provide that the detailed drawings which the contractor is to prepare are not to contain any deviations from the basic drawings. In order to maintain proper control over the work of the contractor, it may in some cases be desirable to obligate the contractor to submit all detailed drawings to the purchaser. The contract may entitle the purchaser to require corrections to be made to the detailed drawings so as to make them accord with the basic drawings, and to require that any work already executed on the basis of inconsistent detailed drawings be re-executed so as to conform to the basic drawings. It is advisable that the contract determine whether detailed drawings submitted by the contractor require the approval of the purchaser before they can be acted upon by the contractor.

19. If the contract requires the purchaser's approval of the detailed drawings, the purchaser may, if he approves the drawings, be obligated to notify his approval within a specified period of time after the drawings have been delivered to him. If he fails to do so, he may be liable for delay in performing this obligation (see chapter XVIII, "Delay, defects and failures to perform", paragraphs 65 and 66). The contract may provide that once he has approved the drawings, the purchaser is entitled to require a change in them only in accordance with the provisions in the contract regulating variations (see chapter XXIII, "Variation clauses"). Where the purchaser is not required to approve drawings, the contract may provide that the absence of objection by the purchaser to detailed drawings is not to be deemed to be consent by the purchaser to deviations in those drawings from the basic drawings.

H. Liability for inaccurate, insufficient or inconsistent specifications and drawings

20. When specifications and drawings are to be supplied by the purchaser, the contractor may be obligated to analyze them with a view to discovering inaccuracies or insufficiencies in the information contained therein, or inconsistencies between them. The contract may provide that the contractor is to be liable for damages if, within a specified or reasonable period of time after he has discovered or could reasonably have been expected to have discovered any inaccuracies, insufficiencies or inconsistencies in the specifications and

drawings, he fails to notify the purchaser of them. The purchaser may be obligated under the contract to pay costs reasonably incurred by the contractor in making corrections and changes required by inaccuracies, insufficiencies or inconsistencies which the contractor did not discover and could not reasonably have been expected to discover. When the contractor could not reasonably have been expected to discover the defects, and the construction must be interrupted due to the defects, the contract should entitle the contractor to be compensated for reasonable costs incurred by him as a result of the defects, including the interruption of his performance, and to an extension of time for completion.

21. When specifications and drawings are to be supplied by the contractor, he may be required under the contract to bear the costs occasioned by all corrections and changes necessitated by inaccuracies, insufficiencies or inconsistencies. Moreover, if there is a resulting delay in the contractor's performance, he may, in addition, be liable to the purchaser for that delay (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 17 to 25).

22. In some cases drawings might be prepared jointly by the parties, and they may wish to consider how errors in the drawings are to be corrected and how the liability for those errors is to be allocated between them. Where each party prepares a distinct part of the drawings, the contract may provide that each party is liable for errors in that part of a drawing which he has prepared. Where the entire drawing has been prepared jointly, the contract may obligate the parties to correct the errors jointly, and to share equally the costs incurred.

I. Protection of specifications, drawings and other technical documents

23. Each party may sometimes wish to keep the contents of certain specifications, drawings or other technical documents confidential. Mandatory rules of an administrative or other public nature in force in the countries of the parties may regulate the extent to which obligations as to confidentiality may be imposed on a party. Those rules may also obligate the parties to disclose the contents of the documents to public authorities in the country of the purchaser or of the contractor. Where certain documents are to be kept confidential, it is advisable in the contract to identify clearly these documents, and to specify the extent and duration of the confidentiality and the extent of permissible disclosure. The parties may wish to agree that the obligation to maintain confidentiality is to remain in force for a certain duration even if the contract is terminated. The contract may provide that the purchaser is entitled to disclose the contents of confidential documents to persons engaged to complete the construction, to cure defects in the works (see chapter XVIII, "Delay, defects and other failures to perform"), or to maintain or repair the works (see chapter XXVI, "Supplies of spare parts and services after construction") to the extent necessary for those persons to perform their duties, provided those persons give undertakings to the purchaser that they will not disclose the contents to third persons.

24. The contract may provide for the transfer to the purchaser of ownership of the documents containing specifications, drawings and other technical data handed over by the contractor to the purchaser for the purposes of indicating the scope of construction and the technical characteristics of the works. The purchaser may need these documents for later maintenance and repair of the works. Since the contractor may have rights based on industrial or other

intellectual property in respect of the contents of the documents, the parties may wish to provide that the purchaser is entitled to use the documents only for maintenance and repair of the works covered by the contract, but not for the construction of other works.

25. The parties may also wish to provide for the consequences of a breach of an obligation relating to confidentiality (see paragraph 23, above) or the use by the purchaser of a technical document for a purpose for which he is not entitled to use it (see previous paragraph). The aggrieved party may be entitled to damages. If the breach occurs before completion of the construction, the aggrieved party may, in addition, also be entitled in some situations to terminate the contract (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 65).

J. Quality guarantee¹

26. It is advisable to provide in the contract for a quality guarantee under which the contractor assumes liability for defects in the works, and for inaccuracies or insufficiencies in technical documents supplied with the works, discovered and notified to him before the expiry of a guarantee period specified in the contract. The guarantee may cover the entire works or only a portion of the works, depending on whether the contractor has constructed the entire works or only a portion. What constitutes a defect in the works and the remedies which the purchaser may have when the contractor is liable under the guarantee, and the question whether there exists any liability after the expiry of the guarantee period are discussed in chapter XVIII, "Delay, defects and other failures to perform".

1. *Limitation in scope of guarantee*

27. The parties may wish to agree that the contractor is not to be liable under the guarantee if the works fail to operate in accordance with the contract during the guarantee period as a result of:

- (a) Normal wear and tear;
- (b) Faulty operation or maintenance of the works by the purchaser or persons engaged by him, unless the faulty operation or maintenance is the result of incorrect instructions on operation or maintenance given by the contractor;
- (c) Defective design, equipment or materials supplied or incorrect instructions given by the purchaser;
- (d) Improper repair or alteration of the works effected without the contractor's consent by the purchaser or a person engaged by him. However, where the contract entitles the purchaser to repair the defects in the works by engaging a new contractor at the expense and risk of the contractor (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 36, 40 and 47), the contract may provide that the contractor is liable under the guarantee in respect of defects in the works caused by improper repair by the new contractor;
- (e) Events which cause loss or damage to the works where the risk of such loss or damage is borne by the purchaser (see chapter XIV, "Passing of risk").

2. *Guarantee period*

(a) *Length of guarantee period*

28. Various factors may be taken into account in determining a reasonable length for the guarantee period, such as the nature of the works (in particular the level of sophistication of the equipment installed in the works) and the difficulty of discovering defects. The parties may also wish to take into account the length of the guarantee period which is usually specified under international trade practice in respect of works of the same type or works with similar characteristics. The purchaser may have to pay a higher price if he wants a guarantee period that is longer than normal. In respect of certain types of works, it may be reasonable to specify guarantee periods of different lengths in respect of different portions of the works.

(b) *Commencement of guarantee period*

29. If a single contractor is to construct the entire works, the guarantee period may commence to run from the date of acceptance of the works by the purchaser, or, alternatively, from the date of take-over of the works by him. If several contractors are engaged for the construction, and the portion of the works constructed by a contractor (e.g. a power station) can be operated and performance tests conducted in respect of that portion before completion of construction of the rest of the works, the guarantee period may commence to run when that portion of the works is accepted or taken over by the purchaser (see chapter XIII, "Completion, take-over and acceptance"). If it is not possible to operate that portion and conduct performance tests in respect of that portion until the completion of construction of the entire works, it may be provided that the guarantee period in respect of that portion commences to run from the date of acceptance of the entire works. However, the contractor may be reluctant to postpone the commencement of the guarantee period until the date of acceptance of the entire works, since this might lead to an extension of the period for which the contractor is responsible for defects as a result of the delay of another contractor. An approach which may resolve this difficulty is to add to the normal guarantee period for that portion of the works an estimated period for completing the rest of the construction, and to provide that the guarantee period in respect of the portion is to consist of the combined length of these two periods, commencing to run from the date of completion of the construction of the portion by the contractor. If this approach is adopted, a delay in the completion of the entire construction due to a failure of performance by another contractor will not result in any extension of the guarantee period. Another approach which may resolve the difficulty is to provide in the contract that the normal guarantee period for the portion of the works commences to run from the date of acceptance or take-over of the entire works, but that the guarantee does not extend beyond a longer period of time to be specified in the contract, which would be longer than the normal guarantee period, commencing to run from the date of completion of the portion constructed by the contractor.

(c) *Extension of guarantee period*

30. The contract may provide that the guarantee period is to be extended by any period of time during which the works cannot be operated as a result of a defect covered by the guarantee. This extension may cover the entire works if

no part thereof could be operated, or a portion thereof if only a portion could not be operated. If defective equipment or materials are repaired or replaced, a new guarantee period may commence to run in respect of the repaired or replaced equipment or materials. If as a result of the defects in the equipment and materials the works could not be operated, this new guarantee period may commence to run from the date when the works can be operated after the repair or replacement. If the works could be operated despite the defects in the equipment and materials, the new guarantee period may commence to run from the date of the repair or replacement. The contract may determine the length of the new guarantee period. The parties may wish to consider whether it is advisable to agree that any new guarantee period is not to exceed a maximum period commencing to run from the date that the initial guarantee period in respect of the equipment or materials commenced to run.

3. *Manufacturer's guarantee*

31. If equipment to be installed in the works is not manufactured by the contractor but by third persons, those manufacturers may provide to the contractor a guarantee in respect of that equipment with a guarantee period longer than the guarantee period provided by the contractor to the purchaser in respect of the construction to be effected by the contractor. The contractor may be obligated to inform the purchaser of the content and length of such guarantees provided by manufacturers, and to transfer to the purchaser all the contractor's rights arising from such guarantees. If a transfer is not permitted under the applicable law, the parties may wish to agree that the guarantee provided by the contractor to the purchaser is not to expire in respect of the equipment covered by the manufacturer's guarantee before the expiration of that guarantee.

Footnote to chapter V

¹Illustrative provisions

“(1) The contractor guarantees that, during the guarantee period, the works will be capable of operation in accordance with the contract, that all equipment, materials and other supplies annexed to or forming part of the works will conform with the drawings, specifications and other contractual terms relating to the equipment, materials or other supplies, and that all technical documents supplied by him are correct and complete.

“(2) The contractor is liable only in respect of defects in the works, equipment, materials or other supplies, or inaccuracies and insufficiencies in technical documents, which are notified to him by the purchaser before the expiry of the guarantee period.

“(3) The contractor is not liable under paragraphs (1) and (2) of this article if the works fail to operate in accordance with the contract during the guarantee period as a result of:

- normal wear and tear;
- faulty operation or maintenance carried out by the purchaser or persons engaged by him, unless the faulty operation or maintenance is a result of incorrect instructions on operation or maintenance given by the contractor;
- defective design, equipment or materials supplied or incorrect instructions given by the purchaser;
- improper repair or alteration of the works effected by the purchaser or persons engaged by him, unless the repair or alteration was effected with the written consent of the contractor;
- any event which causes loss or damage to the works where the risk of such loss or damage is borne by the purchaser.

“(4) The guarantee period commences to run from the date of [acceptance] [take-over] of the works, and continues for . . . (indicate a period of time).

“(5) The guarantee period ceases to run during any period of time during which the works is not capable of being operated due to a defect covered by this guarantee. If only a portion of the works is not capable of being operated, the guarantee period ceases to run in respect of that portion.

“(6) When the works cannot be operated as a result of defective equipment or materials, and the defective equipment or materials are repaired or replaced, a new guarantee period commences to run in respect of the repaired or replaced equipment or materials from the date the works can be operated after the repair or replacement. Where the works can be operated despite defective equipment or materials, a new guarantee period commences to run in respect of the repaired or replaced equipment or materials from the date of the repair or replacement.”

Chapter VI. Transfer of technology

SUMMARY

The purchaser will require a knowledge of the technological processes necessary for production by the works, and require the technical information and skills necessary for its operation and maintenance. The communication to the purchaser of this knowledge, information and skills is often referred to as the transfer of technology (paragraph 1).

Differing contractual arrangements can be adopted for the transfer of technology and the performance of the other obligations necessary to construct the works (paragraph 2). The transfer of technology itself may occur in different ways, for example, through the licensing of industrial property (paragraph 3), through the creation of a joint venture between the parties (paragraph 4) or the supply of confidential know-how (paragraph 5). The information and skills necessary for the operation and maintenance of the works may be communicated through the training of the purchaser's personnel or through documentation (paragraph 6).

The manner in which the technology is to be described may depend on the contractual arrangements which are adopted (paragraph 11). When deciding whether various restrictions are to be imposed on the purchaser's use of the technology, the parties should take into account mandatory legislation which may regulate such restrictions and should attempt to negotiate provisions which are balanced and which impose only those restrictions necessary to protect the legitimate interests of each party (paragraphs 12 to 16).

The guarantees to be given by the contractor may depend on the contractual arrangements adopted. Under certain arrangements a separate guarantee in respect of the technology may be unnecessary, while under other arrangements a qualified guarantee may be given that the use of the technology will result in the operation of the works in accordance with specified parameters provided certain conditions are satisfied (paragraph 17). The price for technology which is transferred is usually determined as a lump sum or in the form of royalties (paragraphs 18 to 20).

The parties may wish to include in the contract an undertaking by the contractor that the use of the technology transferred will not result in claims by a third person whose industrial property rights may be infringed by the use (paragraph 21). They may wish to specify the procedure to be followed by them and their rights and obligations in the event of a claim by a third person (paragraph 22).

The contractor will wish to obligate the purchaser to maintain confidentiality in respect of know-how supplied. The contract should clearly define the extent to which confidentiality is imposed, and provide for situations in which the purchaser may reasonably need to disclose the know-how to third persons (paragraphs 23 and 24).

In drafting contract provisions on the training of the purchaser's personnel, issues to be dealt with may include the categories and numbers of trainees, their qualifications, the procedure for selecting the trainees, the places at which they are to receive training, and the duration of the training (paragraphs 27 to 29).

The training obligations of the contractor should be clearly defined. The contractor may be obligated to engage trainers with qualifications and experience appropriate for the training (paragraph 30). The contract should also fix the payment conditions relating to the training (paragraph 31).

When technical information and skills are conveyed through documentation, the contract may address such issues as the description of the documents to be supplied, demonstrations needed to explain the documents, and the times at which the documents are to be supplied (paragraphs 33 and 34).

A. General remarks

1. The works to be constructed will embody various technological processes necessary for the manufacture of products by the works in a form suitable for use or marketing. The purchaser will often wish to acquire a knowledge of these various processes and their application. The purchaser will also wish to acquire the technical information and skills necessary for the operation and maintenance of the works. Even where the purchaser has the basic capability to undertake certain elements of the construction (e.g., building, civil engineering), he may need to acquire a knowledge of special technical processes necessary to effect the construction in a manner appropriate to the works in question. The communication to the purchaser of this knowledge, information and skills is often referred to as the transfer of technology.

2. It may be noted that differing contractual arrangements can be adopted for the supply of technology and the performance of the other obligations necessary to construct the works (see chapter II, "Choice of contracting approach"). For example, the purchaser may select a contractor who is able to supply the technology to be embodied in the works, as well as to construct the works or that portion of the works which embodies the technology. Alternatively, the purchaser may enter into one contract for the supply of the technology, and into one or more separate works contracts for the construction of the works embodying that technology.

3. The transfer of technology may occur in different ways. It may occur through the grant of licences to use industrial products or processes which are the subject of different forms of industrial property. Most legal systems provide for the registration, subject to certain conditions, of industrial products or processes which are thereby recognized and protected under the law relating to industrial property in force within the territory of the country in which the registration takes place. The owner of the industrial property obtains the exclusive right to exploit the products or processes which are the subject of the industrial property. A common form of industrial property consists of patents. Under the legal systems of many countries, a person who invents a product or

process can apply to a governmental institution designated by the law of the country for the grant to him of a patent protecting the invention in the country. Once a patent is granted, for a limited period determined by the legal system, the invention which is the subject-matter of the patent can be exploited in that country only with the consent of the patent holder. A person can apply in more than one country for the grant to him of a patent. Most legal systems also recognize other forms of industrial property. For example, a distinctive sign used to identify goods and indicate their origin (e.g., as coming from a particular manufacturer) may be protected through registration as a trade mark. A protected trade mark cannot be used without the consent of the registered owner of the trade mark. In these cases, the transfer of technology would occur in conjunction with the licence of a trade mark. A patent holder or the owner of a trade mark may licence the patent or trade mark to the purchaser (i.e., permit the purchaser, subject to the conditions of the licence, to use the subject-matter of the patent, or the trade mark, in return for remuneration). Some legal systems recognize additional forms of industrial property, such as utility models and industrial designs.

4. One of the ways of assuring a complete and permanent transfer of technology by the contractor to the purchaser concerning the product or the industrial process is the creation of a joint venture between them in order to exploit the industrial works. Some of the advantages of joint ventures between contractors and purchasers are mentioned in chapter II, "Choice of contracting approach", paragraphs 26 to 31. If transfer of technology is important to the purchaser, he should at an early stage investigate the feasibility of one of the various kinds of joint ventures.

5. Certain industrial processes may be known only to one or a few enterprises. These enterprises might not wish, or may have been unable, to protect the industrial processes through registration in accordance with the law relating to industrial property. They may, instead, keep this knowledge confidential. In such cases, the transfer of technology may occur through the supply of this knowledge (generally called know-how) to the purchaser.¹ Such supply is usually subject to conditions as to the maintenance of confidentiality by the purchaser (see paragraphs 24 and 25, below).

6. The information and skills necessary for the operation and maintenance of the works may be communicated by the contractor through the training of the personnel of the purchaser (see section D, below) or through documentation (see section E, below). It may be noted that the different ways in which technology is transferred referred to in this and the previous paragraphs may be combined.

7. The *Guide* does not attempt to deal comprehensively with contract negotiation and drafting relating to the licensing of industrial property, or the supply of know-how, as this subject has already been dealt with in detail in publications issued by certain United Nations bodies.² The present chapter merely notes certain major issues which the parties may wish to address when a works contract contains provisions relating to the licensing of industrial property or the supply of know-how.

8. In drafting their contract provisions relating to the transfer of technology, the parties should take account of mandatory legal rules regulating such transfers which may be in force in the purchaser's and the contractor's countries.³ Regulation may take place directly through laws specifically directed

at the transfer of technology. Among those laws are legal regulations prohibiting or restricting the transfer of certain kinds of advanced technology. Contracts violating the prohibitions or restrictions may be void or unenforceable. Under some legal regulations, contracts involving the transfer of technology require the approval of a governmental institution prior to their entry into force. Such an institution may implement the national policy on technology by requiring the contract to contain terms transferring certain forms of technology possessed by the contractor (e.g., technology which might increase productivity in the purchaser's country), or by requiring the deletion or modification of terms which transfer other forms of technology (e.g., where indigenous technology exists equivalent to that sought to be transferred). Contracts or contractual provisions which are not approved may be void or unenforceable. Furthermore, legal regulations often exist which make void or unenforceable contractual provisions in transfer of technology transactions which restrain competition between entities, or which hinder the technological development of a country (see paragraph 12, below). Legal regulations may also govern the pricing of technology. They may, for example, require each element of the technology transfer to be separately priced, or regulate the extent of the price payable, or the manner of payment (e.g., the manner in which royalties are to be calculated).

9. Indirect regulation of transfer of technology may occur when export or import licences are not granted in respect of equipment which embodies certain kinds of technology, or when authority to make payment for technology is refused under exchange control regulations. Even where the law of the purchaser's country mandatorily regulates the transfer of technology in the interests of the purchaser, contract provisions may be needed to supplement that transfer, and to ensure that the purchaser will obtain the knowledge and skills needed to operate the works so that it achieves the performance parameters specified in the contract. Contract provisions on technology transfer will assume even greater importance when the law of the purchaser's country does not regulate the transfer of technology.

10. Where tenderers or enterprises with which the purchaser is negotiating (see chapter III, "Selection of contractor and conclusion of contract") have made offers to construct the works which reflect different technological processes, the purchaser should determine which is the most appropriate process for his needs and for local conditions. A less sophisticated or older technology may be more appropriate, in particular if it can be acquired at a lower price.

B. Issues common both to licensing and to know-how provisions

1. *Description of technology*^A

11. In some cases the contract may need to contain a precise and comprehensive description of the technology. Such a description may be needed, for example, where the purchaser adopts a contracting approach involving several contracts, i.e., with one enterprise for the supply of the technology and for the supply and installation of some of the equipment necessary for the utilization of the technology, and with other enterprises for the performance of other obligations necessary to construct the works (e.g.,

supply of design of the works, civil engineering or building). Even where a single contractor is to perform all the obligations necessary to construct the works (e.g., under a turnkey contract), such a description may be needed if the purchaser requires a particular technology to be used. In some cases, however, the purchaser may prefer the obligations of a turnkey contractor to be defined primarily in terms of constructing works which, when operational, will achieve certain performance parameters (e.g., produce goods of a quantity and quality stipulated in the contract). In these cases a general description of the technology may be sufficient, and the contractor may be required to provide the description since he has special knowledge of the technology which he proposes to embody in the works.

2. Conditions restricting use of technology

12. The contractor may sometimes be prepared to transfer technology only if the purchaser accepts certain restrictions on the purchaser's use of the technology, or on the purchaser's disposal of the products obtained by using the technology. Some of these restrictions are regulated by mandatory legal rules in many countries (e.g., declared void or unenforceable) not only because they create possible hardship to the purchaser, but also because they may conflict with public policy (for example, the restrictions may restrain competition, or hinder the development of national technological capabilities). Some legal rules also exist at a regional level regulating these restrictions on the basis of the public policy existing within the region. Attempts are also being made at the global level to formulate norms which may be applicable to these restrictions where they are included in international transfer of technology transactions.⁵ This chapter does not attempt to make normative recommendations as to the formulation of these restrictions, but merely describes a few restrictions of special importance in the context of works contracts, and the interests of the parties in regard to them. It is very desirable that the parties attempt to negotiate provisions which are balanced and which impose only those restrictions necessary to protect the legitimate interests of each party.

13. The contractor might seek to include a provision that the purchaser is obligated to purchase from him, or from sources designated by him, some or all of the raw materials or semi-finished articles needed for the production of goods by the works. The contractor might seek to include such a provision when, for example, the goods produced by the works can be associated with him by third parties (e.g., if they bear his trade mark), and the quality of the goods depends on the quality of the materials or articles used in their production. He may also wish to prevent any lowering of the quality of the goods if the goods are to be bought by him, or to be supplied to his customers. Such a provision may, however, be disadvantageous to the purchaser (e.g., he may be able to obtain from other sources on more advantageous terms materials or articles of the same quality as those which the contractor wishes to supply). A provision reconciling these competing interests may, for example, provide that the purchaser is obligated to purchase the materials or articles from the contractor, but that the contractor in turn is obligated to supply the materials or articles on terms not less favourable than the terms offered by the contractor to any other of his customers, or on terms not less favourable than those on which the purchaser can secure materials or articles of the same quality from another source.

14. The contractor might seek to include a provision that the purchaser is prevented from adapting the technology, or from introducing innovations to it. He might seek to include such a provision because he fears that adaptations or innovations by the purchaser may lower the quality of the products obtained by using the technology, and that such a lowering of quality may adversely affect him (see previous paragraph). The purchaser, however, might wish to adapt the technology to suit local conditions, or to introduce innovations which lower the cost of production, even if the adaptations or innovations lead to a slight loss of quality in the products. This loss of quality may not be significant in relation to the purchaser's requirements. A provision reconciling these interests of the parties may, for example, provide that the purchaser may not adapt the technology or introduce innovations to it without the consent of the contractor if the goods to be produced by the works are to bear a trade mark of the contractor.

15. The contractor might seek to include a provision that the purchaser is obligated to communicate to the contractor any improvements to the technology made by the purchaser in the course of using it. Such a provision could have certain disadvantages to the purchaser. It could prevent the purchaser from competing with the contractor in the field of technology in question, since the level of technological knowledge of the contractor will be maintained at a level not less than that of the purchaser. If, in addition to being obligated to communicate the improvements to the contractor, the purchaser is also obligated not to disclose them to third parties, the purchaser may be prevented from realizing their full commercial value. If the improvements are to be communicated without remuneration therefor being paid by the contractor, the contractor could benefit at the purchaser's expense. Since each party to a transfer of technology usually has an interest in obtaining improvements to that technology made by the other party, the contract may, for example, provide that each party is obligated to communicate to the other improvements he has made to the technology, and the party acquiring the improvements may in return be obligated to pay a reasonable remuneration. Another possibility is for the parties to make arrangements for joint research with a view to improving the technology.

16. The contractor might seek to include a provision restricting the purchaser from exporting the products manufactured by the use of the technology to countries specified in the contract. He may previously have supplied confidential know-how to enterprises in the specified countries, and given undertakings to them that in the further supply of the know-how to others he would ensure that those others would not compete in the specified countries. Or, again, an enterprise other than the contractor might have industrial property rights covering the same technology in the specified countries, and export of the products to the specified countries by the purchaser might result in legal proceedings being brought against the contractor. The purchaser may himself be interested in principle in export restrictions, since he might wish the contractor to restrict others from exporting to the purchaser's country competing products manufactured by using the same technology. On the other hand, the purchaser might seek to have export possibilities after the market capacity in his own country is exhausted. Mandatory legal rules relating to restrictive business practices⁶ and to the transfer of technology are of special relevance in the field of export restrictions, and the parties may find it advisable to agree upon an equitable provision, taking those rules into account. For example, while export restrictions might be imposed on the purchaser in respect of certain markets, other export markets might be reserved exclusively for him.

3. *Guarantees*⁷

17. When the turnkey contract approach is adopted and the obligations of the contractor are defined primarily in terms of the construction of works which, when operational, will achieve specified performance parameters (see paragraph 11, above), no separate guarantee concerning the technology may be necessary, as the guarantees concerning the operation of the works would require the supply of appropriate technology by the contractor. Where, however, a contracting approach involving several contracts is adopted (see paragraph 11, above), the supplier of the technology may be unwilling to give a guarantee concerning the operation of the works, since whether the works will operate in accordance with the specified parameters will depend on proper performance of their construction obligations by other enterprises. The supplier of technology may in such cases be required to guarantee that the use of the technology will result in the operation of the works in accordance with certain specified parameters, provided the technology is utilized and the works is constructed in accordance with conditions specified by him (e.g., use of certain construction methods, standards, components and raw materials; use of a certain design for the works; provision of certain operating conditions). Guarantees in respect of the operation of the works, together with issues such as the length, commencement and extension of the guarantee period, and defects excluded from the guarantee, are dealt with in chapter V, "Description of works and quality guarantee", paragraphs 26 to 31.

4. *Payment for technology*⁸

18. The price for technology which is transferred is usually determined as a lump sum, or in the form of royalties. The unit-price method (see chapter VII, "Price and payment conditions", paragraphs 25 to 27) is unsuitable, as no units are supplied. When the contractor obtains the technology from a third person, the parties may in some cases wish to adopt the cost-reimbursable method and to provide that the costs incurred in obtaining the technology are to be reimbursed by the purchaser, provided that they do not exceed a specified limit (cf. chapter VII, "Price and payment conditions", paragraph 15).

19. If the lump-sum method is used, the total price is determined at the time the contract is entered into, and this price is payable in one or more instalments. The price for the supply of know-how is often determined as a lump sum. If the royalty method is used, the price payable (i.e., the royalty) is fixed by reference to some economic result of the use of the transferred technology. For example, the royalty is often fixed by reference to the production, sales, or profits arising from the use of the technology. Where the volume of production is used as the reference factor, the royalty may be determined, for instance, as a fixed amount per unit or quantity (e.g., per ton or per litre) produced. Where the volume of sales is used as the reference factor, the royalty may be determined as a percentage of the sales price. Under each method, what is meant by production, sales price, or profits will need careful definition.

20. Each method of price calculation may have certain advantages and disadvantages,⁹ depending on the economic circumstances attending the contract. If, for example, royalties are payable over a long period, economic circumstances may change during this period affecting the volume of sales, and consequently the royalties payable. The two methods may also be combined (e.g., an initial lump-sum payment followed by the payment of royalties).

5. *Claims by third person*¹⁰

21. The purchaser may wish to include in the contract an undertaking by the contractor that the use of the technology transferred will not result in claims against the purchaser by a third person whose industrial property rights may be infringed by the use. Infringement may occur, for example, through the use of a process which is transferred, or through the distribution of products manufactured by using the process, or through the construction of the works itself. The contractor may wish to include an undertaking by the purchaser that, where the contractor has to manufacture equipment in accordance with designs supplied by the purchaser, the manufacture will not infringe the industrial property rights of a third person. Because of the difficulty of conducting a world-wide investigation as to whether any third persons may have industrial property rights in the technology transferred, a supplier will normally undertake only that the use of the technology transferred will not infringe the rights of third persons in specified countries.

22. The parties might wish to specify the procedure to be followed by them in the event of a claim by a third person that his industrial property rights have been infringed, or that the industrial property rights held by the parties are invalid. Each party may be obligated to notify the other of any claim immediately after he learns of the claim. If legal proceedings are brought against the transferee of the technology as a result of the transfer, the supplier may be obligated to assist the transferee in his defence by, for example, bearing the costs incurred in the defence, giving legal advice, or producing evidence as to the validity of the industrial property rights of the supplier. The parties might seek to specify their rights and obligations during the pendency of the legal proceedings (e.g., they may provide for the suspension of royalty payments by the purchaser during the proceedings). They may further provide, for example, that, if the claim by the third person succeeds and the supplier is found to be in breach of his undertaking, the use of the technology transferred will not infringe the rights of third persons (see previous paragraph), royalty payments are to cease, that royalties already paid are to be reimbursed, or that modified technology which does not infringe the rights of the third person and which does not adversely affect the capability of the works to operate in accordance with the contract is to be supplied.¹¹

C. Issue special to know-how provisions: confidentiality¹²

23. The contractor will usually require the know-how supplied by him to be kept confidential (see paragraph 5, above). He may require such confidentiality at two stages. Firstly, he may supply some know-how to the purchaser during negotiations in order to enable the purchaser to decide whether he wishes to enter into a contract, and to make proposals as to contract terms. He will wish the purchaser to keep this know-how confidential. Secondly, if a contract is entered into, the contractor will require the additional know-how supplied thereafter to be kept confidential. To achieve these results, it may be necessary under some legal systems for the parties, prior to the commencement of negotiations, to conclude an agreement under which the purchaser undertakes to maintain confidentiality with regard to know-how supplied during negotiations, and thereafter to include provisions on confidentiality in the works contract if the negotiations lead to the conclusion of a contract. Other legal

systems, however, impose on parties involved in negotiations obligations as to the observance of good faith during negotiations. These obligations would entail the maintenance of confidentiality by the purchaser. Where the applicable law imposes obligations as to the maintenance of good faith, the contractor may wish to consider whether it is necessary for him to supplement those obligations by contractual obligations as to the maintenance of confidentiality.

24. The extent to which contractual provisions may impose obligations as to confidentiality on the purchaser may be regulated by mandatory legal rules in the purchaser's country. Issues to be addressed by such contractual provisions may include clear identification of the know-how to be kept confidential, the duration of the confidentiality (e.g., a fixed period) and the extent of permissible disclosure (e.g., disclosure being permissible in specified circumstances, or to specified persons). The parties might seek to provide that once the know-how to be kept confidential becomes available to the public, the obligation of confidentiality terminates, as does the obligation to pay royalties. The parties may also wish to provide, for example, that an engineer employed by the purchaser to supervise the construction is to be allowed access to such of the know-how as is necessary for him to exercise effective supervision. They may further wish to provide that if the contract is terminated by the purchaser because of a failure of performance by the contractor, or because the contractor is prevented by an exempting impediment from completing the construction (e.g., regulations in the contractor's country prevent him from exporting certain equipment), and the purchaser wishes to complete the construction by engaging another contractor, the purchaser may disclose to the other contractor such part of the know-how as is necessary for completion of construction by the other contractor. The purchaser may, however, be obligated to obtain from the engineer or the other contractor prior to the disclosure of the know-how to him an undertaking that he will not disclose the know-how to others.

25. In some cases an obligation of confidentiality may need to be imposed on the contractor (e.g., when improvements to the technology made by the purchaser are communicated to the contractor). A contractual provision for this purpose may be included in the contract. The issues to be taken into account when formulating a contractual provision imposing confidentiality on the purchaser (see paragraph 24, above) may also be relevant in formulating such a provision.

D. Training of personnel

26. The most important method of conveying to the purchaser the technical information and skills necessary for the proper operation and maintenance of the works is the training of the purchaser's personnel. In order to enable the purchaser to decide on his training requirements, in the invitation to tender or during the contract negotiations the purchaser might request the contractor to supply him with an organizational chart showing the personnel requirements for the operation and maintenance of the works, including the basic technical and other qualifications which the personnel must possess (see also chapter XXVI, "Supplies of spare parts and services after construction"). This statement of requirements should be sufficiently detailed to enable the

purchaser to determine the extent of training required in the light of the personnel available to him. The contractor will often have the capability to provide the training. In some cases, however, the training may be given more effectively by a consulting engineer, or through an institution specializing in training.

27. It may be advisable for the contract to fix the categories of employees in respect of which training is to be given, the numbers to be trained, and the duration of the training. It may also be advisable to fix the qualifications which trainees for a particular post must possess (e.g., educational background, linguistic abilities, technical skills, work experience). If these qualifications are not agreed in the contract, the contractor may have grounds for attributing the failure of the training to lack of relevant qualifications. The parties may also wish to provide that the selection of trainees is to be done jointly by the parties. Despite these procedures, the contractor may find during training that it is not feasible to train a particular trainee. The contractor may in those cases be obligated to inform the purchaser of, and provide supporting evidence for, his finding immediately after he makes it. The parties may thereafter be obligated to consult with a view to reaching an appropriate solution.

28. It is advisable to define clearly the training obligations of the contractor in relation to each category of trainee. In this connection, the contract may obligate the contractor to supply to the purchaser a training programme which will enable the trainees to obtain the information and skills necessary for the proper discharge of their duties in the operation and maintenance of the works. The programme may include a time-schedule for training which is harmonized with the time-schedule for construction. The parties may provide that the training is to be completed by the time agreed for the completion of construction. The programme should also describe the nature of the training to be given. The contract may provide that this programme is to be approved by the purchaser. The purchaser may be obligated not to remove trainees during the implementation of the training programme without good reason.

29. Training will often be required both on site and at places abroad. The places abroad at which training is to be given may be specified. While these would normally be the contractor's places of manufacture, in some cases the appropriate training might be available only at works or factories of third persons (e.g., equipment suppliers). In such cases, the contractor may be obligated to obtain placement of the trainees at those places. It may be advisable to provide that the training must take into account the operational conditions which the trainees will later encounter in the country of the purchaser. The parties may also wish to specify the working and living conditions to be provided for trainees who are to be trained abroad, and for trainers who are to provide training in the purchaser's country. The contractor may be obligated to assist in obtaining necessary visas, entry permits or work permits when training is to be given abroad.

30. The contract may obligate the contractor to engage trainers with qualifications and experience appropriate for the training and to notify the purchaser before the commencement of training of the qualifications and experience of the trainers to be used. In formulating training obligations, the parties may wish to take into account legal rules governing the employment of the personnel to be trained, which may regulate the qualifications and experience which the personnel must possess. Where the parties enter into a

product-in-hand contract (see chapter II, "Choice of contracting approach", paragraph 7), the contractor is obligated to prove during a test period that the works can be successfully operated by the purchaser's personnel. The result of such an obligation is that the contractor must give the purchaser's personnel the training required by them for operating the works. Under this contracting approach, it may be unnecessary to specify particular training obligations of the contractor.

31. In some cases only minimal training of the personnel of the purchaser may be necessary, e.g., making them acquainted on site with the procedures for operating and maintaining the works. The parties might wish to agree that no price is to be paid for such training, as it would be ancillary to the obligations of the contractor to supply and construct the works. Where more extensive training is required, the price for the training might be included in the overall price charged for the construction, but identified separately, or it might be charged separately. The price may be payable in instalments (e.g., a percentage as an advance payment, a further percentage during the performance of the training programme, and the balance after proof of completion of the programme). The training programme may involve other costs (e.g., the living expenses of the trainees in the contractor's country, or the living expenses of the contractor's trainers in the purchaser's country), and it is advisable to settle the allocation of those costs. The contract may provide that the portion of the price for the training which covers costs incurred in the purchaser's country is to be paid in the currency of that country (see chapter VII, "Price and payment conditions", paragraph 35).

32. For practical reasons, it may not be possible to settle at the time the contract is entered into some issues which may arise in regard to training (e.g., the date for commencement of training, or the duration of training). The parties may wish to agree that such issues are to be settled by the parties within a specified period of time after the contract is entered into.

E. Supply of documentation

33. Technical information and skills necessary for the proper operation and maintenance of the works may also be conveyed through the supply of technical documentation. The documentation to be supplied may consist of plans, drawings, formulae, manuals of operation and maintenance, and safety instructions. It may be advisable to list in the contract the documents to be supplied. The contractor may be obligated to supply documents which are comprehensive and clearly drafted, and which are in a specified language. It may be advisable to obligate the contractor, at the request of the purchaser, to give demonstrations of procedures described in the documentation if the procedures cannot be understood without demonstrations.

34. The points of time at which the documentation is to be supplied may be specified. The contract may provide that the supply of all documentation is to be completed by the time fixed in the contract for completion of construction. The parties might also wish to provide that construction is not to be considered as completed unless all documentation relating to the operation of the works and required under the contract to be delivered prior to the completion has been supplied. It may be advisable to provide that some documentation (e.g.,

operating manuals) is to be supplied during the course of construction, as such documentation may enable the purchaser's personnel or engineer to obtain an understanding of the working of machinery or equipment while it is being erected. It may also be advisable to provide that the contractor is liable to pay damages for loss caused to the purchaser through any errors or omissions in the documentation (see chapter XX, "Damages" and chapter XXI, "Exemption clauses").

Footnotes to chapter VI

¹In some countries the term "licensing" is used to describe both the permission to exploit industrial property rights and the supply of know-how. In this chapter the term is used only with the first of these meanings.

²The negotiation and drafting of contracts for the licensing of industrial property and the supply of know-how is dealt with in detail in World Intellectual Property Organization, *Licensing Guide for Developing Countries* (WIPO publication No. 620(E), 1977), hereinafter referred to as the *WIPO Guide*. The main issues to be considered in negotiating and drafting such contracts are set forth in *Guidelines for Evaluation of Transfer of Technology Agreements*, Development and Transfer of Technology Series, No. 12 (ID/233, 1979), hereinafter referred to as the *UNIDO Guidelines* and in *Guide for Use in Drawing Up Contracts Relating to the International Transfer of Know-How in the Engineering Industry* (United Nations publication, Sales No. E.70.II.E.15). Another relevant publication is the *Handbook on the Acquisition of Technology by Developing Countries* (UNCTAD/TT/AS/5, 1978).

³See *WIPO Guide*, section U, "Approval of government authorities". The legal regulations of several countries relating to the transfer of technology are contained in *Compilation of Legal Material Dealing with Transfer and Development of Technology* (TD/B/C.6/81, 1982).

⁴See *WIPO Guide*, section D, 1, "Identification and description of the basic technology".

⁵These norms are being negotiated at the United Nations Conference on an International Code of Conduct on the Transfer of Technology, convened under the auspices of UNCTAD.

⁶A draft model law on restrictive business practices is being prepared under the auspices of UNCTAD.

⁷See *WIPO Guide*, section G, 4, "Guarantee of know-how", and *UNIDO Guidelines*, chapter III, "Performance of know-how—licensor's guarantee obligations".

⁸The different methods of determining the price payable for technology are considered in detail in *WIPO Guide*, section N, "Compensation; consideration; price; remuneration; royalties; fees", and *UNIDO Guidelines*, chapter VII, "Remuneration".

⁹The advantages and disadvantages of the different methods of price calculation are discussed in *WIPO Guide*, section N.3, "Direct monetary compensation: lump-sum payment; royalties; fees".

¹⁰See *WIPO Guide*, section E, "Special aspects concerning patents", and section S, 2, d, "Warranty against claims by third persons for infringement".

¹¹The possible rights and obligations of the parties are discussed in *WIPO Guide*, section E, "Special aspects concerning patents", paras. 202-205.

¹²See *WIPO Guide*, section G, 2, "Legal means for preventing communication, disclosure or use of valuable information and expertise". In addition to confidentiality in respect of know-how, the contractor may require confidentiality in respect of documents describing the works. This is dealt with in chapter V, "Description of works and quality guarantee", paragraph 23.

Chapter VII. Price and payment conditions

SUMMARY

Three main methods of pricing are in common use in works contracts. These are the lump-sum, cost-reimbursable and unit-price methods. Under the lump-sum method, the purchaser is obligated to pay a certain amount which remains constant unless it is adjusted or revised, even though the costs of construction turn out to be different from those anticipated at the time of the conclusion of the contract (paragraphs 2, 6 to 9).

Under the cost-reimbursable method, the purchaser is obligated to pay all reasonable costs incurred by the contractor in constructing the works, together with an agreed fee (paragraphs 2, 10 to 24). Under this method, the purchaser bears the risk of an increase in the costs of construction over those anticipated at the time of the conclusion of the contract. The risk of an increase in construction costs borne by the purchaser may be limited by agreeing upon a ceiling on the total amount of reimbursable costs or a target cost (paragraphs 13 to 15). An incentive to economy and speed of completion of construction may be created by a target fee (paragraph 23).

Under the unit-price method, the parties agree on a rate for a unit of construction, and the price is determined by the total units actually used. The risk of cost increases which occur because the actual quantity of units exceeds the quantity estimated at the time of the conclusion of the contract is borne by the purchaser, while the risk of increases in the cost of each unit is borne by the contractor (paragraphs 2, 25 to 27).

If the purchaser is interested in completion of construction earlier than envisaged in the contract, bonus payments may be agreed in the contract (paragraphs 28 to 30).

Fluctuations in the exchange rate of the currency in which the price is determined may create certain risks for the parties which might be dealt with in the contract (paragraphs 31 to 37).

Even if a lump-sum price or unit-price rate is employed, the parties may wish to provide for the price to be adjusted or revised in specific situations (paragraphs 38 to 62). The contract might provide for an adjustment of the price when the construction under the contract is varied, when incorrect data are supplied by the purchaser, when the contractor encounters unforeseeable natural obstacles, and in the case of changes in local regulations and conditions (paragraphs 41 to 46).

The revision of the price due to a change in construction costs may be effected on the basis of an index clause (paragraphs 49 to 55). Another approach may be to use the documentary proof method. That approach may, however, be appropriate for use only in cases where an index clause cannot be used, and may be limited to portions of the price based on unstable factors (paragraphs 56 and 57).

Changes in the exchange rate of the price currency in relation to other currencies may be dealt with through a currency clause (paragraphs 58 and 59) or a unit-of-account clause (paragraphs 60 to 62).

The payment conditions in the contract may provide for specified percentages of the price to be payable at different stages of construction. They may also stipulate modalities of payment and indicate the place of payment (paragraphs 63 to 66).

An advance payment by the purchaser may be limited to the portion of the price reasonably needed to cover the contractor's expenses in the initial stages of the construction and protect him against loss in the event of termination of the contract in the initial stages (paragraph 67). Payment of portions of the price during construction may depend upon the progress of construction (paragraphs 68 to 74).

A certain percentage of the price may be payable after acceptance or, in some cases, take-over, of the works upon proof that construction has been successfully completed (paragraph 75), with the remainder of the price payable only after expiration of the guarantee period (paragraph 76). If a credit is granted by the contractor to the purchaser, the portion of the price covered by the credit may be payable in instalments within a certain period of time after take-over or acceptance of the works (paragraphs 77 to 79).

A. General remarks

1. The formulation of contractual provisions relating to the price to be paid by the purchaser must take into account a number of factors. The price will often cover varying aspects of construction by the contractor, e.g., the supply of equipment, materials and services, and the transfer of technology. A considerable period of time may elapse from the conclusion of the contract until the completion of construction, and during that period the costs of construction may change. In addition, the extent of construction to be effected may not be precisely determinable at the time of the conclusion of the contract. The parties should decide who is to bear the consequences of changes in costs and reflect their decision in the contract. When construction of the works is financed by an international lending institution, that institution may require certain issues discussed in this chapter to be settled in particular ways.

2. Three main methods of pricing are in common use in works contracts. These are the lump-sum, cost-reimbursable and unit-price methods. However, in appropriate circumstances, two, or all three, methods may be used in combination for pricing different aspects of the construction of the works.

(a) *Lump-sum method.* Under this method, the parties agree on the total amount to be paid for the construction (see paragraphs 6 to 9, below). This amount remains constant even if the actual cost of construction turns out to be different from that anticipated at the time of the conclusion of the contract, unless the contract or the law applicable to the contract provides for an adjustment of the price (see paragraphs 41 to 46, below) or its revision (see paragraphs 47 to 62, below).

(b) *Cost-reimbursable method.* Under this method, the purchaser is obligated to pay all reasonable costs incurred by the contractor in constructing the works, together with an agreed fee to cover the contractor's profit and overhead (see paragraphs 10-24, below).

(c) *Unit-price method.* Under this method, which may be used as a complement to the other methods, the parties agree on a rate for a unit of construction, and the total contract price is determined by the total number of units actually used. This pricing method may be practical only in respect of certain portions of the construction (see paragraphs 25 to 27, below).

3. It is advisable for the contract to specify the price, or a method for determining it. Under some legal systems, the contract is not valid if it does not do so. Under other legal systems, however, the contract is valid, and if the parties fail to agree upon the price at a later stage the price is determined in accordance with the rules of the legal system. However, under some of those legal systems, the rules for determining the price may not be appropriate for works contracts. Therefore, if a firm price cannot be specified in the contract, it would be preferable in certain situations for the parties to use the cost-reimbursable or unit-price method, or to specify a lump-sum price subject, in some cases, to an adjustment or revision, rather than to provide for a provisional price with the final price to be agreed upon by the parties at a later stage (see paragraphs 11, 26 and 38 to 62, below, and chapter XXIX, "Settlement of disputes", paragraph 3).

4. In choosing a pricing method and drafting the payment conditions (see section F, below), the parties should consider applicable foreign exchange regulations and other legal rules of an administrative or other public nature. The violation of those rules may result in the invalidity of the contract, or of some of its provisions, or in the termination of the contract by operation of law. Special problems which may arise in connection with the price to be paid for the transfer of technology are discussed in chapter VI, "Transfer of technology", paragraphs 18 to 20. The price and the payment conditions relating to the supply of spare parts and the maintenance, repair and operation of the works by the contractor after the completion of construction are dealt with in chapter XXVI, "Supplies of spare parts and services after construction".

5. In drafting contractual provisions on price, the parties should take into consideration legislation in the country where the works is to be constructed which imposes taxes in connection with certain aspects of the construction. Under some tax legislation, the purchaser may be obligated to pay on behalf of the contractor the taxes for which the contractor is liable in the purchaser's country and may be able to deduct the amount of the taxes paid from the price payable to the contractor. Practice under other legal systems permits the purchaser to undertake to pay the taxes on behalf of the contractor without right of reimbursement from him. International treaties on avoidance of double taxation concluded between the countries of the parties may be relevant to the settlement of some taxation issues in the contract.

B. Methods of pricing

1. *Lump-sum method*

6. Under the lump-sum method, the contractor is entitled only to the price set forth in the contract, regardless of the actual costs incurred by him during the construction. The mere use of the term "lump-sum price" may be insufficient to achieve this result. Accordingly, it is advisable for the parties to include in the contract clear provisions to this effect. However, the parties may wish to provide for an adjustment or revision of the price in certain defined

circumstances (see paragraphs 38 to 62, below). The parties may find the lump-sum method of pricing suitable for use in the single contract approach (cf. paragraphs 14 and 26, below, and chapter II, "Choice of contracting approach"). It may also be used when an approach involving several contracts is chosen, in particular in cases where, at the time of entering into the contract, the extent of construction is known and significant changes in the scope and quality of the works at a later stage are not anticipated.

7. For practical reasons, it may be advisable to break down the lump-sum price into specific amounts payable for different portions of the works, or amounts payable for equipment, for materials, for different kinds of services and for the transfer of technology. Such a breakdown may facilitate adjustment or revision of the price in certain cases envisaged in the contract (for example, in the case of a variation of a portion of the construction: see chapter XXIII, "Variation clauses", paragraphs 26 to 29). In addition, a breakdown will be needed if different payment conditions are agreed upon for different portions of the works, or for the performance of different kinds of obligations by the contractor (see paragraph 64, below). Tax legislation or other regulations of a public nature may also require certain elements of the price to be specified separately, e.g., the portion of the price to be paid for a transfer of technology (see chapter VI, "Transfer of technology", paragraph 8).

8. The main advantage for the purchaser of the lump-sum method of pricing is that he knows the total price he will be obligated to pay and the contractor bears the risk of increases in the cost of construction. However, this advantage will be reduced to the extent that the lump-sum price may be adjusted or revised. Moreover, the purchaser is obligated to pay the lump-sum price even if the costs incurred by the contractor turn out to be lower than those anticipated at the time of the conclusion of the contract. Another advantage of a lump-sum contract for the purchaser is that the administration of such a contract is normally less burdensome than under the unit-price method, where the extent of construction completed must be measured in order to determine the price to be paid, or under the cost-reimbursable method, where the costs incurred by the contractor must be verified.

9. Since the contract price in a lump-sum contract may include an amount to compensate the contractor for bearing the risk of increases in the cost of construction, the price may be higher in some cases than if the cost-reimbursable pricing method were used for the same construction (cf. paragraph 11, below). In addition, the lump-sum pricing method requires a precise specification in the contract of the scope of the works. It might also be advisable for the purchaser to monitor the performance by the contractor to ensure that the contractor is not tempted to reduce his construction costs by using substandard materials or construction methods.

2. Cost-reimbursable method

10. If the cost-reimbursable method is used by the parties, the exact amount of the price is not known at the time of entering into the contract, since the price will consist of the actual costs of construction incurred by the contractor, plus a fee to be paid to him to cover his overhead and profit. For it to function effectively, this method of pricing requires more detailed contractual provisions than does the lump-sum method.

11. The cost-reimbursable method may be appropriate in a limited class of cases. For example, it may be appropriate when the extent of construction services or materials and the kinds of equipment needed for the construction cannot be accurately anticipated at the time of the conclusion of the contract (e.g., where the works has not been completely designed because of the speed at which construction has to be commenced, or where a substantial part of the construction is to be effected under ground and underground conditions cannot be accurately predicted), or where a substantial part of the construction is to be done by subcontractors and the prices to be charged by them are not known at the time of the conclusion of the contract. This method may also be used in cases where the construction of the works presents unusual difficulties (e.g., special design or complex engineering) involving many unknown factors which affect pricing. In cases such as those, a lump-sum price might have to include an amount sufficient to protect the contractor against his risks. This amount may often turn out to be too high in the circumstances.

12. The main disadvantage of the cost-reimbursable pricing method for the purchaser is that he bears the risk of an increase in the costs of construction over those anticipated at the time of the conclusion of the contract. Financing institutions are therefore often opposed to this method of pricing. It is advisable for the purchaser to have a reasonable estimate of the costs of construction at the time of entering into the contract.

(a) Methods for reducing purchaser's risk

13. In order to reduce the risk for the purchaser it is advisable for the contract to obligate the contractor to construct the works efficiently and economically, and to entitle him to the costs of construction only to the extent that they are reasonable. In practice, however, it may be difficult to enforce or apply such general obligations. In some cases, the parties may agree upon a ceiling on the total amount of reimbursable costs or a system of target costs (see paragraph 15, below). Furthermore, the fee of the contractor may be structured so as to give him an incentive to minimize the costs of construction (see paragraph 23, below).

14. As a means to control costs to be reimbursed, the contract may require the participation of the purchaser in the selections of subcontractors if they are not specified in the contract (see chapter XI, "Subcontracting", paragraphs 15 to 26). The desirability of such participation makes this pricing method inappropriate for most turnkey contracts. Since an essential aspect of a turnkey contract is that the contractor assumes responsibility for constructing works which will operate in accordance with the contract, he will usually assume that responsibility only if he is allowed to choose his subcontractors freely.

15. The risk to the purchaser of an increase in construction costs under a cost-reimbursable contract may be limited by providing a ceiling on the total amount of reimbursable costs. Another approach may be for the parties to agree at the time of entering into the contract upon an estimate of the costs of construction (i.e., a "target cost"), which is not, however, to constitute a ceiling on the total amount of reimbursable costs. The contract might provide that, if the actual costs exceed the target cost, the contractor is to be paid only a percentage of that excess. The contract might also provide that this percentage is to decrease as the excess increases. Alternatively, the parties may agree that, if the actual costs exceed the target cost by a specified amount or percentage,

the purchaser may terminate the contract without being liable to the contractor for costs incurred by the contractor incidental to the termination (cf. chapter XXV, "Termination of contract", paragraphs 17, 18, 34 and 35). The right of the purchaser to terminate may give the contractor an incentive to keep his costs within the estimate. Under this alternative, however, the purchaser may face the difficult choice of having either to refrain from terminating the contract and to proceed with construction by the contractor, with an obligation to pay him reimbursable costs exceeding the target cost, or to terminate the contract and complete the construction by engaging another contractor, bearing in mind the effect this would have upon total costs.

(b) Determination of reimbursable costs

16. It may be desirable for the contract to provide a method of determining which costs are reimbursable and which are to be borne by the contractor out of his fees. In order to prevent disputes as to which kinds of costs are reimbursable, it is advisable either to enumerate the costs to be reimbursed and to provide that all other costs are to be borne by the contractor, or to enumerate the costs which are not reimbursable and to provide that all other reasonable costs are to be reimbursed.

17. The contract may specify which overhead expenses of the contractor are to be excluded from the costs which are to be reimbursed by the purchaser. These excluded costs may include the costs connected with the operation of the contractor's head office, for example, the wages of the personnel at that head office. In addition, telephone, postal and cable expenses may be excluded even if they are incurred on the site. However, wages and other reasonable costs connected with the stay of the contractor's personnel on the site might be regarded as reimbursable by the purchaser to the contractor. In some cases, the cost-reimbursable method may not be appropriate for pricing equipment manufactured by the contractor to be used in the construction. In those cases, it is advisable for the contract to provide an amount to be paid for that equipment by the purchaser. The cost-reimbursable method may, however, be used for supplies obtained by the contractor from subcontractors and suppliers (see chapter XI, "Subcontracting", paragraph 1).

18. Routine items of equipment or materials taken from the contractor's stocks may have been bought by the contractor at various prices before commencement of or during the construction, and disputes may arise on how to value them. Such disputes may be prevented by stipulating their prices in schedules which form a part of the contract.

19. The contract might provide that costs incurred in employing subcontractors and suppliers are to include only costs actually paid by the contractor, taking into account discounts granted to the contractor by subcontractors and suppliers. However, the parties may wish to consider whether discounts granted to the contractor against payments in cash by the contractor are also to be taken into account. They might consider, for example, that the contractor should receive the benefit of cash payments made from his own funds, rather than funds advanced to him by the purchaser.

20. The smooth progress of construction requires that all the necessary materials be available on the site in accordance with the time-schedule. In some cases, however, it may be very difficult to envisage the precise quantities needed

for construction. The contractor may over-order and may incur losses in the resale of unused excess materials. The parties may wish to consider whether and to what extent such losses are to be reimbursed by the purchaser. The contract might, for example, set a limit to which the losses are to be reimbursed.

(c) Fee to be paid to contractor

21. The fee to be paid to the contractor might be fixed at a specified amount. The contract may provide for an adjustment of the fee in case of variations of the extent of construction (see chapter XXIII, "Variation clauses", paragraph 32).

22. Fixing the fee at a specified amount gives no particular incentive to the contractor to minimize his costs of construction, although he may be generally interested in completing the construction as soon as possible in order to receive the fee. It is not advisable for the fee to be calculated as a percentage of the actual costs of construction since this mechanism may provide an incentive to the contractor to increase those costs. Such a method of determining the fee is forbidden under some legal systems.

23. A method of providing for the contractor's fee is to specify a "target fee" to be applied in combination with the target cost (see paragraph 15, above). If the reimbursable costs are less than the target cost, the target fee would be increased by a specified percentage of the saved cost. The contract might also provide that, as the saved costs increase, the percentage payable is also to increase. If, however, the reimbursable costs are more than the target cost, the target fee would be decreased by a specified percentage of that excess. The contract might also provide that as the excess increases, the percentage to be deducted is also to increase. In addition to the costs of construction, other factors might be regarded as relevant in increasing or decreasing the target fee, such as the time taken to complete construction, and the performance of the completed works (e.g., its consumption of raw materials or energy). It may be noted that providing an incentive to the contractor to lower the costs of construction by varying the fee payable may be combined with an incentive based on an obligation to share the costs of construction when they exceed a target cost (see paragraph 15, above).

(d) Maintenance of records

24. To ensure a smooth operation of the cost-reimbursable method, the contract might require a system of record keeping which would accurately give evidence of the costs incurred by the contractor. For example, the contractor might be required to maintain records in accordance with forms and procedures reasonably required by the purchaser reflecting charges incurred and payments effected by the contractor, and the parties may provide that the purchaser shall have access to those records.

3. Unit-price method

25. Under the unit-price method, the parties agree on a rate for a construction unit, and the total price to be paid is dependent upon the number of construction units used for the construction. The rate fixed for a construction

unit should include an increment representing the contractor's profit. The construction unit may be a quantity unit of materials needed for the construction (e.g., a ton of cement for concrete), a time-unit of construction (e.g., an hour of labour in excavation), or a quantity unit of construction result (e.g., a cubic meter of reinforced concrete). Different construction units may be appropriate for different portions of the construction (e.g., material-units for construction of buildings, time-units for installation of equipment).

26. The unit-price method may be desirable where the quantity of materials or the quantity of construction services needed for a portion of the construction cannot be envisaged accurately at the time of entering into the contract, and for this reason it is difficult for the parties to determine a lump-sum price. In most cases, this method can be used only in combination with other pricing methods, since it is not suitable for pricing elements of the construction which, by their nature, cannot be divided into several identical units (e.g., equipment). It may be used, for example, for civil engineering, building and installation of equipment. In a contract in which it is difficult to control the quantities of units to be used for the construction (e.g., in a turnkey contract, where the techniques of construction are left to the discretion of the contractor) it would be advisable for the purchaser to take necessary measures to assess a fair price for the construction effected.

27. If the parties choose the unit-price method, and the contract does not provide for a revision of the unit price in the event of changes in unit costs, the risk of increases and the potential benefits arising out of decreases in construction costs are divided between the contractor and the purchaser. Since the price per construction unit is firm, the contractor bears the risk of an increase of the costs of materials and labour for each unit or receives the benefit of a decrease in those costs. The risk of an increase in the estimated total contract price due to the need to use more units for the construction than anticipated at the time of entering into the contract is borne by the purchaser, while he receives the benefit if fewer units are needed. The purchaser's risk may be reduced by providing in the contract that the purchaser is to pay for quantities up to a specified quantity, but that the contractor would have to bear the costs, or a specified percentage of the costs, of quantities beyond that quantity. In some cases, the contract might also provide for an increase in the unit price where the actual quantity of units does not achieve a certain percentage of an estimated quantity, specified in the contract, or a decrease in the unit price if the actual quantity of units exceeds a specified percentage of the estimated quantity. Since the price payable by the purchaser depends on the number of units needed for the construction, it is advisable to agree in the contract on adequate and clear methods of measuring the quantities used in order to avoid disputes.

C. Bonus payment

28. In cases where the purchaser is interested in the completion of construction and the commencement of the operation of the works as early as possible, he may be willing to pay a higher price, in the form of a bonus payment, if the construction is successfully completed by the contractor prior to the date fixed for completion in the contract. The amount of the bonus may represent a share of the estimated additional profit of the purchaser resulting

from an earlier commencement of the operation of the works. It is not usually advisable to provide for a bonus payment for early completion of construction if the cost-reimbursable pricing method is used in the contract, since this might induce the contractor to incur higher costs in order to complete the works quickly and obtain the bonus.

29. For the calculation of the bonus, the parties may determine the estimated profit to be gained by the purchaser for each day of earlier completion of the works. This amount of money per day may then be expressed in the contract as a fixed amount, as a percentage of the contract price if the lump-sum method of pricing is used, or as a percentage of the fee if the cost-reimbursable method of pricing is used. Representing the bonus payment as a percentage of the price or fee will enable the amount of the bonus to change if the price or fee changes (e.g., due to adjustment or revision of the price, or cost savings in comparison with the target cost). This would to some extent enable the bonus to take account of changes in price levels. If the unit-price method is used, the amount may remain as a fixed amount per day of earlier completion. Whether the bonus payment is specified as a fixed amount per day or as a percentage, it may be limited to a maximum amount.

30. It is advisable to provide for payment of the bonus to be due only after the works has operated continuously for a specified period of time. This approach may deter the contractor from adopting methods of construction which are less time consuming, but which result in defective construction. The period of time for continuous operation of the works might commence to run at the time of take-over or acceptance of the works by the purchaser (see chapter XIII, "Completion, take-over and acceptance", paragraphs 22, 31 and 32).

D. Currency of price

31. The currency in which the price is to be paid may involve certain risks for a party arising from the fluctuation in the purchasing power of the price currency and from the fluctuation in exchange rates between the price currency and other currencies (see paragraphs 47 to 62, below). If the price is to be paid in the currency of the contractor's country, the purchaser bears the consequences of a change in the exchange rate between that currency and the currency of his country. The contractor, however, will bear the consequences of a change in the exchange rate between the currency of his country and the currency of another country in which he has to pay for equipment, materials or services for the construction. If the price is to be paid in the currency of the purchaser's country, the contractor bears the consequences of a change in the exchange rate between this currency and the currency of his country. If the price is to be paid in the currency of a third country which the parties consider to be stable, each party bears the consequences of a change in the exchange rate between this currency and the currency of his country. Where a financing institution has granted the purchaser a loan for the construction of the works, the purchaser may prefer the price to be paid in the currency in which the loan is granted.

32. In stipulating the currency in which the price is to be paid, the parties should take into consideration foreign exchange regulations and international treaties in force in the countries of the contractor and the purchaser, which may

mandatorily govern this question. The parties should also take into account that under some legal systems the price in an international contract must be paid in the currency in which it is denominated, while other legal systems may permit, or even require, payments in the currency of the place of payment, even if the price is denominated in a foreign currency.

33. In cases where the parties use the lump-sum or unit-price method of pricing, the risk borne by the contractor arising from fluctuations in exchange rates will be reduced if the price is to be paid in the same currencies in which he must pay for equipment, materials and services connected with the construction. If this approach is adopted, the price for various portions of the works may be payable in different currencies. The contractor may also reduce to some extent the risk of fluctuations in exchange rates by specifying in his subcontracts that the price is to be paid in the same currency as that in which the price under the works contract is to be paid. Even in these cases, however, except when the currency is that of his own country, the contractor will bear the consequences of a change in the exchange rate of that currency occurring between the date when he bought the currency to pay the subcontractor and the date when the price under the works contract in respect of the subcontractor is paid to him by the purchaser.

34. If the parties use the cost-reimbursable pricing method, the contract might stipulate that the contractor's costs are to be reimbursed to him in the same currency in which they are to be paid by him. Alternatively, it might provide that the costs are to be reimbursed in the same currency as the currency in which the fee is to be paid. If this approach is adopted, and the costs are payable in a currency other than the currency of the fee, the costs will have to be converted into the currency of the fee at a particular rate of exchange. It is advisable to provide in the contract that this conversion is to be made at the exchange rate prevailing at a specified place on a specified date. This date may be either the date on which the costs were incurred by the contractor (in this case, the purchaser will bear the risk of a change in the exchange rate from that date until the date when the costs are reimbursed by the purchaser to the contractor), or the date when the costs are reimbursed by the purchaser to the contractor (in this case, the risk will be borne by the contractor).

35. If the country of the purchaser has scarce foreign exchange resources, that country may be interested in ensuring that at least a portion of the price is to be paid in the currency of the country. The contract might provide for the currency of the purchaser's country to be used for payment in respect of those costs of construction which are incurred by the contractor in the purchaser's currency (e.g., payment of local labour or subcontractors, or costs of accommodation of the contractor's personnel in the purchaser's country). This approach might be used even in cases where the lump-sum pricing method is used in the works contract. Such a contract might specify the part of the lump-sum price to be paid in the local currency, on the basis of an estimate of the costs to be incurred by the contractor in that currency. Another method might be for the contract to denominate the entire lump sum in a foreign currency, but provide that costs incurred in the local currency, after they are ascertained, are to be paid in the local currency and be deducted from the lump sum at a specified exchange rate. The contract might also provide for a change in the currencies in which the price is denominated where supplies foreseen to be procured from local sources become unavailable, and imports of those supplies from foreign sources are authorized.

36. The contract might denominate the price in a currency which the parties consider to be stable, but provide that it is to be paid in another currency. The effects of such an approach may be similar in substance to those achieved by a currency clause (see paragraphs 58 and 59, below), and restrictions imposed by the applicable law in respect of currency clauses may also apply to such provisions. If this approach is used in the contract, it is advisable to agree on the exchange rate which is to apply between the currency in which the price is denominated and the currency in which the price is to be paid. That exchange rate may be defined by reference to the rate prevailing at a specified place on a specified date. If the price is formulated on a lump-sum or unit-price basis, the contractor may prefer for the contract to specify that the relevant date is to be the date when the price is actually paid. If the price is determined on a cost-reimbursable basis, one of the dates referred to in paragraph 34, above, might be specified.

37. It is not advisable for the contract to denominate the entire price for the works in two or more currencies, and allow either the debtor or the creditor to decide in which currency the price is to be paid. Under such a clause, only the party having the choice is protected, and the choice may bring him unjustified gains.

E. Adjustment and revision of price

38. In view of the long-term and complex nature of a works contract, the parties may wish to provide for a lump-sum price or rates in a unit price to be adjusted or revised in specified situations. Since, under the cost-reimbursable method of pricing, the purchaser reimburses the contractor for the construction costs actually incurred by him, a provision for adjustment or revision of the price is not needed, except in respect of the fee, the ceiling, if any, on the total amount of reimbursable costs, or target costs (see paragraphs 15 and 23, above).

39. A distinction is made in the *Guide* between "adjustment" and "revision" of the price. Adjustment refers to cases where construction costs become higher or lower after entering into the contract due to a change in the construction required under the contract. This change may be due to a variation in the works to be constructed (see chapter XXIII, "Variation clauses", paragraphs 25 to 32) or a change in the method of construction from that anticipated at the time of entering into the contract due, for example, to incorrect data supplied by the purchaser (see paragraph 43, below), unforeseeable natural obstacles (see paragraphs 44 and 45, below) or changes in local regulations and conditions (see paragraph 46, below). Revision of price refers to situations where the construction required under the contract remains the same, but certain economic factors have changed in such a way that the cost of the construction and the price to be paid for it have become substantially unbalanced. This may occur, for example, due to substantial change in prices of equipment, material or construction services or in tax regulations or tariffs after the contract has been entered into or due to a substantial change in exchange rates of the price currency in relation to other currencies. An adjustment or revision may increase or decrease the price, although experience shows that an increase is more usual. It is advisable to limit adjustment and revision of the price to situations clearly determined in the contract or provided for by the law applicable to the contract.

40. The contract may provide for the price adjustment or revision to be determined in accordance with certain criteria specified in the contract (see sub-sections 1 and 2, below). This approach is in general permissible under most legal systems. In regard to adjustment, the contract might, for example, provide that the price is to be adjusted by reference to costs reasonably incurred by the contractor in specified circumstances. In regard to revision, the contract might provide that the price is to be revised in accordance with a specified mathematical formula, or that allowance is to be made for costs reasonably incurred. It may be inadvisable for the contract merely to obligate the parties to agree upon an adjustment or revision when stipulated circumstances arise since, if the parties fail to agree, difficulties may arise in settling the question in arbitral or judicial proceedings (see chapter XXIX, "Settlement of disputes", paragraph 3). The parties may further provide that, if disputes between them are being settled in arbitral or judicial proceedings, the construction is not to be interrupted during the proceedings. When the purchaser is a State enterprise, the parties should be aware that difficulties may be encountered in obtaining additional funds in cases of price adjustment or revision, or otherwise.

1. *Adjustment of price*

41. The parties may wish to define carefully the circumstances in which the price determined in the contract is to be adjusted, so as to avoid uncertainty as to the price. In addition, a contract intended to be a lump-sum contract may tend to take on the nature of a cost-reimbursable contract if adjustment is possible in too wide a range of circumstances.

42. The contract might provide for an adjustment of the price when the construction under the contract is varied (see chapter XXIII, "Variation clauses", paragraphs 25 to 32) as well as in the situations discussed below.

(a) *Incorrect data supplied*

43. The parties may wish to provide that the price is to be adjusted in cases where, as a result of incorrect data supplied by the purchaser, additional construction is required or a more expensive method of construction must be used in comparison with the method reasonably envisaged at the time of entering into the contract. However, the parties may wish to provide that the price is not to be adjusted if the contractor could reasonably have discovered the incorrectness of the data at the time of entering into the contract. The price adjustment might cover the reasonable costs of the additional construction or more expensive method of construction. The parties may also wish to provide that, even in cases where the incorrectness of the data could not reasonably have been discovered at the time of entering into the contract, the price is not to be adjusted unless the contractor subsequently discovered the incorrectness of the data at the time it could reasonably have been discovered, and gave notification of the errors at that time to the purchaser. In cases of incorrect data supplied by the contractor, he should not be entitled to an increase of the price.

(b) Unforeseeable natural obstacles

44. The contractor might be expected to have inspected the site and its surroundings, to the extent practicable, before submitting a tender or negotiating a contract, and to have based his negotiations on the findings made at the inspection. During such an inspection, however, it may not be possible, even with reasonable efforts, to discover certain natural obstacles on the site, in particular hydrological and sub-surface conditions.

45. Different approaches may be adopted in the contract for cases where, during construction, natural obstacles, in particular hydrological and sub-surface conditions, are encountered which could not reasonably have been discovered by the contractor during his inspection. The risk of such obstacles might be placed on the contractor, and he might be obligated to bear the extra costs incurred as a result of the unforeseeable obstacles. An alternative approach might be to provide that the price is to be increased so as to reflect the higher costs reasonably incurred by the contractor due to the natural obstacles encountered if they are notified to the purchaser within a reasonable period of time after they could reasonably have been discovered. The parties may also consider the possibility of dividing the costs between them.

(c) Changes in local regulations and conditions

46. Certain legal rules of an administrative or other public nature in the purchaser's or the contractor's country may mandatorily regulate certain aspects of the methods of construction (e.g., in the interests of safety, or for environmental protection, see chapter XXVIII, "Choice of law", paragraphs 22 and 23). If the construction to be effected does not accord with legal rules coming into force after the contract has been entered into, changes in the method of construction may be needed. The contract might specify who is to bear the risk of these changes. If the risk is to be borne by the purchaser, the contract might provide for the price to be adjusted. Changes in the works which may be required by such legal rules are discussed in chapter XXIII, "Variation clauses", paragraph 23. The contract may also provide for an adaptation of the price where supplies foreseen to be procured from local sources become unavailable and imports of those supplies from foreign sources are authorized.

2. Revision of price

47. Under most legal systems, the principle of "nominalism" governs the payment of a contract price. That is, the amount to be paid in the currency specified in the contract remains the same even if the value of that currency changes between the time of entering into the contract and the time the payment is made. The value of the currency may change in terms of its exchange rate in relation to other currencies. It may also change in terms of its purchasing power, with the result that the construction costs of the contractor may increase or, in exceptional cases, decrease. Many long-term contracts contain clauses directed at reducing these risks borne by the contractor. Such clauses may provide for revision of the price on the basis of indices (see paragraphs 49 to 55, below) or on the basis of costs actually incurred (see paragraphs 56 and 57, below). However, contractual provisions concerning

price revision due to a change in the value of the price currency are mandatorily regulated under some legal systems. The parties should, therefore, examine whether a clause which they intend to include in the contract is permitted under the law of the country of each party.

48. The contract might provide for the price revision clause to apply only in cases where its application would result in a revision exceeding a certain percentage of the price. The parties may wish to take into consideration that the price revision clauses are usually not used in practice where the duration of the construction as determined in the contract is less than 12 to 18 months from the coming into force of the contract.

(a) Change in costs of construction

(i) Index clauses

49. The purpose of index clauses is to revise the contract price in accordance with changes in the costs of construction by linking the contract sum price to the levels of the prices of certain goods or services prevailing on a certain date. In works contracts, the contract price may be linked to the levels of prices of materials or services needed for the construction of the works. A change in the agreed indices automatically effects a change in the price, without the necessity of examining the actual prices paid by the contractor during construction. Under the laws of some countries, the use of index clauses is not allowed or is restricted. For example, in some countries index clauses are permitted only for the purpose of dealing with changes in construction costs occurring between the time the contract is entered into and its coming into force. An index clause may need to be adapted to a new situation in the event of a substantial revision in the scope of the construction.

50. In drafting an index clause, it is advisable to use an algebraic formula to determine how changes in the specified indices are to be reflected in the price. Several indices, with different weightings given to each index, may be used in combination in the formula in order to reflect the proportion of different cost elements (e.g., materials or services) to the total cost of construction. Different indices reflecting the costs of different materials and services may be contained in a single formula. Different indices may be needed when the sources of the same cost element are in different countries.

51. Separate formulae, each with its own weightings, may be used for different aspects of the construction. If, for instance, the construction involves a number of dissimilar types of operations, such as excavation, concreting, brickwork, installation, and dredging, a single price revision formula may be difficult to draft, and may produce inaccurate results. Therefore, it may be preferable to have a separate formula for each main aspect of the construction.

52. An index clause may include a certain percentage of the price (commonly 5-20 per cent) which is not subject to any revision under the clause. This percentage is intended to make allowance for the fact that some items may be paid for by the contractor at a lower price level than that reflected in the price index for those items. It may also afford some protection against other inaccuracies resulting from the formula used in the clause. In addition, if the aim of the index clause is to protect the contractor only against higher costs of construction and not against inflation in general, this percentage may reflect the contractor's profit.

53. The contract may provide that the index clause is to be applied to determine whether a price revision is needed at the time of each interim payment. In order to use the agreed indices, it is advisable to specify in the contract the date to be used as a basis for comparing the levels of the indices. The contract might provide that the base date is the date when the contract was entered into. Alternatively, when the contract is entered into on the basis of tendering, the contract may provide that the base date is a specified number of days (e.g., 45 days) prior to the date of submission of the contract bid, or a specified number of days prior to the closing date for the submission of tenders since the tender price may be based upon price levels existing at those times. The contract might provide that the index levels on the base date are to be compared with the index levels existing a specified number of days prior to the last date of the period of construction in respect of which payment is to be made since the costs will be incurred by the contractor before the end of this period. Alternatively, it might provide that the index levels on the base date are to be compared with the levels existing a specified number of days prior to the date on which payment is due. However, the contract might also provide that if the contractor is in delay in completing the construction, the index levels existing a specified number of days prior to the agreed date for performance are to be used if those levels are more favourable for the purchaser. The ability of the purchaser to exercise this option might be limited to cases where the contractor is not prevented from performing in time due to exempting impediments (see chapter XXI, "Exemption clauses", paragraphs 9 to 26).

54. Several factors may be relevant in deciding on the indices to be used. The indices should be readily available (e.g., they should be published at regular intervals). They should be reliable. Indices published by recognized bodies (such as well-established chambers of commerce), or governmental or inter-governmental agencies, may be selected. Where certain construction costs are to be incurred by the contractor in a particular country, it may be advisable to use the indices of that country in respect of those costs. The parties should exercise caution in using indices based on different currencies in a formula, as changes in the relationships between the currencies may affect the operation of the formula in unintended ways.

55. In some countries, particularly in developing countries, the range of indices available for use in an index clause may be limited. If an index is not available for a particular element of costs, the parties may wish to use an available index in respect of another element. It is advisable for an element to be chosen such that its price is likely to fluctuate in approximately the same proportions and at the same times as the actual material to be used (e.g., because it is composed of the same raw material, or can be used as an alternative to the actual material to be used). For example, in cases where it is desired to provide an index for labour costs, a consumer price index or cost-of-living index is sometimes used if there is no wage index available.¹

(ii) *Documentary proof method*

56. The contract might provide a method, often referred to as the documentary proof method, to deal with changes which may occur after the conclusion of the contract in the costs of certain specified elements connected with the construction. The documentary proof method is based on the principle that the contractor is to be paid the amount by which his actual costs connected with

the construction, if they are reasonable, exceed the costs upon which the calculation of the contract price was based, due to changes other than changes in the quantity of materials, equipment and construction services needed for the construction. The documentary proof method, therefore, requires that the contract indicate the quantity and the price for each unit of the materials, equipment and work upon which the calculation of the price was based. Revision of the price under this method would include the difference between the price reflected in the calculation and the price actually paid by the contractor for quantity units in respect of the quantity determined in the contract. In contrast to the cost-reimbursable pricing method, under the documentary proof method the contract price should not be revised when the contractor incurs higher costs due to under-estimation of the scope of his construction obligations at the time of the conclusion of the contract. This method has certain disadvantages for the purchaser, since it imposes on him the risk of increases in construction costs due to the increases in the prices of equipment, materials and labour. In addition, the ability to recover increases in his costs may give the contractor little incentive to keep down the costs of construction. The administrative procedures needed by the contractor to obtain documentary proof of the costs of construction, and by the purchaser to verify such costs, may be almost as extensive as the administrative procedures under a cost-reimbursable contract. For these reasons, the parties may wish to use the documentary proof method only in respect of portions of the price calculated on the basis of unstable cost factors where the index clause method cannot be used (e.g., where relevant indices are not available).

57. If the parties wish to use the documentary proof method, they should specify in the contract the portion of the price that is subject to revision under that method. It is advisable to identify in the contract the equipment, materials or services in respect of which revision of the price is to take place, and separately state the quantity and the amount of the costs relating to a unit of such equipment, materials or services upon which the contract price is based. It is also advisable to stipulate that a revision of the price is to occur not only in the case of an increase, but also in the case of a decrease in costs. The contract might set forth procedures, similar to those which are to be used under a cost-reimbursable contract (see paragraph 24, above), by which the contractor is to prove the costs actually incurred by him. The contract might require the contractor to purchase equipment or materials in respect of which price revision is permitted from approved sources, or after obtaining competitive bids.

(b) Change in exchange rate of price currency in relation to other currencies

(i) Currency clause

58. Under a currency clause, the price to be paid is linked to an exchange rate between the price currency and a certain other currency (referred to as "the reference currency") determined at the time of entering into the contract. If this rate of exchange has changed at the time of payment, the price to be paid is increased or reduced in such a way that the amount of the price in terms of the reference currency remains unchanged. For purposes of comparing exchange rates, it may be desirable to adopt the time of actual payment, rather than the time when the payment falls due. If the latter time is adopted, the contractor may suffer a loss if the purchaser delays in payment. Alternatively, the currency

clause may give the contractor a choice between the exchange rate prevailing at the time when payment falls due or that prevailing at the time of actual payment. It is advisable to specify an exchange rate prevailing at a particular place.

59. If a currency clause is to serve its purpose, the reference currency must be stable. The insecurity arising from the potential instability of a single reference currency may be reduced by reference to several currencies. The contract may determine an arithmetic average of the exchange rates between the price currency and several other specified currencies, and provide for revision of the price in accordance with changes in this average.

(ii) *Unit-of-account clause*

60. If a unit-of-account clause is used, the price is denominated in a unit of account composed of cumulative proportions of a number of selected currencies. The unit of account may be one defined in an international treaty or by an international organization, and which will specify the selected currencies making up the unit and the relative weighting given to each currency. In contrast to a currency clause, in which several currencies are used, the weighting given to each selected currency of which the unit of account is composed is usually not the same, and greater weight is given to currencies generally used in international trade.²

61. The main advantage of using a unit of account as the currency unit with which the price currency is to be compared is that a unit of account is relatively stable, since the weakness of one currency of which the unit of account is composed is usually balanced by the strength of another currency. A unit-of-account clause will therefore give substantial protection against changes in exchange rates of the price currency in relation to other currencies.

62. In choosing a unit of account to be used in a clause, the parties should consider whether the relation between the price currency and the unit of account can be easily determined at the relevant times, i.e., at the time of entering into the contract and at the time of actual payment. The unit of account defined by the International Monetary Fund as the Special Drawing Right (SDR) might be used. The parties might also refer to the European Currency Unit (ECU) as a unit of account. The values of these units of account in terms of a number of currencies are published daily.

F. Payment conditions

63. Payment conditions in the contract may determine when and where various portions of the price are to be paid, and the modalities of payment. The time of payment may influence the price since the contractor may take into consideration interest in calculating the price. Payment conditions might provide an incentive for the contractor to perform in accordance with an agreed time-schedule by providing for a substantial portion of the price to be paid to the contractor as various steps in the construction are completed. The place of payment may have important consequences. For example, while funds are being transferred to a different country the value of currency may change. In addition, a transfer may be subject to foreign exchange restrictions. The

modalities of payment (e.g., a letter of credit or the documents against payment) may be structured so as to reduce the risk of the contractor in not being paid on time and of the purchaser in paying for construction not effected in accordance with the contract.

64. In drafting payment conditions, the parties should take into consideration the pricing method or methods (see paragraph 2, above) used in the contract. If the lump-sum pricing method is used, the lump-sum price might be broken down and allocated against major aspects of the construction to be effected by the contractor (e.g., civil engineering, supply of equipment, or transfer of technology). The portions of the price in respect of such major items may be payable at different stages, in specified percentages. For example, a portion might be allocated to the supply of equipment. A certain percentage of that allocation might be payable in advance (see paragraph 67, below), a certain percentage during construction (see paragraphs 68 to 74, below), a certain percentage after take-over or acceptance of the works (see paragraph 75, below), and the rest after expiry of the guarantee period (see paragraph 76, below).

65. If the cost-reimbursable pricing method is used for the works or a portion of the works, the contract might contain an estimate of the costs of construction covered by that method. A specified percentage of the total estimated reimbursable costs might be payable in advance, a specified percentage of the costs incurred during construction might be payable within a specified short period of time after receipt by the purchaser of the documents required under the contract (see paragraph 71, below), a specified percentage of those costs might be payable after take-over or acceptance of the works (see chapter XIII, "Completion, take-over and acceptance", paragraphs 22, 31 and 32), and the rest might be payable after expiry of the guarantee period (see chapter V, "Description of works and quality guarantee", paragraphs 28 to 30). In agreeing upon the time when the fee is to be paid to the contractor, the parties should take into consideration the nature of the fee to be paid (see paragraphs 21 to 23, above). A certain portion of the fee may be payable as portions of the construction are completed, a certain portion after acceptance and the rest after the expiry of the guarantee period.

66. If the unit-price method is used, the contract might provide that a specified percentage of the estimated price, calculated on the basis of estimated quantity of construction covered by this pricing method, is to be paid in advance, a specified percentage of the price in respect of the construction as actually effected is to be paid at the times specified in the contract, a specified percentage of the price in respect of that construction is to be paid after take-over or acceptance and the rest after the expiry of the guarantee period.

1. Advance payment

67. An advance payment might be required under the contract to cover the contractor's working capital and expenses in the initial stages of the construction (e.g., for initial purchases of equipment and materials, transport and accommodation of personnel). An advance payment may also provide to the contractor some protection against loss in the event of a termination of the contract by the purchaser prior to the commencement or at an early stage of

the construction. The purchaser might be protected by a guarantee against failure by the contractor to repay the advance. The amount of the advance payment might be calculated so as to cover the initial expenses of the contractor which are anticipated. The contract might require the advance payment to be directly remitted by the purchaser to a bank designated by the contractor within a specified period of time after the provision by the contractor of the performance and repayment guarantees. Performance and repayment guarantees are dealt with in chapter XVII, "Security for performance", paragraphs 10 to 13.

2. Payment during construction

68. It is advisable to provide in the contract for the payment of portions of the price as the construction progresses. The amount to be paid during construction should be determined taking into consideration the nature of the construction to be effected and the pricing method adopted.

69. One approach to determining the time and extent of payment may be to identify specific portions of the construction (e.g., excavation, or construction of the foundations), and to provide that specified portions of the price are to be payable upon completion of those portions. An alternative approach may be to provide that the contractor is entitled to receive progress payments for the construction completed within specified periods of time (e.g., every month), the amount of the payment depending upon the extent of construction effected within that period.

70. Equipment and materials supplied by the contractor may be paid for after they are incorporated in the works, under either of the approaches described in the preceding paragraph. The parties may, however, agree on another approach, particularly in cases where the equipment and materials are taken over by the purchaser after their delivery, and are in his physical possession until their use for construction. In these cases, the portion of the price in respect of such equipment and materials may be payable against the submission to the purchaser or the purchaser's bank of documents proving that they have been handed over to the first carrier for transmission to the purchaser and insurance has been taken out, or that they have been handed over to the purchasers on the site (see chapter VIII, "Supply of equipment and materials", paragraph 10).

71. It is advisable to specify in the contract the documents which the contractor is obligated to submit in order to obtain payment, such as invoices, bills of lading, certificates of origin, packing lists, and inspection certificates. The documents to be required may depend upon the time and manner of performance. Differing documents may be required in respect of supplies of equipment, materials, or services. The documents required may also differ depending on the method of pricing used by the parties.

72. Since payments during the construction process are to be effected in respect of construction already completed, the parties should clearly agree upon the procedures for determining such completion. The purchaser may wish to authorize the consulting engineer to measure the extent of the completed construction. To obtain a progress payment, the contract might require the contractor to submit to the consulting engineer at the end of each payment

period certain documents supported by a detailed report concerning the construction completed in the relevant payment period. The contract might provide for payments to be effected on the basis of interim certificates issued by the consulting engineer or the purchaser.

73. If the cost-reimbursable pricing method is used, special contractual provisions may be needed for the verification of costs incurred by the contractor. The contract might entitle the purchaser to audit the contractor's records. Since the payment conditions in subcontracts concluded by the contractor may be expected to correspond to the payment conditions in the works contract, the contract might entitle the contractor to payment of a portion of the price in respect of subcontracted construction only if he has already paid his subcontractor, or if the payment to the subcontractor has at least become due. The purchaser may be able to influence payment conditions in subcontracts by participating in the selection of the subcontractors (see chapter XI, "Subcontracting", paragraphs 15 to 26), or by including in the works contract requirements for payment conditions in subcontracts.

74. The contract might specify a period of time within which an interim certificate for payment must be issued by the consulting engineer or the purchaser, and a period of time after issuance of this certificate within which payment must be effected by the purchaser. The portion of the price under the certificate might be made due within a specified period of time after submission of the certificate to a bank to be specified in the contract. In case of a failure to issue the certificate even though the event entitling the contractor to payment has occurred, or to pay the amount due under the certificate, the contractor might be entitled to claim payment in dispute settlement proceedings (see chapter XXIX, "Settlement of disputes").

3. Payment within specified time after take-over or acceptance of works

75. Certain percentages of some portions of the price (e.g., those in respect of equipment and materials supplied, civil engineering, installation, or transfer of technology) might be payable only upon proof that construction has been successfully completed, i.e. after acceptance of the works. The contract might require the purchaser to pay those portions of the price within a specified period of time after such proof (e.g., within two weeks after successful performance tests have been conducted, or an acceptance protocol has been signed). In some cases, where take-over precedes acceptance of the works, a portion of the price might be made payable within a specified period of time after take-over (see chapter XIII, "Completion, take-over and acceptance").

4. Payment within specified time after expiration of guarantee period

76. To protect the purchaser against the consequences of defective construction by the contractor, the contract might provide that a certain percentage of the price is payable only within a specified period of time after expiration of the guarantee period (see chapter V, "Description of works and quality guarantee," paragraphs 28 to 30). In fixing that percentage, the parties may wish to take into account the other securities which are available to the purchaser in case of

the discovery of defects during the guarantee period. If the purchaser is sufficiently protected by a performance guarantee (see chapter XVII, "Security for performance", paragraphs 10 to 12), the contract might provide that the entire price is to be paid within a specified period of time after the date of the acceptance of the works. The contract might further provide that if any defects are discovered and notified within the guarantee period, the purchaser is entitled to retain from the portion of the price then outstanding an amount which is needed to compensate him for the defects. The retention might last until the contractor cures the defects and pays any damages to which the purchaser may be entitled.

5. *Credit granted by contractor or contractor's country*

77. In most cases, the construction of a works is financed by a loan granted to the purchaser by a financing institution. However, in some cases, where the contractor has at his disposal ample financial resources and the works to be constructed is not large, the contractor may prefer to grant a credit to the purchaser in respect of a portion of the price. In such cases, the portion of the price covered by the credit might be repayable in instalments within a specified period of time after take-over or acceptance of the works by the purchaser.

78. Where the contractor grants such a credit to the purchaser, some of the same issues which are dealt with in a loan agreement with a financing institution (e.g., security for repayment of the loan by the purchaser, interest payable on the loan) must also be settled between the purchaser and the contractor in the works contract.

79. The construction of a works is sometimes financed by a credit granted by the contractor's country to the purchaser's country. In these cases, the parties should, when drafting the payment conditions in the works contract, take into consideration the provisions of the agreement between the Governments of these two countries and the rules which may be issued in the purchaser's country in connection with the implementation of the agreement (e.g., conditions under which the credit may be used for construction).

APPENDIX

"The price revision envisaged in article ... of this contract is to be made by the application of the following formula:

$$P1 = \frac{P0}{100} \left(a + b \frac{M1}{M0} + c \frac{N1}{N0} + d \frac{W1}{W0} \right)$$

Where:

P1 = price payable under index clause

P0 = initial price as stipulated in the contract

a, b, c, d, represent the contractually agreed percentages of individual elements of construction price covered by the index clause, which add up to 100 (a + b + c + d = 100).

- a = proportion of price excluded from adjustment = . . . percent
- b = proportion of . . . (to specify materials covered by this weighting) = . . . percent
- c = proportion of . . . (to specify other materials covered by this weighting) = . . . percent
- d = proportion of . . . (to specify wages covered by this weighting) = . . . percent
- M0 = base level of price indices for materials specified under b;
- M1 = comparable level of price indices for materials specified under b;
- N0 = base level of price indices for materials specified under c;
- N1 = comparable level of price indices for materials specified under c;
- W0 = base level of price indices for wages specified under d;
- W1 = comparable level of price indices specified under d."

Notes:

— "b", "c" and "d" should be equal to percentage indicated in paragraph 3 of the illustrative provision contained in footnote 1 to this chapter; "a" should include the remaining percentage;

— The dates provided for in paragraph 2 and the price indices indicated in paragraph 5 of the illustrative provision contained in footnote 1 to this chapter should be used for base levels under M0, N0 and W0 and comparable levels under M1, N1, and W1.

Footnotes to chapter VII

¹Illustrative provision (index clause)

"(1) The agreed price is to be revised if there is an increase or decrease in the costs of . . . [list materials or services to be covered by this clause]. The revision is to be made by the application of the formula contained in the annex to this contract." [see appendix to the present chapter].

"(2) The base levels of the indices are to be those existing [at the time of the entering into the contract] [. . . days prior to the actual submission of the bid] [. . . days prior to the closing date for the submission of bids]. These levels are to be compared with the levels of the indices for the same materials or wages existing [. . . days prior to the last day of the period of construction in respect of which payment is to be made] [. . . days prior to the date on which the payment claimed is due]. However, if the contractor is in delay in construction, the base levels are, at the purchaser's option, to be compared with the levels existing . . . days prior to the agreed date for performance [unless the delay was due to an exempting impediment].

"(3) The price subject to revision is to be . . . per cent of the price for the construction of . . . (indicate items to be covered by this clause) effected during the construction period in respect of which the interim payment is to be made.

"(4) If a dispute arises between the parties with regard to the weightings in the formula, the weightings are to be adjusted by [the arbitrators] [the court] if they have been rendered unreasonable or inapplicable as a result of changes in the nature or extent of construction or major changes in the cost relationship of the factors weighted."

(This paragraph may be included in the index clause if the laws applicable to the contract and the law applicable to arbitral or judicial proceedings permit an arbitral tribunal or a court to exercise the authority specified in this paragraph).

"(5) For the purposes of this provision the indices published by . . . in . . . [indicate the country] are to be used. If these indices cease to be available, other indices are to be used if they can reasonably be expected to reflect price changes in respect of the construction costs covered by this clause.

"(6) This clause applies only in cases where its application results in a revision of the price exceeding . . . per cent of the price agreed in the contract."

²*Illustrative provision*

“The price is agreed upon subject to the condition that . . . [indicate a unit of price currency] is equal to . . . [indicate unit or units of a unit of account]. Should this relationship have changed at the time of the actual payment of the price by more than . . . per cent, the price to be paid is to be increased or decreased so as to reflect the new relationship between the unit of account and the unit of the price currency.”

Chapter VIII. Supply of equipment and materials

SUMMARY

In structuring provisions in their contract concerning the supply of equipment and materials, the parties might bear in mind that supply of equipment and materials by the contractor under a works contract has features which may differ from those in respect of delivery of goods under a sales contract (paragraph 2).

The parties may wish to consider whether certain issues connected with the supply of equipment and materials should be settled in their works contract in accordance with a particular trade term as interpreted in the International Rules for the Interpretation of Trade Terms (INCOTERMS). Since trade terms are interpreted in INCOTERMS primarily in the context of sales contracts, some issues in a works contract may need to be resolved in a manner different from that in INCOTERMS (paragraph 3).

The necessity for and nature of the description in the contract of equipment and materials to be supplied by the contractor may depend upon the contracting approach chosen by the purchaser as well as the extent of the contractor's obligations (paragraphs 6 and 7).

It is advisable to specify in the contract the time when and the place where equipment and materials are to be supplied. In some cases, the contract might obligate the contractor to supply equipment and materials on a specified date; in other cases, it might obligate him to supply them within a specified period of time. The place of supply may depend upon whether or not the purchaser is to take over the equipment and materials (paragraphs 8 to 10).

The contract may specify which party is obligated to arrange for the transport of equipment and materials and to bear the costs connected with that transport. It may also deal with such ancillary issues as the packing of the equipment and materials, permits required for the transport, marking of the equipment and materials, and delivery to the purchaser of the documents connected with the transport (paragraphs 11 to 14).

The contract might specify which party is to arrange customs clearance of the equipment and materials and to pay the customs duties (paragraphs 15 and 16).

The parties should take into account any legal rules in the country where the works is to be constructed which prohibit the import of certain equipment and materials, and any legal rules which prohibit the export of certain equipment and materials from the contractor's country or another country from which they are to be exported. The contract might allocate responsibility for obtaining necessary import or export licences. The contract might also provide that its entry into force depends upon the granting of all import and export licences which are required at the time the contract is entered into, except in respect of such licences as are not obtainable before the start of construction (paragraphs 17 and 18).

Equipment and materials supplied by the contractor may need to be taken over by the purchaser in order to store them, or prior to their being incorporated in the works by the purchaser, or by a contractor other than the one who supplied them. The contract might contain provisions concerning the checking by the purchaser of equipment and materials taken over by him, and the giving of notice of a lack of conformity (paragraphs 19 and 20).

The contract may establish the responsibilities of the parties in connection with the storage of equipment and materials on site. If the equipment and materials are to be stored by the purchaser, the contract might establish the extent of the purchaser's responsibility for loss of or damage to the equipment or materials during storage (paragraphs 21 to 26).

If the purchaser assumes the obligation to supply certain equipment and materials needed for the construction of the works by the contractor, it is advisable for the contract to specify the quantity and quality of the equipment and materials to be supplied, as well as the time when they are to be supplied. In addition, the contract might obligate the contractor to inspect the equipment and materials promptly after they have been supplied by the purchaser, and require notice to be given to the purchaser of any lack of conformity of the equipment and materials (paragraphs 27 to 29).

A. General remarks

1. This chapter deals with the supply of equipment and materials which are to be incorporated in the works. Certain related issues are discussed in other chapters. Inspection and tests of equipment and materials during manufacture and construction, as well as the consequences of defects discovered through the inspection and tests, are discussed in chapter XII, "Inspections and tests during manufacture and construction". The passing of the risk of loss of or damage to equipment and materials, and the consequences of the passing of risk, are discussed in chapter XIV, "Passing of risk", paragraphs 7 to 19. The transfer of ownership of equipment and materials is discussed in chapter XV, "Transfer of ownership of property", paragraphs 6 and 7. Insurance of equipment and materials is discussed in chapter XVI, "Insurance", paragraphs 24 to 26. Spare parts for equipment incorporated in the works to be supplied by the contractor after completion of construction are discussed in chapter XXVI, "Supplies of spare parts and services after construction", paragraphs 10 to 21. The remedies which the purchaser may have for the supply of defective equipment and materials by the contractor are dealt with in chapter XVIII, "Delay, defects and other failures to perform", paragraphs 26 to 32.

2. In structuring provisions in their contract concerning the supply of equipment and materials, the parties might bear in mind that supply of those items under a works contract has features which may differ from those in respect of the delivery of goods under a sales contract. For example, since equipment and materials supplied by the contractor under a works contract are to be incorporated in the works by him or by another contractor under his supervision, the mere supply of the equipment and materials is only a partial performance of the supplying contractor's obligations. The passing of risk or the transfer of ownership in respect of equipment or materials may occur at a time different from the time when they are supplied. In some cases (in

particular, if only a single contractor is engaged to construct the whole works), the equipment and materials may remain in the hands of the contractor after their arrival at the site until their incorporation in the works. In other cases, they may be taken over by the purchaser for storage purposes, and later handed back to the contractor for incorporation in the works (see section B,6 and 7, below).

3. Some of the issues involved in the supply of equipment and materials (e.g., transport, passing of risk, obtaining of export and import licences, and packing) are addressed by trade terms (e.g., f.o.b., c. & f.) as interpreted in the International Rules for the Interpretation of Trade Terms (INCOTERMS). If the parties wish certain issues under their works contract to be settled in accordance with a particular trade term, they might include in the contract a provision to that effect.¹ The parties should be aware, however, that trade terms are interpreted in INCOTERMS primarily in the context of sales contracts, and that certain issues arising in the context of a works contract may not be resolved in INCOTERMS, or may need to be resolved in a manner different from that in INCOTERMS.

4. Some of the equipment and materials needed for the construction of the works may be available in the country where the works is to be constructed. Even when the use of local equipment and materials is not required by the local law or by the local authorities in order to strengthen the industrial development of the country, it is advisable for the purchaser to use such equipment or materials if, for example, they are less costly than those obtainable from abroad, or if their use enables the purchaser to conserve foreign exchange. Therefore, the purchaser may wish to assume the obligation to supply specific locally available equipment and materials, if he is in a better position to procure them than the contractor (see paragraphs 27 to 30, below). If the purchaser does not wish to assume this obligation, the contract might obligate the contractor to obtain and use specified locally available equipment and materials.

5. In some cases, the contractor may perform his obligation to supply equipment or materials by providing them from his own stocks. In many other cases, however, he will engage third persons (e.g., subcontractors or suppliers) to supply them directly to the place specified in the contract. In the latter case, the supply by a third person might be regarded under the works contract as performance of the supply obligations of the contractor (see, e.g., chapter XI, "Subcontracting", paragraph 1). The discussion in the present chapter is intended to apply whether the contractor performs his obligation to supply equipment or materials by providing them from his own stocks or by engaging a third person to supply them.

B. Supply of equipment and materials by contractor

1. *Description of equipment and materials to be supplied*

6. The necessity for and nature of the description in the contract of equipment and materials to be supplied by the contractor may depend upon the contracting approach chosen by the purchaser as well as the extent of the contractor's obligations. In some cases, for example, the contractor may be one of several engaged to construct the works, and each contractor may be obligated to supply certain types of equipment and materials. In those cases,

the purchaser will have to co-ordinate the obligations and performance of the several contractors in order to achieve his construction targets (see chapter II, "Choice of contracting approach", paragraph 18). To achieve that co-ordination, he should see to it that the equipment and materials to be supplied by each contractor are clearly specified in the contract with that contractor, and that all of the equipment and materials needed for the construction of the entire works are allocated among the various contractors.

7. When a single contractor is engaged to construct the entire works, or a particular portion of the works which can be operated separately (e.g., a power station), and the contractor must supply all the equipment and materials needed for the construction, the contract need not describe in detail all the items which are to be supplied. However, it is advisable for the contract to contain a description of the operation capability to be attained by the important items of equipment and technical characteristics of main materials to be supplied, since the quality of the construction will depend in large measure on the quality of those items and materials (see chapter V, "Description of works and quality guarantee", paragraphs 8 and 9, and cf. chapter XII, "Inspections and tests during manufacture and construction", paragraphs 4 and 5).

2. Time and place of supply

8. It is advisable to specify in the contract the time when and the place where equipment and materials are to be supplied. When equipment and materials are to be supplied by one contractor but incorporated in the works by other contractors under the supervision of the supplying contractor, it is important for the contract to specify the time when the equipment and materials must be supplied in order to enable the performances of the various contractors to be co-ordinated. In such cases, it is usually desirable to provide in the time-schedule for construction that the time when the equipment and materials are to be supplied is obligatory. Even in cases where the equipment and materials are to be incorporated in the works by the contractor who supplied them, the parties may agree on a time-schedule for the supply of certain items at given times in order to enable the purchaser to monitor the progress of construction and to subject the contractor to sanctions for delay if those times are not met (see chapter IX, "Construction on site", paragraphs 18 to 23, and chapter XVIII, "Delay, defects and other failures to perform", paragraphs 17 and 18). The contract might link the obligation of the purchaser to pay a portion of the price to the time when certain equipment and materials are supplied (see chapter VII, "Price and payment conditions", paragraph 70).

9. The contract might obligate the contractor to supply equipment and materials on a specified date or within a specified period of time. A specified date may be appropriate when a rigid time-schedule has been established for the construction process, with the contractor being obligated to supply on the specified date and not earlier (e.g., because storage facilities would not be available earlier). In certain circumstances, however, it may not be possible to specify a date in the contract, for example, when the equipment and materials are required subsequent to the completion of certain elements of construction by another contractor, and the time of that completion is uncertain at the time when the contract for the supply of equipment and materials is entered into. In such cases, the contract might entitle the purchaser, after the contract has been entered into, to specify a date falling within a period of time set forth in the contract when the contractor

must supply the equipment and materials. In determining what period of time to set forth in the contract, the purchaser may take into consideration the time frame within which he expects the equipment and materials to be needed for the construction. Such an approach would take into account the uncertainty at the time of entering into the works contract as to precisely when the equipment or materials would be needed, but would give the contractor an indication as to the period of time within which he must supply them (cf. chapter IX, "Construction on site", paragraph 20). In circumstances where it is not needed to specify a particular date for the supply of equipment and materials (e.g., where only one contractor is to construct the entire works), the contract might permit the contractor to supply them at any time within a period of time specified in the contract.

10. With regard to the place of supply, if equipment and materials are to remain in the hands of the contractor until he incorporates them in the works, the contract may specify that supply to the site is relevant for determining compliance with the time-schedule, as well as for the allocation of the costs of supply. If they are to be taken over by the purchaser (see paragraph 19, below), the contract might obligate the contractor to hand them over to the purchaser at the site, or at some other specified place. In cases where the purchaser is to arrange for the transport of the equipment and materials to the site (see section B,3, below), the contract might obligate the contractor to supply the equipment and materials at a specified place for handing over to the first carrier engaged by the purchaser. Except where the cost-reimbursable method of pricing is used (see chapter VII, "Price and payment conditions", paragraphs 10 to 24), the contract might obligate the contractor to bear the costs of supplying the equipment and materials at the place specified.

3. Transport of equipment and materials

11. Normally, it would be appropriate for the party obligated to supply the equipment and materials to be obligated to arrange and pay the costs of transport to the stipulated place of supply. Where equipment and materials are to be supplied at a place other than the site, it is desirable for the contract to specify which party is obligated to arrange for their transport from that place to the site and to pay the costs of transport.

12. Even when the equipment and materials are to be supplied at a place other than the site, it is desirable in most cases for the contractor to be responsible for the packing and protecting of the equipment and materials in a manner adequate for their transport to the site by the means of transport envisaged. The packing of equipment and materials may be governed by legal rules applicable to international transport or to transport in the countries through which the equipment is to be transported (e.g., rules imposing limitations on the dimensions of packages or requiring that dangerous goods be packed in particular ways). If the contract provides for a lump-sum price, the costs of packing the equipment and materials may be included in the price.

13. The transport of equipment and materials may require road, rail or other transport permits, and it is advisable for the contract to specify which party is to be responsible for obtaining the permits. The contract might obligate the party not responsible for obtaining the permits to render to the other party any

assistance necessary to obtain them (e.g., by providing information about the dimensions of the equipment, the kind of packaging used, or the formalities to be satisfied for obtaining the permits under applicable regulations).

14. If equipment and materials are to be taken over by the purchaser at the place of supply, it may be desirable for the contract to obligate the contractor to mark the packages containing the equipment and materials in such a manner that they can be identified by the purchaser. In addition, the contractor might be obligated to mark the equipment and materials as required by the legal rules applicable to the mode of transport envisaged (e.g., to use the appropriate marking to indicate that the materials are dangerous). The contract might also obligate the contractor to deliver to the purchaser the documents connected with the transport (e.g., invoices or transport documents). Some of these documents, such as bills of lading, may be needed by the purchaser to be able to take over the equipment and materials; the contract might require such documents to be delivered to the purchaser, or, in the case of a documentary credit transaction, to the purchaser's bank, so that they are received in sufficient time to enable the purchaser to take over the equipment and materials when they arrive at the place of destination. The receipt of such documents by the purchaser may also be made a precondition to payment of the price for the equipment and materials (see chapter VII, "Price and payment conditions", paragraph 71).

4. Customs clearance and customs duties

15. The contract might specify which party is to arrange customs clearance of the equipment and materials and to pay the customs duties. Customs duties are normally imposed on equipment and materials being imported. However, in exceptional cases, they may be imposed on equipment and materials being exported. In addition, transit charges and fees may be imposed on equipment and materials during transit. It may be appropriate to provide in the contract that customs clearance of equipment and materials for export, and the payment of export customs duties, are the responsibility of the contractor. This may be the case even where the place of supply is the place where the equipment and materials are to be handed over to the carrier engaged by the purchaser (see paragraph 10, above). The contract might provide that customs clearance and the payment of customs duties during transit are the responsibility of the party arranging the transport. The parties may take into account in the contract any exemption from customs duties provided under local law.

16. The customs clearance of imported equipment and materials might be undertaken by the purchaser if they are to be taken over by him after import (see paragraph 19, below). If equipment and materials are to remain in the hands of the contractor after import, import customs clearance may be the responsibility either of the contractor or the purchaser, depending on which party would find it easier to engage in the clearance procedures or which party is obligated under local law to engage in those procedures. The contract might obligate the party not responsible for the clearance to assist in the clearance procedures, in particular, by providing documents which may be needed (e.g., the contractor might be required to assist by providing invoices and certificates of origin, and the purchaser by providing import licences or other required permits issued in his country). As regards the payment of import customs

duties, it may be preferable in some cases to provide that the payment is to be the responsibility of the purchaser. If the contractor is to be responsible for the payment, a change in the rates of import customs duties from those existing at the time the contract is entered into may necessitate a revision of the price to account for the change (see chapter VII, "Price and payment conditions", paragraphs 38 and 39).

5. Prohibitions and licence requirements

17. Legal rules in the country where the works is to be constructed may prohibit the import of certain equipment and materials. In addition, legal rules in the contractor's country, or another country from which equipment and materials are to be exported, may prohibit the export of certain equipment and materials. The parties should take those rules into account when drawing up the works contract, since violating them may render the contract invalid. If import and export are permitted only upon the obtaining of licences, it is advisable for the contract to obligate the purchaser to obtain any import licences and the contractor to obtain any export licences which are required by law at the time the contract is entered into, or which may become required by law after the contract has been entered into. In addition, the contract may obligate each party to co-operate with the other in obtaining such licences. The party who is to obtain the licences may be obligated by the contract to notify the other party in time of the steps taken towards obtaining them and the results achieved.

18. The contract might provide that its entry into force depends upon the granting of all import and export licences which are required at the time the contract is entered into (see chapter III, "Selection of contractor and conclusion of contract", paragraph 50). In some cases, however, licences required for the import or export of certain equipment or materials may not be obtainable before the start of construction. For example, applicable regulations might enable an application for a licence to be acted upon only a short time before the proposed date of export or import, which may be some time after the start of construction. In such cases, it would not be possible to condition the entry into force of the contract upon the granting of those licences, but the contract might provide for the consequences of a failure to obtain a licence by the party obligated to obtain it. It might also provide that, if the party who is obligated to obtain a licence does not do so within a specified period of time after the contract is entered into, the other party may suspend his performance or terminate the contract (see chapter XXIV, "Suspension of construction" and chapter XXV, "Termination of contract"). Such consequences might also be provided for a failure to obtain a licence which becomes legally required after the contract has been entered into.

6. Take-over of equipment and materials by purchaser

19. In certain circumstances, equipment and materials supplied by the contractor may need to be taken over by the purchaser. For example, the purchaser may need to take them over in order to store them (see section B,7, below). He may also need to take them over prior to their being incorporated in the works when the incorporation is to be done either by himself or by a

contractor other than the one who supplied them (e.g., in cases where the supplying contractor only supervises the installation of the equipment). The contract might provide that take-over occurs when the purchaser takes physical possession of the equipment and materials. It might also provide that take-over by the purchaser does not connote any approval by him of the equipment or materials supplied by the contractor (see chapter XII, "Inspections and tests during manufacture and construction", paragraph 1, and chapter XVIII, "Delay, defects and other failures to perform", paragraphs 8 and 44). Furthermore, the contract might provide that where the purchaser is obligated to take over equipment and materials and he fails to do so, they are deemed to be taken over at the time that they are placed at the disposal of the purchaser.

20. In some cases, the contract might provide that the take-over of the equipment and materials by the purchaser is to result in the passing to the purchaser of the risk of loss of or damage to the equipment and materials (see chapter XIV, "Passing of risk", paragraphs 9 to 17). Where the risk so passes, disputes may arise as to whether loss or damage occurred before or after take-over. Disputes may also arise as to whether defects in the equipment and materials were caused prior to take-over, e.g., by faulty manufacture or inadequate packing by the contractor, or after take-over, e.g., by improper storage by the purchaser. Such disputes may be reduced if the purchaser is obligated to check the apparent condition of the equipment and materials at the time of take-over, and to notify the contractor promptly of any lack of conformity which the purchaser discovers. However, the purchaser might not be capable of determining whether the equipment and materials are in good condition (e.g., because he is not aware of the specifications of the equipment and materials, or does not have the technical knowledge to determine whether the specifications are met). In addition, some defects may be discoverable only after the incorporation of the equipment and materials in the works and the completion of construction. The parties might therefore wish to consider whether the contract should provide that in such cases the purchaser would not lose his remedies in respect of a lack of conformity which he did not notify to the contractor, if that lack of conformity arose from causes for which the contractor was liable to the purchaser.

7. Storage on site

21. Equipment and materials must be available at the site at the time when they are needed for incorporation in the works. They are, therefore, usually supplied to the site and stored there prior to the time when they will be used. The contract may establish the obligations of the parties in connection with that storage.

22. Provisions concerning storage may be unnecessary if the equipment and materials are to remain in the hands of the contractor after being supplied to the site and the contractor bears the risk of loss of or damage to them. In such cases, the contractor's liability for defects in the works, or the portion of the works in which the stored equipment and materials are to be incorporated, will be a sufficient incentive by him to exercise proper care in storage. In cases where the storage is to be effected by the contractor, but the risk is to be borne by the purchaser during the storage, it is advisable to determine in the contract the degree of care expected of the contractor in performing the storage.

23. The choice of which party is to be responsible for storage may depend upon the contracting approach chosen by the purchaser. If only one contractor is engaged to construct the works, that contractor might assume responsibility for storage (see, also, paragraph 22, above). If more than one contractor is to supply equipment and materials, each contractor might assume responsibility for storing the equipment and materials supplied by him if his personnel are to be present on site at the time of supply, and if he has suitable storage facilities. Otherwise, the purchaser might assume responsibility for the storage. Such an arrangement may, however, give rise to disputes. In that case, the contract might obligate the contractor supplying the equipment or materials to advise the purchaser on the manner in which they are to be stored, if the purchaser requests such advice. It might also obligate the contractor to inform the purchaser of any special measures which have to be taken in storing the equipment and materials, even if the purchaser makes no such request.

24. In cases where the contractor is responsible for storage, that responsibility might include the provision of adequate storage facilities (e.g., storage sheds or rooms). However, the contract might require the purchaser to provide the land on which the facilities are to be located. If the purchaser is better able to provide the storage facilities, the contract might obligate him to provide them at a time set forth in the time-schedule for construction (see chapter IX, "Construction on site", paragraphs 18 to 23).

25. If the equipment and materials are to be taken over and stored by the purchaser, and the risk of loss of or damage to the equipment and materials during storage is to be borne by him (see chapter XIV, "Passing of risk", paragraphs 9 to 17), the contract might obligate the purchaser to hand over the equipment and materials to the contractor in the same condition in which the purchaser took them over for storage. However, the contract might exclude from such liability loss or damage caused by the contractor or by a person engaged by him, or loss or damage occurring by reason of the inherent character of the equipment or materials. In cases where storage is to be effected by the purchaser but the risk is to be borne by the contractor, it is advisable to determine in the contract the degree of care expected of the purchaser in performing the storage. In cases where the purchaser stores the goods, the contractor might obligate him to notify the contractor promptly of any loss or damage occurring to the stored equipment and materials.

26. The contract might establish the time and manner in which equipment and materials stored by the purchaser are to be handed back to the contractor for incorporation in the works. It might obligate the contractor to inspect the equipment and materials at the time they are handed back to him by the purchaser, and to notify the purchaser of any loss or damage. Whether the purchaser is liable for the loss or damage may depend on the nature of the purchaser's responsibility for storage (see paragraph 25, above). The contract might provide that the contractor loses his right to hold the purchaser liable for loss of or damage to the stored equipment or materials if the contractor does not give notice to the purchaser specifying the nature of the loss or damage within a reasonable period of time after the contractor can reasonably be expected to have discovered it, and, at the latest, within a period of time, specified in the contract, after the stored equipment or materials have been handed over to the contractor by the purchaser.

C. Supply of equipment and materials by purchaser

27. Under some works contracts, the purchaser may assume the obligation to supply certain equipment and materials needed for the construction of the works by the contractor (see paragraph 4, above). This should be distinguished from the situation where the purchaser has undertaken to construct a portion of the works himself and he is to be solely responsible for that construction (see chapter II, "Choice of contracting approach", paragraph 1).

28. It is advisable for the contract to specify the equipment and materials to be supplied by the purchaser. The time when the equipment and materials are to be supplied by the purchaser may be set forth in the time-schedule by reference to dates or periods of time in a manner similar to that discussed in paragraph 9, above, concerning the time of supply by the contractor.

29. The contract might obligate the contractor to inspect the equipment and materials promptly after they have been supplied by the purchaser. It might also provide that the contractor loses his right to hold the purchaser liable for a lack of conformity of equipment and materials if the contractor does not give notice to the purchaser specifying the lack of conformity within a reasonable period of time after the contractor can reasonably be expected to have discovered it, and at the latest, within a period of time, specified in the contract, after the equipment and materials have been supplied by the purchaser. The remedies available to the contractor for a failure by the purchaser to supply equipment and materials in time and free of defects are dealt with in chapter XVIII, "Delay, defects and other failures to perform", paragraph 63.

30. The parties may wish to agree that the contractor is not to pay for equipment and materials supplied by the purchaser, but that the value of that equipment and materials is to be accounted for in determining the price to be paid by the purchaser for the construction of the works.

Footnote to chapter VIII

¹ Illustrative provision

"(1) The supply of equipment and materials by the contractor for incorporation in the works is to be effected on the basis of [FOR . . . (named departure point)] [f.o.b. . . . (named port of shipment)] [c. & f. . . . (named port of destination)] [Freight/Carriage Paid to . . . (named port of destination)] [Ex Ship . . . (named port of destination)] [Ex Quay (duty paid . . . named port)] [Delivered at Frontier . . . (named place of supply at frontier)] [Delivered Duty Paid at . . . (named place of destination in the country of importation)].

"(2) The trade term referred to in paragraph (1) is to be interpreted in accordance with the International Rules for the Interpretation of Trade Terms (INCOTERMS) of the International Chamber of Commerce in force on the date of entering into the contract, unless the contract provides otherwise in respect of any of the issues regulated by that trade term". (INCOTERMS, as revised in 1980, are contained in ICC Document No. 350).

Chapter IX. Construction on site

SUMMARY

Construction on site as discussed in this chapter covers civil engineering, building and the installation of equipment. It also covers the supply by the contractor of certain construction services relating to installation to be effected by the purchaser or an enterprise engaged by the purchaser. The scope of the construction to be effected will depend on the terms of the particular works contract. Mandatory legal rules in force in the country where the works is to be constructed may require certain standards or procedures to be observed during the construction (paragraphs 1 to 3).

Some preparatory work is usually needed on the site before construction can commence. The contract may specify the items of preparatory work to be undertaken by each party. The purchaser may be obligated to obtain any authorizations required for the use of the site for construction. The contract may also specify the facilities which will be needed by the contractor's personnel during the construction, and determine how those facilities are to be provided (paragraphs 6 to 9).

The contract may obligate the contractor to equip himself with the construction machinery and tools that he needs for the construction. If the purchaser is to supply some of the construction machinery and tools, the contract may determine the rights and obligations of the parties in regard to the supply. The purchaser may be obligated to assist the contractor in obtaining authorizations for the import of the construction machinery and tools into the country where the works is to be constructed (paragraphs 11 and 12).

The contract should set forth the dates when the construction is to be commenced and completed by the contractor, and also determine whether completion prior to the date set for completion is permissible (paragraphs 14 to 17).

It is advisable for the contract to contain a time-schedule which establishes the sequential order in which construction is to take place. In designing the time-schedule, the parties may wish to consider using the "critical path method". The time-schedule may establish obligatory and non-obligatory milestone dates for the completion of portions of the construction (paragraphs 18 to 23).

The date for completion of construction may need to be changed in certain circumstances. The contract may establish a mechanism for making the change if those circumstances occur (paragraphs 24 and 25).

If the purchaser undertakes the installation of equipment, the contractor may be obligated to supervise the installation. The contract may specify the rights and obligations of the parties in relation to the supervision. Where supervision by the contractor is not needed, the contractor may be obligated to give advice on installation, if so requested by the purchaser (paragraphs 27 to 30).

Each party will need access to the site for certain purposes. The contract may define the access to be granted, and include provisions regulating access (paragraphs 31 and 32).

In cases where the purchaser is to construct a portion of the works, he may sometimes find it advantageous to require the contractor to purchase on his behalf some of the equipment and materials needed for the construction (paragraphs 33 and 34).

The contract may obligate the contractor to clear the site periodically, and to leave it in a clean and workmanlike condition after the completion of construction (paragraph 36).

A. General remarks

1. Construction under a works contract may include the supply of equipment and materials to be incorporated in the works, as well as civil engineering, building, installation of equipment and the supply of other construction services (e.g., supervision of installation). In addition to undertaking the construction, the contractor may undertake to transfer technology (see chapter VI, "Transfer of technology", paragraph 2) and to supply the design for the works (see chapter II, "Choice of contracting approach", paragraph 2).

2. Construction on site as discussed in this chapter covers civil engineering, building and the installation of equipment. It also covers the supply by the contractor of certain construction services relating to installation to be effected by the purchaser, or by an enterprise engaged by the purchaser. The supply of equipment and materials is dealt with in chapter VIII, "Supply of equipment and materials". The scope of the construction on site to be effected will depend on the terms of the particular works contract (e.g., the construction may be limited to the installation of equipment, or may include, in addition, civil engineering and building: see chapter V, "Description of works and quality guarantee", paragraph 3). In some cases, equipment supplied by the contractor may be installed by the purchaser or an enterprise engaged by him, and the obligation of the contractor may be limited to the supervision of the installation (see paragraphs 27 to 30, below). In other cases, some equipment may be supplied by enterprises engaged by the purchaser, and the contractor may be obligated to install that equipment in addition to equipment supplied by him.

3. Mandatory legal rules in force in the country where the works is to be constructed may require certain standards or procedures to be observed during the construction on site (e.g., in the interests of the health and safety of the personnel effecting the construction and in the interests of environmental conservation). The contract may, however, obligate the purchaser to assist the contractor in obtaining information concerning such rules, and the purchaser may find it convenient to perform some of the obligations imposed by the rules. In addition, certain mandatory legal rules of the contractor's country relating to working conditions may apply even to construction effected on the site in the purchaser's country by the contractor's personnel. Apart from relevant local, national and international legal rules and regulations and the provisions of the contract, there may exist local, national and international standards or codes of practice concerning health, safety and environmental conservation. It is advisable for the parties to agree that the contractor will comply with those requirements.

4. When several contractors are engaged to construct the works, and construction by them is to proceed simultaneously, the contract may require each of them to avoid conduct which would interfere with the performance of his obligations by other contractors.

5. The contract may provide that representatives of the parties are to meet periodically at specified intervals on the site to promote co-operation between them and to resolve outstanding issues concerning the construction on site. Such meetings may help to resolve routine problems or misunderstandings, and thus dispel the need to invoke contract provisions on dispute settlement (see chapter XXIX, "Settlement of disputes", paragraph 9).

B. Preparatory work

6. Most works contracts obligate the purchaser to provide the site on which the works is to be constructed. The site may be identified in the contract, e.g., by reference to maps or plans. The contractor will normally have inspected the site prior to entering into the contract, and may have assumed some obligations as to the suitability of the site for the proposed construction (cf. chapter VII, "Price and payment conditions", paragraphs 44 and 45).

7. Some preparatory work on the site (e.g., clearing and levelling the site, providing access roads or railways, and making water and energy available to the site) is usually needed to enable construction on site to commence and to progress smoothly. The contract may specify the items of preparatory work to be undertaken by each party, fix a time-schedule for the completion of the work (see section C,3, below), and determine which party is to bear the cost of the work.

8. It is desirable for the contract to obligate the purchaser to obtain official approvals or authorizations required under the law of the country where the works is to be constructed for the use of the site for construction (cf. chapter XXVIII, "Choice of law", paragraph 24). The parties may also wish to provide that the purchaser is to assist the contractor in obtaining visas, work permits, and similar documents which are necessary for the contractor's personnel to enter the country of the site, and to commence work there.

9. It is desirable that the contract specify the facilities which will be needed by the contractor's personnel during the construction on site, which party is to provide those facilities, and which party is to bear the costs of providing them. If the purchaser is to pay for facilities to be provided by the contractor, the amount of the payment may be included in a lump-sum price or, alternatively, the amount may be payable on a cost-reimbursable basis (see chapter VII, "Price and payment conditions", paragraph 2). In some cases, the contractor may be obligated under the contract to provide certain facilities needed by the purchaser's personnel during the construction on site. The purchaser may wish to consider undertaking some or all of the following obligations: to provide offices and living quarters suitable for the contractor's personnel; to equip such accommodations with furniture, telephones and other utilities; to provide food or catering facilities for the contractor's personnel; to provide sanitary facilities on the site; and to provide daily transportation for the contractor's personnel between their living quarters and the site. The contract may specify the standard of the facilities to be provided, taking into account requirements

imposed by the applicable law in respect of the working conditions of construction personnel. It may be desirable for the contract to require, prior to the commencement of construction on site, a joint inspection by the parties of the facilities to be provided by the purchaser. The condition of the facilities as ascertained by the inspection may be set forth in a protocol signed by both parties.

10. It is usually necessary to establish a workshop for the purposes of the construction on site, and the contract may obligate the contractor to provide it. The purchaser may wish to retain this workshop after construction has been completed since it may be useful for the purposes of repairing and maintaining the works. The cost of providing the workshop may be included in the contract price.

C. Construction on site to be effected by contractor

1. *Machinery and tools for effecting construction*

11. The contractor will need construction machinery (e.g., excavators, cranes, earth movers) and tools (e.g., drills, saws) for effecting the construction on site, and he may be obligated to equip himself with the machinery and tools that he needs. In certain cases, however, it may be advantageous for the purchaser to supply the contractor with some of the construction machinery and tools (e.g., when he has the possibility of inexpensively leasing such machinery and tools for local currency). In such cases, the contract may enumerate the items to be supplied by the purchaser, and provide that the contractor is responsible for obtaining all the other items needed by him. Furthermore, it is advisable for the contract to specify the rights and obligations of the parties in respect of items supplied by the purchaser (e.g., whether the items are to be sold or leased to the contractor, and whether the amount payable by the contractor in respect of the sale or hire has been accounted for in the contract price or has to be paid separately). The contract may also address other issues which will arise under such arrangements, for example, the dates on which various items are to be supplied, the quantity and quality of the items, which party is to be responsible for maintenance and repairs, the purposes for which the items may be used, and which party bears the risk of loss of or damage to the items. The same issues will have to be addressed if the purchaser is to construct a portion of the works, and he finds it advantageous to obtain from the contractor some of the machinery and tools he needs for the construction.

12. Special licences and authorizations (e.g., customs clearances) may be required in respect of construction machinery and tools imported by the contractor into the country where the works is to be constructed, even if they are to be exported after completion of the construction. The purchaser may be obligated under the contract to assist the contractor in obtaining such licences and authorizations, or to obtain them on behalf of the contractor.

13. The parties may wish to agree upon how the transport on the site needed for effecting the construction is to be provided. For example, the contract may require one of the parties to provide the vehicles needed, and may allocate responsibility in respect of the maintenance, repair and replacement of the vehicles. Issues connected with the transport of equipment and materials to the site are discussed in chapter VIII, "Supply of equipment and materials", paragraphs 11 to 14.

2. *Time for completion of construction*

14. The contract should clearly set forth the times when the construction is to be commenced and is to be completed by the contractor. The time for completion may be determined either by reference to a calendar date or by reference to a period of time. If construction is to be completed by a calendar date, it is advisable for the contract to specify the situations in which this date may be postponed, and the criterion for determining the length of postponement. The contract may provide that construction is to be completed within a specified period of time in cases where the date on which construction can commence is uncertain (e.g., because approval of the contract by a governmental institution is required before the contract can enter into force, or because licences for the import of equipment and material required for the construction have to be obtained by the purchaser). The contract should specify when the period is to commence (see succeeding paragraph), under what circumstances it will cease to run or will be extended or shortened, and the criterion for determining the change in the period (see paragraphs 24 to 26, below, chapter XXIII, "Variation clauses", paragraph 8, and chapter XXIV, "Suspension of construction", paragraphs 13 and 14).

15. The parties may wish to provide that a period of time for completion of construction is to commence from one of the following dates:

- (a) The date on which the contract enters into force;
- (b) The date on which the purchaser makes an advance payment of a part of the price required to be made under the contract, or the date on which the purchaser delivers to the contractor a guarantee as security that such an advance payment will be made;
- (c) The date on which the purchaser delivers a notification to the contractor that the purchaser has obtained all licences for import of equipment and materials, and all official approvals for construction of the works required in the country where the works is to be constructed;
- (d) The date on which the purchaser has delivered to the contractor all the contract documents defining the scope of construction and the technical characteristics of the works (e.g., designs, drawings) which are needed for the commencement of construction;
- (e) The date on which the site is handed over to the contractor.

16. Alternatively, the parties might refer to more than one of the dates mentioned in the preceding paragraph, and provide that the period of time is to commence to run from the date which occurs last. The consequences of a failure by the contractor to complete construction in time are discussed in chapter XVIII, "Delay, defects and other failures to perform" and in chapter XIX, "Liquidated damages and penalty clauses".

17. Where only one contractor is engaged to construct the works and co-ordination by the purchaser of construction on site by several contractors is not needed, it may be in the interest of the purchaser that the construction is completed as early as possible. In such a case, the date fixed for completion, or the end of the period of time for completion, may be considered as the final time for completion, with earlier completion being permissible or even encouraged (see chapter VII, "Price and payment conditions", paragraphs 28 to 30). Sometimes, however, the purchaser may not desire earlier completion for various practical reasons, including his financial arrangements. The contract should determine whether early completion is permitted.

3. *Time-schedule for construction*

18. It is advisable for the contract to contain a time-schedule which establishes the sequential order in which construction is to take place. A time-schedule facilitates an evaluation of the progress of the construction. It may also facilitate the determination of a change in time for completion of construction when this time has to be changed (see sub-section 4, below). The parties may wish to negotiate a time-schedule acceptable to them prior to entering into the contract, since it may be more difficult to reach agreement at a later stage. However, where it is impracticable to formulate a complete and detailed time-schedule prior to entering into the contract, the contract may set forth a basic time-schedule dealing with the construction of major portions of the works, and provide for a detailed time-schedule to be prepared by the contractor within a specified period of time after the contract has entered into force.

19. The time-schedule should be prepared in such a form (e.g., graphically or by using computer facilities) as would permit the actual progress of the construction to be recorded and compared with the time-schedule. One method for designing the time-schedule which the parties may wish to consider is the so-called "critical path method". In this method, the entire construction is divided into individual tasks, and each task is assigned a period of time within which it is to be performed. These periods are incorporated in a schematic diagram depicting the sequence and interrelationship of construction activities. Critical activities, i.e., activities on which other activities depend, form a continuous chain, known as the critical path, through the schematic diagram. This method may facilitate the evaluation of the consequences of delay in certain construction activities upon other such activities.

20. Where several contractors are engaged for the construction (see chapter II, "Choice of contracting approach", paragraphs 17 to 25), each contract may include a time-schedule of the sequence of construction under that contract to enable the purchaser to harmonize it with the purchaser's overall time-schedule for the construction of the entire works. However, while in some cases it may be possible to stipulate the period of time within which the construction to be effected by each contractor is to be completed, it may not be possible to specify the dates for commencement of construction by each contractor (e.g., because the exact dates of completion by other contractors are uncertain). The contract with each of the contractors may provide that the date on which that contractor is to commence construction must fall within a period of time specified in the contract, and may further provide that the date of commencement is to be specified in a notification to the contractor to be delivered within a specified period of time prior to that date. The contract may further provide that, if the purchaser does not require the commencement of construction by the end of the specified period, the contractor is entitled to terminate the contract (see chapter XXV, "Termination of contract").

21. The time-schedule may establish milestone dates (that is, dates by which specified portions of the construction are expected to be completed) for the purposes of assessing the progress of construction. The completion of a portion of construction by a milestone date may be obligatory. When several contractors are engaged for the construction, strict compliance by each contractor with his own time-schedule will be necessary in order for the

construction to be successfully co-ordinated by the purchaser. In such cases, therefore, the contract may provide that the milestone dates are obligatory, and that a contractor who fails to meet a milestone date is liable for delay (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 17 and 18).

22. When only a single contractor is engaged to construct the entire works, milestone dates are not needed for the purposes of co-ordinating construction activities; the single contractor will be obligated to co-ordinate the activities and to complete construction of the entire works by the date specified in the contract for completion. Nevertheless, even in such cases, obligatory milestone dates may be useful to the purchaser. In the absence of milestone dates requiring certain portions of the construction to be completed by those dates, under some legal systems the purchaser may have no remedy until the date fixed for completion of construction is reached, even where the contractor has fallen far behind the time-schedule for construction. The purchaser may therefore wish to provide in the time-schedule one or several obligatory milestone dates by which certain major portions of the construction are to be completed. The contract may provide that the purchaser is entitled to terminate the contract if the contractor fails to complete one of those portions within a reasonable or specified period of time after the passing of the relevant milestone date (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 17 and 18, and chapter XXV, "Termination of contract", paragraph 9).

23. Non-obligatory milestone dates may be useful for certain purposes. For example, the use of such dates to delimit the periods of time within which portions of the construction are expected to be completed may facilitate the determination of the length of an extension of time to be granted to a contractor in the event of a variation or suspension of the construction. However, a contractor who failed to meet a non-obligatory milestone date would not be in delay in the performance of his construction obligations.

4. Change in time for completion of construction

24. The time for completion of construction may need to be extended or shortened in certain circumstances. If the law applicable to the contract does not adequately provide for such an extension or shortening, it is advisable for the parties to do so in the contract. The circumstances requiring a change in the time for completion is discussed in various other chapters of this *Guide* (see, for example, chapter XXIII, "Variation clauses", paragraph 8, and chapter XXIV, "Suspension of construction", paragraphs 13 and 14). If the time for completion is changed, the time-schedule for construction will have to be adapted accordingly.

25. The contract may obligate the contractor to notify the purchaser promptly of the occurrence of any event on which the contractor intends to rely for the exercise of his right to an extension of time for completion and of the causes of the event. Furthermore, the contractor may be obligated to notify the purchaser of the length of the extension which is needed as soon as the contractor is in a position to specify that length. If, within a specified period of time after the delivery of the notification, the parties fail to agree on the length

of the extension which the contractor is to be given, the time for completion of construction may be deemed under the contract to be extended by a period of time reasonably needed for the completion. The parties may provide that, if disputes between them are settled in arbitral or judicial proceedings (see chapter XXIX, "Settlement of disputes"), the construction is not to be interrupted during the proceedings.

26. A change in the time for completion of construction may require a consequential extension of insurance cover in respect of the construction (see chapter XVI, "Insurance") or of the period of validity of performance guarantees (see chapter XVII, "Security for performance", paragraphs 10 to 12). The party who is obligated to obtain insurance or provide security may be obligated to take the necessary measures.

D. Installation of equipment to be effected under contractor's guidance

27. Where the several contracts approach is adopted (see chapter II, "Choice of contracting approach", paragraphs 17 to 25), the purchaser may wish to undertake the installation of equipment supplied by a contractor, or to engage a local enterprise to install the equipment. The contract may obligate the contractor to supervise the installation. Such an arrangement would reduce the purchaser's outflow of foreign exchange, and might lead to the acquisition of technical skills in his country.

28. It is advisable for the contract to specify the duties to be performed by the contractor in the course of supervision. The contract may obligate him to give specific instructions to the personnel installing the equipment on technical, health and safety aspects of the installation. The contract may specify the qualifications required of the persons to carry out the supervision on behalf of the contractor, and may obligate the contractor to notify the purchaser of the names of persons authorized to carry out the supervision. The contract may indicate the estimated duration of the installation to be supervised, and the approximate date when the installation is to commence. The contract may obligate the contractor to commence his supervision within a specified period of time after delivery to him by the purchaser of a notice to commence. The contract may obligate the purchaser, within a specified period of time before the supervision by the contractor is due to commence, to notify the contractor of the personnel to be supervised.

29. The contract may obligate the contractor to inspect equipment installed under his supervision in order to verify that the installation has been properly carried out, and to notify the purchaser promptly of any defects which he discovers or may reasonably be expected to discover at the inspection. The contract may provide that the contractor is not liable for defects caused by a failure of the purchaser or enterprise engaged by the purchaser to follow instructions given by the contractor.

30. The purchaser, or a local enterprise engaged by the purchaser, may have the technical capability to install the equipment without supervision by the contractor. In such cases, the contract may obligate the contractor to give advice on installation, if so requested by the purchaser. The contract may also obligate the contractor to inspect the equipment installed after the installation is completed, and to notify the purchaser promptly of any defects which he discovers or may reasonably be expected to discover at the inspection.

E. Access to site

31. Each party will need access to the site for certain purposes. The contract may define access to the site to include access to the area where the construction is to be carried out, and also to workshops, laboratories, stores and other facilities established for the purposes of construction on site. Where several contractors are engaged for the construction, in determining the access to be given by the purchaser to a contractor to portions of the works constructed by another contractor, account should be taken of undertakings as to confidentiality (e.g., with regard to drawings, specifications or technology) given by the purchaser to the other contractor.

32. It is advisable for the contract to regulate access to the site. The nature of the access to be granted may depend upon which party is to be in physical possession of the site and the works during construction. When the site and the works during construction are to be in the physical possession of the contractor, the contract may obligate him to give the purchaser, and persons nominated by the purchaser, access to the site for the purpose of enabling them to ascertain the progress of construction, and to exclude persons having no right of access. When the site and the works during construction are to be in the physical possession of the purchaser, the contract may obligate him to give the contractor, and persons engaged by him (including subcontractors), access for the purpose of constructing the works and ensuring curing defects during the guarantee period (see chapter XIII, "Completion, take-over and acceptance", paragraph 23). The contract may obligate each party to take such security measures as are necessary to prevent loss of or damage to equipment, materials and the works when the risk of loss or damage is borne by the other party (see chapter XIV, "Passing of risk").

F. Assistance by contractor in purchasing equipment and materials

33. In cases where the purchaser is to construct a portion of the works, he may sometimes find it advantageous to require the contractor to purchase on his behalf some of the equipment and materials needed for the construction (e.g., the contractor may be in a position to obtain such items more efficiently or more inexpensively). The services relating to purchasing to be supplied by the contractor may include suggesting appropriate specifications for the equipment and materials; suggesting the contractual undertakings, including quality guarantees, to be required from potential suppliers; selecting suitable suppliers; preparing tender and other documents needed for entering into contracts with suppliers; entering into purchase contracts on behalf of the purchaser; and taking over and inspecting supplies. It is advisable for the contract to contain special provisions concerning payment by the purchaser for items purchased on his behalf by the contractor, since the payment conditions applicable to the construction to be effected by the contractor may not be appropriate in respect of those items.

34. The contract may specify the liability of the contractor for a failure to perform his obligations. In contrast to the cases where the contractor engages subcontractors or other persons for the performance of his own construction obligations (see chapter XI, "Subcontracting", paragraphs 27 and 28), it may be provided that the contractor is not liable if suppliers fail to perform their

obligations under contracts which they have entered into with the purchaser. The contractor may be liable only where he has failed to exercise the care which can reasonably be expected from him in the performance of his obligations related to purchasing.

35. In some cases, the purchaser may be capable of purchasing the necessary equipment and materials himself, but may need assistance on a few issues (e.g., appropriate specifications for the equipment and materials, or the guarantees which may be required from suppliers). In such cases, the contractor may be obligated to give suitable advice.

G. Clearance of site

36. The contract may obligate the contractor to clear the site periodically of excess materials and waste. Furthermore, it may obligate him to remove his construction machinery and tools from the site after take-over or acceptance of the works by the purchaser, with the exception of machinery and tools which he may need to repair defects notified to him during the guarantee period. The contract may also obligate the contractor to depart from the site after completion of the construction, leaving it in a clean and workmanlike condition. For the contractor's obligations with respect to his construction machinery and tools when the contract is terminated, see chapter XXV, "Termination of contract", paragraphs 23 to 25.

Chapter X. Consulting engineer

SUMMARY

A consulting engineer as dealt with in this chapter is an engineer engaged by the purchaser to render advice and technical expertise to the purchaser, to take certain actions under the works contract on behalf of the purchaser, or to exercise certain independent functions under the contract (paragraphs 1 to 3). It is advisable for the works contract to set forth clearly the authority and functions of the consulting engineer to the extent that they affect the rights and obligations of the contractor (paragraph 4). The contract need not authorize or regulate the rendering by the consulting engineer of advice and technical expertise to the purchaser (paragraphs 5 and 6). It is advisable, however, for the contract to set forth any authority of the consulting engineer to act on behalf of the purchaser, including any limitations on such authority (paragraphs 7 and 8).

In some works contracts, the parties may wish to provide for a consulting engineer to exercise certain functions independently, rather than for or on behalf of the purchaser (paragraphs 9 to 12 and 16). Such independent functions may be limited to matters of a technical nature, and may include, for example, resolving on site technical questions arising during the course of construction, resolving discrepancies, errors or omissions in the drawings or specifications, interpreting the technical provisions of the contract, and certifying the existence of certain facts giving rise to rights and obligations under the contract (paragraphs 13 and 14). The parties may wish to consider whether the consulting engineer should be authorized to decide disputes between the parties (paragraph 15).

It is desirable for the contract to establish the extent to which an act of the consulting engineer pursuant to an independent function is to be considered binding on the parties. This may depend upon whether the act relates to the resolution of routine problems and questions, or is in connection with the settlement of a dispute between the parties (paragraphs 17 to 19).

If the consulting engineer is only to render advice and technical expertise to the purchaser, or to act on behalf of the purchaser, he might be selected by the purchaser alone. However, if he is to exercise independent functions, the contractor may wish to have the right to participate in the selection. It is desirable for the contract to establish procedures relating to the selection and replacement of the consulting engineer (paragraphs 20 to 26). It may be desirable for the parties to deal with the question of delegation by the consulting engineer of his authority, if they are able to do so under the applicable law (paragraphs 27 and 28).

The contract might obligate the contractor to provide to the consulting engineer such information or grant access to the site, places of manufacture and the completed works to the same extent that he must provide the information or grant access to the purchaser under the works contract (paragraph 29).

A. General remarks

1. The purchaser is likely to require the services of an engineer from the early stages of an industrial works project. Prior to the conclusion of the works contract, an engineer may be required in connection with the performance of feasibility and other pre-contract studies (see chapter I, "Pre-contract studies"), preparation of the design, drawings and specifications for portions or all of the works, preparation of tender and contract documents (see chapter III, "Selection of contractor and conclusion of contract"), and for advice on various other technical matters. After the contract has been entered into, an engineer may provide advice and technical expertise to the purchaser in connection with the construction of the works. In some cases, the purchaser may authorize an engineer to act on his behalf with respect to certain actions to be taken by the purchaser under the works contract (see paragraphs 7 and 8, below). In addition, an engineer may be authorized to exercise independent functions under the works contract which directly affect the rights and obligations of the parties (see paragraphs 9 to 19, below).

2. The scope of the functions to be exercised by an engineer may vary depending upon the contracting approach chosen by the purchaser (see chapter II, "Choice of contracting approach"). The scope would be greater, for example, if the purchaser were to choose an approach involving several contractors and the engineer was required to assist the purchaser in co-ordinating the performances of the various contractors, than if he were to choose a turnkey contract in which such co-ordination was not normally required. Even in a turnkey contract, however, the purchaser may find the services of an engineer to be valuable in connection, for example, with monitoring the progress and checking the quality of the construction performed by the contractor.

3. In some cases, the purchaser may have on his own staff engineers who are capable of supplying the various services which the purchaser will require in connection with the construction of the works. In other cases, however, the purchaser's staff may not be able to supply all the engineering services required, and the purchaser may wish to engage an engineer in order to obtain those services. Such a third-party engineer is referred to in this chapter as the "consulting engineer". Even in cases where the purchaser's in-house engineering capabilities are sufficient, the purchaser may wish to engage a consulting engineer in order to supplement those capabilities, for example, where a consulting engineer has particular expertise or experience in the type of works or construction involved. In addition, if the works contract provides for certain independent functions to be exercised by an engineer, the contract may require that those functions be exercised by a third party, rather than by engineers on the staff of the purchaser. In choosing a consulting engineer, the purchaser may wish to consider whether the engineer who performed the pre-contract studies should be chosen (see chapter I, "Pre-contract studies", paragraph 16).

4. The present chapter deals with provisions in the works contract with respect to the authority and functions of a consulting engineer who is engaged by the purchaser. As far as the consulting engineer is concerned, such authority and functions will be established by the contract between him and the purchaser, rather than by the works contract, to which the consulting engineer

is not normally a party. To the extent that the consulting engineer takes actions either on behalf of the purchaser or independently in his own right which are to have consequences upon the rights and obligations of the contractor under the works contract, it is advisable for the works contract, too, to set forth the authority and functions of the consulting engineer. This will give the contractor the legal authorization as well as the obligation to give effect to such actions of the consulting engineer. It is important for the provisions of the works contract with respect to the authority and functions of the consulting engineer to be consistent with those of the contract between the purchaser and the consulting engineer. If there is more than one works contract for the construction of the works, it is advisable for the provisions in those contracts with respect to the authority and functions of the consulting engineer to be consistent.

B. Authority and functions of consulting engineer

1. *Rendering services to purchaser*

(a) *Rendering advice and technical expertise to purchaser*

5. With any type of works contract, it is important for the purchaser to possess or to have access to the technical expertise necessary to satisfy himself that the design and specifications for the works meet his requirements and that the construction is progressing satisfactorily, and to take the various decisions and exercise the other functions which are within his province under the contract. For example, he must be able to approve the construction time-schedule submitted by the contractor, monitor the progress of the construction, assess the performance of the contractor in order to determine whether to make payments claimed to be due, evaluate delays or defects in construction and determine what measures to take in that regard, order variations or decide upon variations proposed by the contractor, decide upon subcontractors proposed by the contractor, deal with exempting impediments or hardship situations and evaluate the results of inspections and tests. In certain contracts, it may be necessary for the purchaser to contract for equipment and materials, check and evaluate drawings submitted by the contractor, evaluate guarantees proffered by contractors and suppliers and schedule and co-ordinate work performed by various contractors. In a cost-reimbursable contract, it will be necessary for the purchaser to ascertain whether the costs of items for which the contractor seeks reimbursement are reasonable and correct. In a unit-price contract, the purchaser will have to verify the amount of construction units to be paid. The purchaser will often find it desirable to engage a consulting engineer to advise him and render technical expertise as to matters such as these.

6. If the consulting engineer merely renders such advice and expertise to the purchaser, and does not, either on behalf of the purchaser or in his own right, take actions which directly affect the contractor's contractual rights and obligations, there is no need for the works contract to authorize or regulate the exercise of such functions by the consulting engineer. On the other hand, it may be desirable for the works contract to contain provisions designed to enable the consulting engineer to perform such functions, or to facilitate that performance, such as provisions granting him access to the site or place of manufacture or information necessary to monitor the progress of the work and to exercise his other functions (see paragraph 29, below).

(b) *Acting on behalf of purchaser*

7. In addition to rendering advice and technical expertise to the purchaser, a consulting engineer may be authorized to take, on behalf of the purchaser, some or all of the acts of the nature referred to in paragraph 5, above. Since, in some cases, such acts by the consulting engineer may directly affect the contractor's contractual rights and obligations, it is advisable for the works contract to set forth the authority of the consulting engineer in this regard, including any limitations upon that authority (e.g., any restrictions on the authority of the engineer to order or agree to variations on behalf of the purchaser). In addition, it is advisable for the works contract to obligate the purchaser to notify the contractor in writing of any addition to or change in the authority of the consulting engineer effected after the contract has been entered into.

8. It is desirable for the works contract to specify any authority of the consulting engineer to communicate with the contractor on behalf of the purchaser. For example, the contract might provide for communications between the purchaser and the contractor dealing with matters within the authority of the consulting engineer to be transmitted through the engineer.

2. *Independent functions*

9. The parties may wish to consider whether a consulting engineer should exercise certain functions independently, rather than for or on behalf of the purchaser. Such a practice is sometimes a feature of works contracts in certain areas of the world, but may be unfamiliar in other areas. It may have certain advantages. For example, it could enable technical questions arising during the course of construction to be resolved expeditiously and in an independent manner by one who is conversant with the construction and knowledgeable about the project, and who has immediate access to the relevant personnel, factual information and correspondence. An act taken independently by a consulting engineer in whom both parties have confidence may be more readily accepted by the parties than one taken by or on behalf of one of them, and might avoid time-consuming and costly arbitral or judicial proceedings.

10. On the other hand, there may be certain disadvantages to the exercise of independent functions by a consulting engineer. For example, if the consulting engineer is chosen, engaged and paid by the purchaser, the contractor may question whether the consulting engineer will be able to perform his independent functions impartially. Such concern may arise, in particular, if, in addition to his independent functions, the consulting engineer is to perform various other functions for or on behalf of the purchaser. The contractor may question the ability of the consulting engineer to shift from protecting the interests of the purchaser in some cases to acting impartially and independently in other cases.

11. In theory, it would be possible for each party to appoint a consulting engineer and to have independent functions performed by agreement between them. It would also be possible for the purchaser to engage one consulting engineer to render advice and technical expertise to him or to act on his behalf, and another one to exercise independent functions. In practice, however, such arrangements could prove cumbersome.

12. The ability of the consulting engineer to exercise independent functions, the scope of such functions and the degree to which independent acts by the consulting engineer are to be binding upon the parties, may depend upon the extent to which both parties participate in the selection of the consulting engineer (see section C, below). For example, if the consulting engineer is selected exclusively by the purchaser, a contractor might be reluctant to agree to the exercise of any independent functions by the consulting engineer; or, he might agree to the exercise by the consulting engineer of independent functions of only a restricted scope. Also, he may not agree to accord any binding effect to independent acts of the consulting engineer, or may agree only to a limited binding effect (see paragraph 17, below). Permitting both parties to participate in the selection of the consulting engineer could enable the independent role of the consulting engineer to be broadened. However, even in the case where the consulting engineer is selected by the purchaser alone, the selection of an engineer who has a high international reputation for competence and fairness could increase the acceptability to potential contractors of a broader independent role of the consulting engineer.

13. With respect to the types of independent functions which the consulting engineer may exercise, the parties may wish to limit those functions to such matters of a technical nature as the methods of construction, specifications of equipment and materials to be incorporated in the works, and the quality of the works. For example, the parties may wish to authorize the consulting engineer to be on site to be able expeditiously to answer technical questions which arise during the course of construction, to resolve discrepancies, errors or omissions in the drawings or specifications or to interpret technical provisions of the contract. In addition, the parties might wish to authorize the consulting engineer to certify the existence of certain facts which would give rise to rights or obligations under the contract. For example, the consulting engineer might be authorized to certify the entitlement of the contractor to payments claimed by him, the existence of a delay in construction, or the occurrence and duration of events asserted by a party to be exempting impediments, to give rise to rights under a hardship clause, or to justify suspension of construction. He might also be authorized to certify whether mechanical completion tests or performance tests are successful, or the existence of circumstances asserted by the contractor as a ground for objecting to a variation ordered by the purchaser.

14. Some of the functions referred to in the previous paragraph might be exercised by the consulting engineer either on behalf of the purchaser or independently, such as certifying the entitlement of the contractor to payment, or that mechanical completion tests were successful. It is advisable for the contract to indicate clearly whether a particular function is to be exercised on behalf of the purchaser or independently, and to exclude from independent functions those functions which are to be exercised on behalf of the purchaser.

15. The parties may wish to consider whether the consulting engineer should be authorized to decide disputes between the parties concerning matters of a technical nature. If the parties designate a referee to deal with such disputes (see chapter XXIX, "Settlement of disputes", paragraphs 16 to 21) who is different from the consulting engineer, they may wish to restrict the authority of the consulting engineer to resolving routine problems and questions and certifying the existence of facts (see paragraph 13, above). The consulting engineer might himself exercise the role of a referee to settle disputes. In such a

case, considerations such as those discussed in paragraphs 10 to 12, above, are likely to be relevant. For example, such a role is more likely to be acceptable to the contractor if he can participate in the selection of the consulting engineer. If the consulting engineer is to exercise that role, the settlement of such issues as the appointment of the consulting engineer and the scope of his authority to decide disputes may be in accordance with the discussion concerning the referee in chapter XXIX, "Settlement of disputes", paragraphs 17 to 19.

16. If the consulting engineer is to be authorized to exercise independent functions, the contract should provide that those functions are to be exercised impartially with respect to the purchaser and the contractor. Moreover, the contract should provide that the consulting engineer is to apply and give effect to the provisions of the contract, and not simply to act in accordance with his own conception of fairness and without regard to the contract.

17. It is desirable for the contract to establish the extent to which an act of the consulting engineer pursuant to an independent function is to be considered binding on the parties. With respect to the resolution of routine problems and questions and certification of the existence of facts, the contract might provide that any such act may be referred by either party for review in dispute settlement proceedings provided for in the contract. Another possibility may be to provide that acts involving a value less than a stipulated amount are to be binding on the parties and non-reviewable. The contract might also provide that any matter upon which the consulting engineer has failed to act within a specified period of time after having been requested by a party to do so may be referred to dispute settlement proceedings, unless the contract provides another means of dealing with the matter.

18. As to the status of the act in question during the pendency of dispute settlement proceedings, the contract might provide that the act must be conformed to or complied with until it is modified or reversed in such proceedings, or unless the tribunal conducting the proceedings otherwise decides as an interim measure (cf. chapter XXIX, "Settlement of disputes", paragraph 21). Such an approach would avoid lengthy and costly interruptions in the construction. If that approach is adopted, however, the contract might entitle either party to be compensated by the other party for any costs incurred, not otherwise compensated under the contract, as a result of conforming to or complying with an act of the consulting engineer which is subsequently modified or reversed in dispute settlement proceedings.

19. With respect to the settlement of disputes by the consulting engineer, the discussion in chapter XXIX, "Settlement of disputes", paragraphs 16 to 21, concerning the settlement of disputes by a referee, is also relevant to questions concerning the binding nature of a decision by the consulting engineer and the status of such a decision during the pendency of dispute settlement proceedings.

C. Selection and replacement of consulting engineer

20. If the consulting engineer is only to render technical advice and technical expertise to the purchaser, or to act on behalf of the purchaser, he might be selected by the purchaser alone. However, if he is to exercise independent functions, the contractor may wish to have the right to participate in the selection (see, e.g., paragraphs 10 to 12, above).

21. In some cases, the purchaser may designate the consulting engineer in the tender documents. In deciding on whether or not to submit a tender, a potential contractor may take into consideration his knowledge of the designated consulting engineer or his reputation and the role to be played by the consulting engineer under the works contract, particularly if the consulting engineer is to exercise independent functions. It is, therefore, in the purchaser's own interest to designate a firm which is likely to be acceptable to potential contractors.

22. If the consulting engineer is to be selected by the purchaser alone after the works contract has been entered into and the consulting engineer is to act on behalf of the purchaser, it is desirable for the contract to obligate the purchaser to deliver to the contractor written notice of the name and address of the consulting engineer. If the consulting engineer is only to render advice and assistance to the purchaser, such a provision may not be necessary.

23. If the contractor is to participate in the selection of a consulting engineer after the contract has been entered into and the consulting engineer is to exercise independent functions, it would be desirable for the contract to provide a mechanism for the selection. The contract might require the purchaser to notify the contractor in writing of the name and address of the proposed consulting engineer and seek the contractor's consent to his appointment. It might permit the purchaser to engage the proposed consulting engineer immediately, but provide that the consulting engineer is not to exercise any independent functions until the contractor consents in writing to the appointment of the consulting engineer. This would enable the consulting engineer to render technical advice and expertise to the purchaser and to take actions on his behalf, and thus permit the construction to proceed to the extent that it can in the absence of the performance of independent functions by a consulting engineer. The contract might further provide that the consulting engineer may exercise the independent functions provided for in the contract if the purchaser does not receive, within a specified period of time after the despatch of his notice to the contractor, his written objection to the appointment specifying his grounds for the objection.

24. The parties may wish to consider various possible approaches to deal with the case where the contractor objects to the consulting engineer proposed by the purchaser. Under one approach, the contract might obligate the purchaser to propose another consulting engineer to exercise independent functions who meets the contractor's objections. Under another approach, the contractor might provide for the parties to agree upon a third person to select the consulting engineer. Under a third approach, the contract might permit either party to submit the question of the appointment of the consulting engineer to dispute settlement proceedings. If, in those proceedings, the contractor's objection is found not to be reasonable, the contract may authorize the consulting engineer to perform independent functions. If the objection is found to be reasonable, the purchaser may be obligated to propose another consulting engineer to perform the independent functions who meets the contractor's objections. Alternatively, the contract might permit the purchaser to request the person, tribunal or court before which the proceedings are brought to substitute its consent to the appointment of the consulting engineer for that of the contractor, if it is competent under the applicable law to do so.

25. The contract might also contain provisions to deal with the case where the consulting engineer must be replaced after the contract has been entered into. If the original consulting engineer was selected by the purchaser alone after the conclusion of the contract, then the replacement might also be chosen by the purchaser alone, subject to his giving written notice to the contractor of the name and address of the replacement if such notice was required for the appointment of the original consulting engineer. If the original consulting engineer was stipulated in the works contract, or if the contractor participated in the selection of the consulting engineer after the works contract was entered into, the contract might entitle the contractor to participate in the selection of the replacement. Procedures in that regard may be similar to those described in the previous paragraphs with respect to the participation by the contractor in the selection of the original consulting engineer.

26. It is desirable for the contract to provide that acts taken by the original consulting engineer which are in effect at the time of the appointment of the replacement are to remain in effect to the same extent as if the original consulting engineer had not been replaced.

D. Delegation of authority by consulting engineer

27. The delegation of authority by the consulting engineer will often be regulated by rules of the applicable law. However, it may be desirable for the parties to deal with that question in the contract, if they are able to so (i.e. if not restricted by mandatory rules of law). For example, in cases where the consulting engineer is to exercise independent functions, the parties may consider it desirable to provide that he may not delegate his authority to exercise those functions to another consulting engineer without the written consent of both parties. If such a restriction is desired, it is advisable to include it both in the purchaser's contract with the consulting engineer and in the works contract. Similarly, in cases where the consulting engineer is to act on behalf of the purchaser, it is advisable for any limitations which the purchaser may wish to impose upon the ability of the consulting engineer to delegate his authority to exercise such functions to be contained both in the purchaser's contract with the consulting engineer and in the works contract, so that the contractor is made aware of and subject to those limitations.

28. The contract might also provide that any acts taken by a person to whom authority has properly been delegated by the consulting engineer shall have the same effect as if the acts had been taken by the consulting engineer himself. It might also provide that the consulting engineer may take any act which the person to whom authority has been delegated is authorized to take but has not taken.

E. Information and access to be provided to consulting engineer

29. In order to enable the consulting engineer to exercise his functions effectively, he may need to have various types of information, as well as access

to the site, access to the places of manufacture of equipment, materials and supplies to be incorporated in the works, and access to the works during construction and to the completed works. The contract might obligate the contractor to provide such information or grant such access to the consulting engineer to the same extent that he must provide the information or grant the access to the purchaser under the works contract.

Chapter XI. Subcontracting

SUMMARY

The term "subcontracting" as used in this *Guide* refers to the engagement by the contractor of a third person to perform certain of the contractor's obligations under the works contract. It is desirable for the contract to contain provisions dealing with the permissible scope of subcontracting, the selection of subcontractors and other aspects of subcontracting. It is also desirable for the contract to specify the obligations of the contractor which are to be subject to those provisions (paragraphs 1 to 4). Under many legal systems, no legal relationship exists between the purchaser and the subcontractor. It may be desirable for the works contract to deal with certain consequences which arise from this fact (paragraphs 5 and 6).

In particular cases, the contract might prohibit the contractor from subcontracting the performance of some, or all, of his obligations (paragraphs 8 and 9).

With regard to the selection of subcontractors, the parties might consider two basic approaches: the selection of subcontractors by the contractor alone (paragraph 10), and participation of the purchaser in the selection of subcontractors (paragraphs 11 to 26).

If possible, it is desirable for the parties to agree upon the subcontractors prior to entering into the works contract. The names of the subcontractors may be specified in the contract, in order to avoid disputes as to the choice of subcontractors. Alternatively, the parties might agree upon a list of acceptable potential subcontractors, from which the subcontractor would be selected by the contractor (paragraphs 13 and 14).

If the contract provides for the subcontractors to be selected with the participation of the purchaser after the contract had been entered into (paragraph 15), the contract might entitle the purchaser to raise reasonable objections to a subcontractor proposed by the contractor (paragraphs 16 to 19), or obligate the contractor to engage as a subcontractor a firm nominated by the purchaser, subject to the right of the contractor to object to the firm on specified grounds (paragraphs 20 to 26). The nomination system should be used with caution, and with a full understanding of the procedures involved, as well as of the contractual provisions and their consequences (paragraph 23). In either case, it is advisable for the parties to agree upon an expeditious procedure for dealing with disputes between themselves concerning the engagement of a subcontractor (paragraphs 17 and 18, and 26, respectively).

The parties may wish to provide that the engagement by the contractor of a subcontractor to perform any obligation of the contractor under the works contract does not diminish or eliminate the liability of the contractor for a failure to perform that obligation (paragraph 27). The contract might also require the contractor to indemnify the purchaser against losses resulting from damage caused by the subcontractor to property of the purchaser, or resulting from liabilities incurred by the

purchaser towards third persons as a result of acts or omissions of the subcontractor, to the same extent that the contractor would be liable to the purchaser had those losses resulted from an act or omission of the contractor himself. Alternatively, the contract might leave those issues to be resolved by the applicable law (paragraph 28).

In some situations, the purchaser might wish the subcontractor to undertake certain obligations towards him, and might wish to be able to claim directly against the subcontractor for a failure to perform those obligations. The parties may wish to consider providing in the works contract a mechanism to make this possible (paragraphs 29 to 31).

The parties may consider it desirable for the works contract to authorize the purchaser to pay a subcontractor directly and to recover from the contractor the sums paid or otherwise be credited for those payments (paragraphs 32 to 34), and to provide for co-operation and communication between the purchaser and a subcontractor (paragraphs 35 and 36).

It is desirable for the provisions of the works contract and of the subcontract to be compatible (paragraph 37).

A. General remarks

1. The term "subcontracting" as used in this *Guide* refers to the engagement by the contractor of a third person to perform on behalf of the contractor certain of the contractor's obligations under the works contract. The term includes, for example, third persons who are engaged by the contractor to install equipment or to supply other construction services, or to manufacture major equipment which the contractor is obligated to supply for incorporation in the works. The term does not include third persons from whom the contractor obtains standard equipment, materials or services used by the contractor himself in connection with the performance of his contractual obligations. The latter type of third persons, sometimes referred to as "suppliers", is not dealt with in the *Guide*. Contractual relations with those third persons do not present the special problems presented by contractual relations with subcontractors; accordingly, only the latter need be dealt with in the works contract.

2. It is difficult to draw a precise borderline between subcontractors and suppliers. While certain third persons engaged by the contractor may clearly fall within one category or the other, others will not. Therefore, it is advisable for the parties not to attempt to differentiate in the contract between them. Rather, it is preferable for the contract to specify the obligations of the contractor which are to be subject to the contractual provisions restricting or regulating the engagement by the contractor of a third person to perform his contractual obligations.¹

3. It is common for a contractor to engage subcontractors to perform certain of his obligations under a works contract. A contractor might not possess the expertise, personnel, equipment or financial resources to perform by himself all of the specialized work for which he is responsible under the contract. Even if a contractor is able to perform all of his contractual obligations himself, he might be required by regulations in force in the country where the works is to be constructed to engage local subcontractors to perform certain types of obligations. In some situations, an organization, such as a State foreign trade

organization which does not itself possess the capability of performing any aspect of the construction, may enter into a contract for the construction of an industrial works, and subcontract for the performance of all of the construction obligations under the works contract.

4. It is desirable for a works contract to contain provisions dealing with the permissible scope of subcontracting, the selection of subcontractors and other aspects of subcontracting. Without such provisions, under some legal systems a contractor might be able to subcontract more liberally than would be desirable from the point of view of the purchaser; under other legal systems his ability to subcontract without the express consent of the purchaser might be restricted. The parties should give due attention to provisions on subcontracting when negotiating and drafting the works contract, since unsatisfactory treatment of issues associated with subcontracting could result in problems with the progress of the construction and the quality of the works. In formulating provisions on subcontracting, the parties should consider any mandatory rules on the subject in the law applicable to the contract, and mandatory legal rules of an administrative or other public nature in force in the country where the works is to be constructed (see chapter XXVIII, "Choice of law", paragraph 22).

5. Since a subcontract is a contract solely between the contractor and the subcontractor, under many legal systems no legal relationship exists between the purchaser and the subcontractor. Thus, if the subcontractor fails to perform, he is liable only to the contractor. The purchaser can recover only from the contractor for loss suffered by the purchaser as a result of the failure of the subcontractor to perform, and only if the contractor is liable to the purchaser under the works contract for that loss (see paragraph 27, below). Similarly, in those legal systems where there is no legal relationship between the purchaser and the subcontractor, the purchaser is not obligated to pay the subcontractor for his services; the subcontractor must seek payment from the contractor, who will in turn recover that payment in some form from the purchaser under the works contract (see, however, paragraphs 32 to 34, below). For example, the cost of the services of the subcontractor may be included in a lump-sum price charged by the contractor, or it may be reimbursed to the contractor in the case of a cost-reimbursable contract. In some legal systems, however, certain legal rights and obligations flow directly between the purchaser and the subcontractor by operation of law.

6. The absence of a contractual relationship between the purchaser and the subcontractor could be beneficial to the purchaser by, for example, insulating him from disputes between the contractor and the subcontractor with respect to a failure by the subcontractor to perform or a failure by the contractor to pay the subcontractor. However, this insulation is usually not complete, and it may be desirable for the works contract to contain provisions dealing with matters of concern to the purchaser in relation to the subcontractor. These are discussed in subsequent sections of this chapter.

B. Right of contractor to subcontract

7. In some countries, there are legal rules obligating the contractor to subcontract certain works to national enterprises. Where such legal rules do not exist, the parties should provide in the contract whether, and to what extent, the contractor is entitled to subcontract.

8. The purchaser might rely upon the contractor's expertise and reputation for the creation of the design, the supply of certain equipment or materials for the works, or the performance of certain services in connection with the construction; he may therefore wish the contractor to perform those obligations himself. On the other hand, the purchaser might expect the contractor to subcontract for the supply of certain other equipment, materials or services. In addition, a purchaser who supplies the technology or design might wish to restrict or prohibit the contractor from subcontracting in order to protect the confidentiality of the technology or design.

9. Different approaches are possible for restricting or prohibiting the contractor from subcontracting. In some cases, the parties might wish to provide that the contractor cannot subcontract a major portion of his obligations with respect to the construction of the works. In other cases, the contract might specify those obligations which the contractor cannot subcontract and those which may be subcontracted, subject to the other provisions of the contract (e.g., those discussed in the following section). In still other cases, the parties might agree that the contractor cannot subcontract any of his obligations. In cases in which the contractor is an organization which does not itself possess the capability of performing any aspect of the construction (see paragraph 3, above), the contract might permit the contractor to subcontract for the performance of all of his construction obligations.

C. Selection of subcontractors

1. *Selection by contractor alone*

10. In some cases, the purchaser may have little or no interest in the selection of a subcontractor. In those cases, the selection of the subcontractor might be left exclusively to the contractor.

2. *Participation by purchaser in selection of subcontractor*

11. In other cases, however, the purchaser may have a concrete interest in the selection of a subcontractor. He may be interested in being assured that the subcontracted obligations will be performed by a firm that possesses the expertise and resources needed to perform those obligations satisfactorily. The purchaser may wish to be assured that particular equipment to be installed will be of a certain standard which can be met only by certain subcontractors. In contracts in which the price charged by a subcontractor will directly affect the price payable by the purchaser to the contractor, such as in cost-reimbursable contracts, the purchaser will be interested in having the subcontracted obligations performed at the most reasonable price. The purchaser may wish to restrict the contractor to the employment of local subcontractors, or he may be obligated to do so by the law of the country where the works is to be constructed. Due to arrangements with a foreign financing organization, the purchaser may be obligated to ensure that subcontracts amounting to a certain value are entered into with firms from the country of that organization.

12. The circumstances mentioned in the preceding paragraph may be accommodated by having the contract provide for the purchaser to participate in the selection of a subcontractor. The degree and nature of the purchaser's participation may vary, depending on the contracting approach chosen by the parties (see chapter II, "Choice of contracting approach") and the importance to the purchaser of being able to exercise control over the cost and quality of the performance of the obligations to be subcontracted. Purchasers should be aware, however, that the inclusion in the contract of a right to compel a contractor to subcontract with a particular subcontractor could have adverse financial consequences for a purchaser, since the contractor might include in his price the cost of exercising increased supervision over a subcontractor with whose work he may not be familiar, as well as an increment to account for the increased risk resulting from being liable to the purchaser for losses due to failures to perform by the subcontractor. In addition, the purchaser should be aware that his participation in the selection of subcontractors could diminish the liability of the contractor arising from failure by the subcontractor to perform (see paragraph 27, below).

(a) Specification of subcontractors in works contract

13. If possible, and in particular when the equipment, materials or construction services to be supplied by a subcontractor are critical for the construction, it is desirable for the parties to agree upon the subcontractors prior to entering into the works contract, and for the names of the subcontractors to be specified in the contract. This will avoid disputes as to the choice of subcontractors in particular instances, and the interruptions of the work and the financial consequences which may arise from those disputes. Moreover, such an approach might help to avoid "bid-shopping" by the contractor after the contract has been awarded. Under that practice, a contractor uses a bid which he has obtained for a subcontract from one firm, and upon which his own contract price was based, to try to obtain lower bids for the subcontract from other firms, and possibly to force a lower bid from the first firm. If the contractor is successful in procuring a lower bid from the first firm (which, in most lump-sum contracts, will not lead to a reduction of the price payable by the purchaser), that firm may be induced to reduce his expenses and to perform the subcontract less satisfactorily in order to prevent his profit margin from being reduced.

14. The works contract might specify that a particular subcontractor is to perform a certain aspect of the construction. Alternatively, it might include a list of acceptable potential subcontractors who have been agreed to by the purchaser and the contractor. The agreement of the purchaser to a subcontractor or to a list of potential subcontractors might be facilitated if the contractor were to obtain bids from proposed subcontractors and present them to the purchaser together with details of their past work records. However, the solicitation of bids by the contractor could result in extra expenses to him which would ultimately have to be borne by the purchaser. Moreover, in contracts other than cost-reimbursable contracts, the contractor may be reluctant to reveal to the purchaser bids submitted by subcontractors.

(b) Participation by purchaser in selection of subcontractor after works contract entered into

15. There is an increased possibility of disputes arising between the parties as to the subcontractors to be engaged when the subcontractors are to be selected

after the contract has been entered into. This could result in an interruption of the work, with possible financial consequences for both parties. The use of this approach, therefore, requires a high degree of co-operation and prompt communication between the parties. For example, if the contract provides for a subcontractor to be proposed by the contractor or nominated by the purchaser (discussed below), it would be desirable for the other party to inform the proposing or nominating party as early as possible of potential subcontractors who do not meet with his approval. The following paragraphs discuss various possible procedures for participation by the purchaser in the selection of a subcontractor after the works contract has been entered into.

(i) Right of purchaser to object to subcontractor proposed by contractor

16. The contract might provide that the contractor cannot engage as a subcontractor a firm against which the purchaser has a reasonable objection. The contract could obligate the contractor to deliver to the purchaser a written notice of his intention to subcontract with a particular firm, including the name and address of the firm and the work to be performed by it. In contracts in which the price charged by the subcontractor will directly affect the price to be paid by the purchaser, e.g., cost-reimbursable contracts, and lump-sum contracts incorporating the documentary-proof method for price revision (see chapter VII, "Price and payment conditions", paragraphs 56 and 57), it is desirable for the notice also to include the price to be charged by the firm. The parties may also wish to consider requiring the contractor to provide to the purchaser a copy of the proposed subcontract, as well as additional information relative to the firm which the purchaser might reasonably require. Unless the purchaser delivers to the contractor a written objection to the engagement of the firm within a specified period of time after receiving the notice, specifying reasonable grounds for the objection, the contractor would be permitted to engage the firm.²

17. It is advisable for the parties to agree upon an expeditious procedure for dealing with disputes concerning objections by the purchaser to the subcontractor proposed by the contractor, so that the interruption of construction is prevented or minimized. Under one approach, either party might be permitted to submit the dispute immediately for settlement in dispute settlement proceedings (see chapter XXIX, "Settlement of disputes"), and the works contract might provide for a decision to be rendered within a short period of time (e.g., one month). No subcontractor would be engaged until the dispute was resolved, but the construction would be interrupted only to the extent that it could not be performed without a subcontractor having been engaged. If the purchaser's objections were found to be reasonable, the contractor could be obligated to propose another subcontractor and to bear the financial consequences of the interruption of construction. If the purchaser's objections were found not to be reasonable, the contractor could be permitted to subcontract in accordance with his notice to the purchaser, and the purchaser could be required to bear the financial consequences of the interruption of construction.

18. Under another approach, the contractor might be obligated to deliver to the purchaser a new notice of intention to subcontract within a short period of time (e.g., one week) after receipt of the purchaser's objection to the subcontractor originally proposed. If the firm proposed as a subcontractor in

the new notice was acceptable to the purchaser, that firm would be engaged by the contractor. The dispute concerning the reasonableness of the purchaser's objection to the firm proposed in the first notice of intention to subcontract could be submitted to dispute settlement proceedings immediately or at some later time. The pendency of those proceedings would not postpone the engagement of the firm proposed in the new notice of intention to subcontract. If, in the dispute settlement proceedings, the purchaser's objections were found not to be reasonable, the purchaser could be required to bear the financial consequences of any interruption in construction, and the additional financial consequences to the contractor of engaging the new firm rather than the one proposed originally. If the purchaser's objections were found to be reasonable, the contractor could be required to bear those consequences and losses. For the case where the firm proposed in the new notice was not acceptable to the purchaser, the contract might provide a procedure such as that described in paragraph 17, above.

19. In certain types of contracts, e.g., cost-reimbursable contracts, the parties may wish to consider requiring the contractor to solicit bids from a certain number of firms for the performance of the obligations to be subcontracted, and to submit them to the purchaser with an indication of those bids which he would be prepared to accept. The subcontractor would be selected from those bidders by the purchaser. This mechanism might not be appropriate for the supply of highly specialized items or services, since there might not exist a range of firms from which bids could be solicited.

(ii) *Nomination system*

20. Even more extensive involvement by the purchaser in the selection of subcontractors may be provided by having the purchaser himself select the subcontractor and require the contractor to execute a subcontract with him. This, in essence, is the system of "nomination", which is common in certain parts of the world.

21. Under the nomination system, the purchaser identifies and negotiates with prospective subcontractors to perform obligations which are specified in the contract as being subject to that system. Those negotiations may take place before the works contract is entered into. If so, it may be possible to include in the contract the essential terms of a subcontract to be concluded by the contractor, including the price. In a lump-sum contract, if a price for the subcontracted work is not established at the time of entering into the contract, an estimated price for that work may be set forth in the contract, and the contract price may be increased or decreased by the difference between the estimated price and the actual price for the subcontracted work. In essence, the subcontracted work would be cost-reimbursable (see chapter VII, "Price and payment conditions", paragraphs 10 to 24). In any event, the contract would obligate the contractor to enter into a subcontract with the firm nominated by the purchaser.

22. There are various advantages to the purchaser of a mechanism such as the nomination system. It enables the purchaser to choose a subcontractor, and gives the purchaser a large measure of control over the price and other terms under which the subcontracted obligations will be performed. It also enables him to make use of a particular design, equipment or services supplied by a

particular subcontractor. In addition, it is a way for the purchaser to ensure that subcontracts are awarded to local firms. These benefits may be achieved by the purchaser without himself having to enter into a contractual relationship with the subcontractor.

23. However, the nomination system should be used with caution and with a full understanding of the procedures involved, as well as of the contractual provisions and their consequences. There are various pitfalls which could be encountered in the use of the system and these should be dealt with by appropriate contractual provisions. For example, unless clearly negated by the contract, the high degree of the purchaser's involvement in the selection of a subcontractor might lead to an undesired implication that contractual rights and obligations flow directly between the subcontractor and the purchaser, or that the contractor's liability for a failure to perform by the subcontractor is restricted or excluded. In the latter case, in addition to being unable to recover from the contractor, the purchaser may be unable to recover from the subcontractor, with whom he has no contractual relationship, and he would have to bear the loss himself. These consequences could be avoided by providing in the contract that the engagement by the contractor of a subcontractor to perform any obligation of the contractor under the contract does not diminish or eliminate his liability for a failure to perform that obligation (see paragraph 27, below; however, see, also, paragraph 24, below). In addition, in negotiating with a firm which may be nominated as a subcontractor, the purchaser must take care that the results of those negotiations cannot be construed as an agreement that that firm will be engaged as a subcontractor. Otherwise, the purchaser might be held liable to that firm if it were not to be ultimately engaged as a subcontractor by the contractor. Due to the disadvantages and pitfalls of the nomination system, the purchaser may wish to consider whether it would be preferable for him to engage a firm directly as a separate contractor instead of nominating it as a subcontractor.

24. If the nomination system is adopted, it may be advisable to allow the contractor to object to the firm nominated as subcontractor on certain grounds, in order to protect the contractor against being obligated to enter into a contractual relationship with a subcontractor which is unduly prejudicial to the contractor's interests. These grounds might include, for example, one or more of the following:

(a) The refusal of the firm nominated as subcontractor to undertake towards the contractor obligations and liabilities of the same scope as are imposed on the contractor towards the purchaser, including obligations and liabilities with respect to quality, timing, guarantees, and financial amounts of liability;

(b) The refusal of the firm nominated as subcontractor to agree to indemnify the contractor against any liability which the contractor incurs towards the purchaser or a third person as a result of acts or omissions of the subcontractor;

(c) The lack of qualifications to perform the obligations to be subcontracted on the part of the firm nominated as subcontractor;

(d) Any other reasonable objection of the contractor to subcontracting with the firm nominated as subcontractor. This could include, for example, that the

contractor has previously had unsatisfactory experience with that firm, or that its financial situation prejudices its ability to perform satisfactorily.

25. The parties may wish to consider certain approaches to deal with cases in which the contractor objects to a firm nominated by the purchaser as a subcontractor because that firm refuses to undertake towards the contractor obligations and liabilities of the same scope as are imposed on the contractor towards the purchaser. For example, the works contract might obligate the contractor to enter into the subcontract if the purchaser agrees to a reduction in the scope of the obligations of the contractor towards the purchaser, so that they match the obligations of the subcontractor towards the contractor. Alternatively, the contract might limit the damages payable by the contractor to the purchaser in the event of a failure by a subcontractor to perform to no more than the damages that are recoverable by the contractor from the subcontractor.

26. The parties should consider what should occur if a dispute arises from a refusal by the contractor to enter into a contract with a firm nominated by the purchaser as a subcontractor. In this regard, the parties may wish to consider approaches comparable to those described in paragraphs 17 and 18, above, with the financial consequences to be allocated on the basis of whether or not the contractor's refusal to engage that firm was justified.

D. Extent of liability of contractor for losses of purchaser due to failure to perform by subcontractor or other acts or omissions of subcontractor

27. The parties may wish to consider the extent to which the contractor should be liable to the purchaser for a failure by the former to perform an obligation under the works contract if the failure resulted from failure of the subcontractor to perform the subcontract. In this regard, they may wish to provide that the engagement by the contractor of a subcontractor to perform any obligation of the contractor under the works contract does not diminish or eliminate the liability of the contractor for a failure to perform that obligation.³ This approach would preserve the purchaser's right to redress for losses arising from a failure of a subcontractor to perform. If, under the works contract, the contractor may be compelled to engage a subcontractor against whose engagement he has reasonable objections (see, however, paragraphs 12 and 24, above), the parties might wish to consider restricting the liability of the contractor for losses due to a failure of the subcontractor to perform (see, e.g., paragraph 25, above). In legal systems in which the subcontractor is considered to have a legal relationship only with the contractor and not with the purchaser, a consequence of the latter approach is that the purchaser would have to bear the losses arising from failures to perform by a subcontractor to the extent that the contractor was not liable to the purchaser for those losses.

28. Related issues the parties may wish to consider are whether and the extent to which the contractor should be liable to the purchaser for losses resulting from damage caused by the subcontractor to property of the purchaser, or resulting from liabilities incurred by the purchaser towards third persons as a result of acts or omissions of a subcontractor. The latter liabilities could arise, for example, from injury caused by the subcontractor to third persons or their

property. One possible approach would be to require the contractor to indemnify the purchaser against such losses to the same extent that the contractor would be liable to the purchaser had those losses resulted from an act or omission of the contractor himself.⁴ Another possible approach would be to leave these issues to be resolved by the applicable law.

E. Right of purchaser to claim directly against subcontractor

29. In some situations, the purchaser might wish the subcontractor to undertake certain obligations towards him, and might wish to be able to claim directly against the subcontractor for a violation of those obligations. For example, the purchaser might wish the subcontractor to be obligated to preserve the confidentiality of the design. Similarly, the contractor might not wish to be liable to the purchaser for defects in the design of a specialized element of the works which is to be designed and supplied by a subcontractor, e.g., air conditioning, and the parties might agree that the purchaser should be able to claim directly against the subcontractor that supplies the design. Where there is no contractual relationship between the purchaser and subcontractor, obligations such as those would not flow from the subcontractor directly to the purchaser, and the purchaser could not claim against the subcontractor for violating them.

30. One approach which the parties might wish to consider in such cases is for the purchaser to enter into a separate agreement with the subcontractor limited to the obligations sought to be imposed on him. For example, the subcontractor could undertake towards the purchaser an obligation of confidentiality, or could guarantee the suitability of the design. The purchaser could then claim directly against the subcontractor for a violation of the obligation.

31. An alternative approach would impose the relevant obligations on the contractor and require the contractor to obtain the same obligations from the subcontractor. This might be accomplished either by a provision in the contract requiring the contractor to do so, or by the purchaser's conditioning his consent to a subcontractor proposed by the contractor on the contractor's obtaining such obligations from the subcontractor. In order for the purchaser to be entitled to claim directly against the subcontractor, an additional provision would be included in the contract by which the contractor assigned to the purchaser the contractor's rights against the subcontractor for a violation of the obligations, if such an assignment was permitted by the applicable law.

F. Payment for performance by subcontractors

32. As noted above (see paragraph 5), the purchaser will in most cases not be obligated to pay a subcontractor; rather, the subcontractor will have to seek payment from his contracting party, the contractor. There may, however, be instances in which the purchaser wishes to pay a subcontractor, such as when the contractor fails to pay a sum previously due to the subcontractor and the smooth progress of the construction is threatened by a reluctance of the subcontractor to continue to work. Furthermore, in some legal systems a subcontractor may have a right to enforce payment of the sums due him by establishing a lien or priority in the works itself. The parties may consider it

desirable, therefore, for the works contract to authorize the purchaser to demand proof from the contractor that payment due to a subcontractor has been made and, if within a specified period of time after delivery of such a demand to the contractor, the contractor does not deliver the proof to the purchaser, or deliver to the purchaser a written statement of reasonable grounds for not making the payment, to pay a subcontractor and to recover from the contractor the sums paid or otherwise to be credited for those payments. Unless the purchaser is expressly authorized by the works contract to pay a subcontractor, a purchaser who does so will place himself in peril, since his obligation to pay the contractor will not be reduced by the amount of the payment to the subcontractor. In order to avoid the implication that a contractual relationship exists between the purchaser and the subcontractor, the works contract could also make it clear that such direct payments by the purchaser are made on behalf of the contractor.

33. The method by which the purchaser recovers from the contractor or is credited the amount of his direct payment to the subcontractor may depend upon the payment conditions in the works contract between the purchaser and the contractor. In a lump-sum contract, the purchaser might be entitled to deduct the amount of his payment from the contract price to be paid to the contractor. In a cost-reimbursable contract, if the purchaser pays the subcontractor on behalf of the contractor in respect of the subcontracted work, no adjustment need be made as between the contractor and the purchaser, since the contractor will not have incurred a cost for the subcontracted work which is to be reimbursed by the purchaser.

34. It may be noted that payment by the purchaser to the subcontractor could have the disadvantage of involving the purchaser in disputes between the contractor and the subcontractor, and could in some cases impair relations between the purchaser and the contractor. Moreover, the purchaser should exercise caution in making such payments, lest disputes arise between him and the contractor as to whether the payment should have been made or whether the amount paid was that actually due.

G. Co-operation and communication between purchaser and subcontractor

35. As discussed in chapter IX, "Construction on site", paragraph 3, the contract may obligate the purchaser to provide certain types of information to the contractor relevant to the performance by the contractor (e.g., information concerning safety or environmental laws in force in the country of the purchaser), and to co-operate in other ways with the contractor (e.g., by storing equipment or materials of the contractor). The parties may also wish to consider obligating the purchaser to provide information to, or to co-operate with, the subcontractor in the same way and to the same extent when the subcontractor is performing the obligations of the contractor.

36. Direct communication between the purchaser and a subcontractor is often desirable in order to enable matters relevant to the performance by the subcontractor to be discussed and understood by both of them. The parties may wish, therefore, for the works contract to authorize the purchaser to communicate with the subcontractor as to technical matters or matters relating

to the design or quality of the works, insofar as they relate to the performance by the subcontractor. The contract might also entitle the contractor to be present at discussions between the purchaser and the subcontractor, and might obligate the purchaser to inform the contractor of any other communications between the purchaser and the subcontractor. The parties may wish to provide that agreements between the purchaser and the subcontractor in respect of matters about which the purchaser is authorized to communicate with the subcontractor are binding upon the contractor, provided that the contractor participated or was entitled to participate in the discussions between the purchaser and the subcontractor, or was informed of communications between them, and provided that the agreements do not alter the terms of the works contract between the contractor and the purchaser.

H. Compatibility of subcontract with works contract

37. It is desirable for the provisions of the works contract and of the subcontract to be in harmony, so that the scope and quality of the work to be performed by the subcontractor fulfil the obligations incumbent upon the contractor under the works contract.

Footnotes to chapter XI

¹Illustrative provision

"The engagement by the contractor of one or more third persons to perform the obligations hereinafter listed shall be subject to the provisions of this contract regarding subcontracting, and such a third person shall be regarded as a subcontractor. The obligations referred to in the previous sentence are the following: . . ."

²Illustrative provision

"The contractor shall deliver to the purchaser written notice of his intention to subcontract, which shall include the name and address of the proposed subcontractor, and a description of the work to be performed by him [and the price to be charged by him] [and any other information relative to the proposed subcontractor which the purchaser might reasonably require]. [The contractor shall also deliver to the purchaser a copy of the proposed subcontract.] The contractor shall be permitted to subcontract in accordance with such notice after the expiration of . . . days following the delivery thereof to the purchaser, unless within the said . . . days the purchaser delivers to the contractor an objection to the proposed subcontractor, the obligations to be subcontracted, [the price to be charged by the subcontractor] [or the terms of the subcontract], specifying reasonable grounds for the objection."

³Illustrative provisions

"(1) All subcontractors engaged by the contractor are those of the contractor alone, and no provision of this contract is to be interpreted or applied so as to give rise to or imply the existence of a contractual relationship between the purchaser and any subcontractor, except to the extent that this contract expressly provides otherwise.

"(2) The engagement by the contractor of a subcontractor to perform any obligation of the contractor under this contract does not diminish or eliminate the liability of the contractor for a failure to perform that obligation."

⁴Illustrative provision

"The contractor agrees to indemnify the purchaser against any loss resulting from damage caused by the subcontractor to property of the purchaser, or resulting from any liability which the purchaser may have to bear towards a third person as a result of an act or omission of a subcontractor, to the same extent that the contractor would be liable to the purchaser had such loss resulted from an act or omission of the contractor himself."

Chapter XII. Inspections and tests during manufacture and construction

SUMMARY

The parties may wish to specify in the contract the requirements and procedures for inspections and tests during manufacture and construction. The purpose of inspecting and testing during manufacture and construction may be to satisfy the purchaser that manufacture and construction are proceeding in accordance with the agreed time-schedule and in accordance with the contract (paragraph 1).

In drafting contractual provisions on inspecting and testing during manufacture and construction, it is advisable to take into account municipal legal regulations prescribing inspections and tests in the countries where the works is to be constructed and where equipment or materials are to be manufactured (paragraph 3). Inspections and tests may be conducted by an independent institution (paragraphs 2, 6 and 19).

It is advisable to describe the character of the inspections and tests to be conducted during manufacture (paragraph 8). The contract may provide for the purchaser to have access to places where inspections and tests are to be conducted, and specify the facilities to be given to the purchaser for the purposes of inspecting and testing (paragraphs 10 and 11). While the time for conducting the tests may be fixed by the contractor, the purchaser should be notified in advance of that time (paragraphs 12 to 14).

Additional or modified tests not specified in the contract may be required by legal rules issued in the purchaser's country, or may be desired by the purchaser even if not so required. The contract should determine the allocation of the costs of conducting those tests (paragraph 15).

The contract should determine the consequences if tests conducted during manufacture and construction are unsuccessful (paragraph 16) and provide for the issue of test reports and certificates (paragraphs 17 to 19).

If certain payments are to be made upon shipment of equipment and materials (chapter VII, "Price and payment conditions", paragraph 70), the contract might provide for inspection by the purchaser upon shipment. Inspection upon shipment may be also advisable if the risk of loss of or damage to equipment and materials (chapter XIV, "Passing of risk") is to pass to the purchaser upon shipment (paragraphs 21 and 22). The contract may require inspection of equipment and materials on their arrival on the site if they are to be taken over by the purchaser at that time (paragraph 23).

The contract might entitle the purchaser to inspect how the construction on the site proceeds, or might require specified tests to be conducted during the construction by the contractor. Issues arising in connection with inspections and tests during construction might be settled in a manner analogous to the manner in which issues arising in connection with inspections and tests during manufacture are settled (paragraphs 24 and 25). Inspection by the purchaser may be facilitated if records are maintained by the contractor of the construction as it proceeds (paragraph 26).

A. General remarks

1. This chapter deals with inspections and tests to be conducted during manufacture and construction. Tests to be conducted after completion of construction are dealt with in chapter XIII, "Completion, take-over and acceptance". It is important for a works contract to specify clearly the requirements and procedures for inspecting and testing to be conducted during manufacture and construction, and the legal effects of those inspections and tests. Procedures for inspecting and testing might be established to ascertain whether the manufacture and construction process conforms to contractual requirements, since such conformity will reduce the occurrence of defects in the completed works. The procedures might relate not only to inspection by the purchaser through visual checking, but might also relate to a variety of tests to be performed by the contractor during manufacture and construction. The purchaser may be entitled, though not obligated, to inspect equipment and materials and participate in specified tests to be effected during manufacture or construction (see paragraphs 8 and 24, below). The precise nature, scope and timing of the inspections and tests provided for in the contract may depend upon the contracting approach chosen by the purchaser and the nature of the works to be constructed (see chapter II, "Choice of contracting approach"). Inspections and tests to be conducted during manufacture and construction are not, in principle, intended to demonstrate that the contractor has met his construction obligations. The inspections and tests are, rather, intended to satisfy the purchaser that manufacture and construction are proceeding in accordance with the agreed time-schedule (see chapter IX, "Construction on site", paragraphs 18 to 23) and in accordance with the contract (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 26). Consequently, it is advisable to provide that a failure of the purchaser to detect and notify a defect during manufacture and construction does not deprive him from later claiming a remedy for that defect (see paragraph 8, below, and chapter VIII, "Supply of equipment and materials", paragraph 20).

2. A number of countries, especially those in which industry is highly developed, have issued legal regulations which require that equipment and materials to be incorporated into industrial works must be inspected by public authorities or authorized private institutions. In regard to certain matters, the inspections and tests may also be prescribed at an international level.

3. Inspections and tests prescribed by municipal legal regulations which relate primarily to safety, health and environmental standards are in principle applicable irrespective of whether or not they are provided for in the contract. Legal regulations of this character may exist in the country where the works is to be constructed. Such regulations should be taken into account when drafting the contract. In addition, where certain quality control requirements have to be met during manufacture under legal regulations in the country of manufacture, additional contractual provisions on testing the equipment and materials might not be necessary. It might be sufficient for the contractor to show that the inspections and tests required in the country of manufacture have been properly carried out, if those requirements are in conformity with the quality requirements specified in the contract.

4. The contractor may conduct tests during manufacture or construction as a part of his quality control system. The purchaser should satisfy himself that this

quality control system is adequate. Excessive testing requirements during manufacture and construction, like other interferences with the contractor's performance, are likely to lead to an increase in the cost of the construction.

5. A number of technical standards prepared by national or international standardization institutions specify testing requirements. Therefore, the contract may provide that the standards of a specified international standardization institution, or the standards of a specified national standardization institution, preferably one in the country where the works is to be constructed, are to be applied, if such standards settle all relevant issues in a satisfactory manner.

6. Where a new industry is being developed it may be preferable, at the initial stages, to have some of the inspections and tests carried out by an experienced foreign institution which is ready to carry out inspections and tests abroad. The necessary arrangements can be made between the purchaser and the institution. Alternatively, the contract might provide that the necessary arrangements are to be made by the contractor with an institution specified in the contract and might require the production of certificates from the institution that the inspections and tests have been successful.

7. In some cases, inspections and tests might be required in the contract with respect to equipment and materials supplied by the purchaser that are to be incorporated into the works by the contractor. The contractor might be obligated to make the inspections and tests as soon as possible after the equipment and materials have been supplied to him. The contract might deal with the consequences of the contractor's failure to discover defects and notify them to the purchaser (see chapter VIII, "Supply of equipment and materials", paragraph 29, and chapter XVIII, "Delay, defects and other failures to perform", paragraph 65).

B. Inspections and tests during manufacture

1. *Description and effects of inspections and tests during manufacture*

8. The parties may agree that the purchaser is entitled to inspect the processes involved in the manufacture of certain equipment and materials to be incorporated into the works, and to participate in specified tests to be conducted during manufacture by the contractor. The purpose of the inspections and tests during manufacture might be to check whether an appropriate manufacturing process has been followed, and whether the equipment and materials have the required technical parameters. It is advisable to describe the character of the inspections and tests to be conducted during manufacture as precisely as possible, taking into consideration the nature of the equipment and materials. The contract might provide that the purchaser's failure to discover defects during those inspections and tests does not release the contractor from the responsibility to demonstrate by appropriate tests after completion that the works is free of defects (cf. chapter XIII, "Completion, take-over and acceptance", paragraphs 1 and 24, and chapter XVIII, "Delay, defects and other failures to perform", paragraph 8).

9. Inspection of equipment during manufacture may also give to the purchaser's personnel an opportunity to acquaint themselves with certain

aspects of the equipment. If the purchaser wishes to have this opportunity, the contract might specify that the right to attend inspections during manufacture is not limited to the purchaser's engineer or other personnel supervising the construction of the works, but also extends to other employees of the purchaser whom he may nominate. However, the purchaser's right should be limited to having his employees participate in normal inspection procedures, since any improper operation could affect the contractor's obligation to deliver equipment free of defects.

2. Purchaser's access to places of manufacture and facilities to be provided by contractor

10. If the purchaser wishes to inspect equipment and materials during manufacture, or participate in tests during manufacture, the contract may provide that for the purposes of such inspections and tests the purchaser is to have access during working hours to all places where the equipment and materials are manufactured. Difficulties in conferring this right on the purchaser may arise primarily for two reasons. Firstly, the contractor may wish to protect the confidential know-how of certain manufacturing processes, or he may be under an obligation to preserve such confidentiality either under contractual arrangements with other persons, such as licensors, or under arrangements with certain clients, for example when he also performs certain contracts for Government authorities in sensitive subjects. In addition, legal rules in the country of manufacture may restrict the purchaser's access to the place of manufacture. In those cases, the only possibility for according the purchaser an opportunity for some form of inspection might consist in retaining a specialized inspection institution which could provide the guarantees of confidentiality acceptable to the contractor or to the third parties concerned, or which might be permitted to have access under the legal rules. Secondly, the contractor's subcontractors and suppliers (in particular where they are specialists in high technology products) may refuse to allow the purchaser access to their premises. Where the subcontractor and suppliers have no contractual relationship with the purchaser (see chapter XI, "Subcontracting", paragraph 5) the works contract between the purchaser and the contractor may require the contractor to include in the contracts with his subcontractors and suppliers a right of access for the purpose of inspecting and testing during manufacture.

11. Where the purchaser has a right to inspect or participate in tests, the contract may specify what facilities are to be given to the purchaser's representatives for this purpose. The facilities may consist in particular of office space, or in the supply of samples for independent testing by the purchaser or by institutions retained by him.

3. Time for conducting tests during manufacture

12. Since tests during manufacture may form part of the contractor's quality control system, he is usually entitled to fix the times of those tests. However, it is rare for those times to be fixed in the time-schedule for contract performance, except possibly in respect of some critical major items.

13. The contract may provide that the purchaser has the right to observe the tests. In order to enable the purchaser to exercise this right, the contractor might be obligated to notify him in advance of the time when the tests will be conducted. The contract may require a specified period of notice to be given to the purchaser. The length of the period may depend on the time which is usually needed for the purchaser to make the necessary travel and other arrangements for his representatives to attend the tests.

14. In the case of specified important items of equipment, the contract may allow the contractor to proceed with further manufacture and construction only after those items have been successfully tested in the presence of the purchaser. If the purchaser fails to attend the tests due to causes for which the contractor is not responsible, the contract might entitle the contractor to conduct the tests in the absence of the purchaser.

4. *Additional or modified tests*

15. It may not be possible to specify in the contract all the tests required. Additional or modified tests not specified in the contract may be required by legal rules issued in the purchaser's country subsequent to entering into the contract. The contractor may be entitled to be compensated for reasonable costs incurred by conducting such tests, and to a reasonable extension of the period of time for supply of the equipment and materials and for completion of the construction if an extension is needed due to the additional or modified tests. If additional or modified tests are not required by such legal rules, but the purchaser wishes to have them conducted, the tests may be conducted with the consent of the contractor. As in cases where the tests are necessary, the contractor may be entitled to be compensated for reasonable costs incurred and to a reasonable extension of time for supply of equipment and materials and for completion of construction. Alternatively, the costs of additional or modified tests may be allocated in the contract in accordance with international standard practice in the industry.

5. *Unsuccessful tests*

16. If the tests are unsuccessful the contract might require them to be repeated. The contractor might not be granted additional time for performance if unsuccessful tests have to be repeated for reasons for which the contractor is responsible, and he might be required to bear all the costs of the unsuccessful tests. The purchaser's remedies in cases of defects discovered during manufacture are dealt with in chapter XVIII, "Delay, defects and other failures to perform", paragraph 28.

6. *Test reports and certificates*

17. The contract may require reports to be made on all tests conducted. The test reports might include the procedures which were followed and the test results. When a test has been attended by representatives of the purchaser, the test report should also be signed by those representatives. However, the

signature might be deemed to constitute only an acknowledgement that the test procedures and readings have been correctly recorded.

18. When a test is not attended by representatives of the purchaser, the contractor might be obligated to transmit the test reports immediately to the purchaser. If the purchaser has been given proper notice of the tests (see paragraph 13, above), the procedures and results recorded in the reports might be deemed to be correct.

19. When inspections and tests are carried out by an independent inspection or testing institution, the institution normally issues a certificate or a similar document. The contract may obligate the contractor to transmit the document to the purchaser either promptly after it has been issued or as part of the documentation submitted to the purchaser prior to acceptance of the works.

7. Costs

20. In most cases, the parties may wish to agree that the costs of inspections and tests are to be borne by the contractor. However, the costs of attendance by the purchaser's representatives (see paragraph 13, above) might be borne by the purchaser. The costs to be borne by the contractor might include the cost of labour, materials, electricity, fuel and other items necessary for the proper conduct of the inspections and tests.

C. Inspection upon shipment or arrival on site

21. When certain payments are to be made upon shipment of equipment or materials (see chapter VII, "Price and payment conditions", paragraph 70) or when the risk of loss of or damage to the equipment or materials is to pass from the contractor to the purchaser upon shipment (see chapter XIV, "Passing of risk", paragraph 12), the contract might provide for inspection of the equipment and materials by the purchaser upon shipment. In addition to covering the equipment and materials, the inspection might cover their packing, in particular if the risk of loss or damage during the transport is to be borne by the purchaser. The contractor might be obligated to give reasonable advance notice to the purchaser when and where the equipment and materials will be available for inspection.

22. Where equipment and materials are to be inspected, the contractor may be obligated under the contract to dispatch them only after the inspection has been conducted or after the purchaser, despite timely notification, has failed to conduct the inspection within a period of time to be specified in the contract. The parties may agree that the inspection is to be conducted by a specified independent organization at the cost either of the purchaser or the contractor. The contract may require a certificate of the organization confirming that no defects were discovered during the inspection, and the contractor may be obligated to dispatch the equipment and materials only after the issue of the certificate. If defects are discovered, the purchaser may be entitled to stop the shipment and require their cure (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 28).

23. As an alternative to inspection prior to shipment, the contract may require that the inspection take place upon the arrival of the equipment and

materials on the site. This procedure might be adopted in cases when payments are to be made or the passing of the risk is to occur at that time. In addition, inspection upon arrival might be agreed upon by the parties if the equipment and materials are to be taken over by the purchaser at the time of arrival on the site. The inspection may facilitate the identification of defects for which the contractor is liable and the preservation of potential rights against the carrier for loss of or damage to the equipment and materials during transport. The consequences of a failure by the purchaser to inspect, or to notify in time, defects discovered during the inspection, are discussed in chapter VIII, "Supply of equipment and materials", paragraph 20, and the remedies which the purchaser may have in respect of discovered defects are discussed in chapter XVIII, "Delay, defects and other failures to perform", paragraphs 8 and 30 to 32.

D. Inspections and tests during construction on site

24. The purchaser might be entitled under the contract to inspect how the construction on the site proceeds. In addition, the contract might require specified tests to be conducted during the construction by the contractor, and the purchaser might be entitled to be notified in time of those tests and to participate therein.

25. Issues arising in connection with inspections and tests during construction might be settled in a manner analogous to the manner in which issues arising in connection with inspections and tests during manufacture are settled. However, the period of notice to be given to the purchaser of the time when tests will be conducted can be considerably shorter, since the purchaser will usually have a representative on the site to observe or supervise the construction process. In addition, the problems of confidentiality, to which reference has been made in paragraph 10, above, do not normally occur on the site. The purchaser's remedies for defective construction, and the consequences of his failure to discover defects in construction or to notify in time defects which he discovers, are discussed in chapter XVIII, "Delay, defects and other failures to perform", paragraphs 8 and 30 to 32.

26. Inspection by the purchaser may be facilitated if records are maintained of the construction as it proceeds. Accordingly, the contractor might be obligated to keep complete records of the construction and to produce them to the purchaser upon request. Alternatively, the records might be checked periodically by the purchaser's representative and the correctness of the records authenticated by his signature.

27. When equipment is to be installed by the purchaser or another person under the supervision of the contractor (see chapter IX, "Construction on site", paragraphs 27 to 29), the contractor might be made responsible for specifying and conducting the inspections and tests to be made during the installation. The contractor might be obligated to keep records of those inspections and tests.

Chapter XIII. Completion, take-over and acceptance

SUMMARY

It is advisable that the contract clearly specify when completion, take-over and acceptance are to occur, and their legal consequences. Completion of construction will normally occur prior to take-over and acceptance (paragraphs 1 and 2).

The contractor may be obligated to prove completion of construction through the conduct of successful completion tests. The contract may describe the tests that are required. The contract may require the conduct of the tests within a specified period after notification of completion to the purchaser. If the tests are unsuccessful, the contractor may be obligated to repeat them. The contract may require the tests to be conducted in the presence of both parties (paragraphs 4 to 8).

The contract may allocate the costs of tests between the parties. The contract may require the results of completion tests to be reflected in a report to be signed by both parties. The contract may determine the date when construction is considered to be complete if completion tests are successful (paragraphs 9 to 13).

The sequence in which take-over, performance tests and acceptance are to occur may depend on the contracting approach chosen by the parties, and on whether the parties have provided for a trial operation period. It is advisable for the contract to determine which party is to provide the items needed to operate the works during the trial operation period (paragraphs 14 to 20).

The contract should specify when the purchaser is obligated to take over the works. The parties may be obligated to prepare a take-over statement which describes the construction of the works at the date of take-over. It is advisable for the contract to determine the legal consequences of take-over (paragraphs 21 to 23).

Performance tests serve to demonstrate that the works meets the technical characteristics specified in the contract. The contract may provide that acceptance can occur after performance tests have been conducted. The contract may obligate the contractor to conduct performance tests within a specified period of time after the expiry of the trial operation period, or, if the contract does not provide for a trial operation period, after completion of construction. It is desirable that the contract describe the tests to be conducted. The results of the tests may be reflected in a report to be signed by both parties (paragraphs 24 to 28).

The contract may obligate the purchaser to accept the works within a specified period after the conduct of successful performance tests, and obligate the parties to prepare an acceptance statement, to be signed by both parties. The statement may list the defects in the works discovered during the performance tests, and set forth a time-schedule for their cure (paragraphs 29 and 30).

The contract may provide that, if the contractor is prevented from conducting performance tests due to a failure by the purchaser to perform an obligation, acceptance is deemed to occur. Where performance tests can be conducted independently in respect of portions of the works, those portions may be accepted separately (paragraphs 32 and 33).

It is advisable for the contract to determine the legal consequences of acceptance, in particular if the contract provides for provisional acceptance (paragraphs 34 to 36).

A. General remarks

1. It is advisable that the contract clearly specify when completion of construction, and take-over and acceptance of the works, are to occur, and their legal consequences. The contract may provide that the completion of construction is to occur when equipment, materials and construction services (e.g., installation of equipment) required under the contract have been supplied by the contractor, and the supply proved through successful completion tests; that take-over is to occur when the purchaser takes physical possession of the works from the contractor; and that acceptance is to occur when the purchaser states that he is satisfied that the works is free of serious defects, or, despite the existence of serious defects in the works, expresses his intention not to exercise remedies which are available to him solely in respect of serious defects in the works (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 35). However, even if acceptance occurs, the contract may entitle the purchaser to exercise other remedies for defects in the accepted works (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 38 to 48). The contract may also provide that acceptance is deemed to occur in certain situations (see paragraph 32, below).
2. Under normal construction procedures, completion of construction will occur prior to take-over and acceptance. The sequence in which take-over and acceptance are to occur may depend upon a number of factors (see section C, below).
3. The take-over of uncompleted or defective works after the termination of the contract is discussed in chapter XXV, "Termination of contract", paragraph 26. The take-over of works where construction is to be completed or defects in the works are to be cured by a new contractor at the expense of the original contractor is discussed in chapter XVIII, "Delay, defects and other failures to perform". The take-over of equipment and materials to be incorporated in the works is discussed in chapter VIII, "Supply of equipment and materials", paragraphs 19 and 20.

B. Completion of construction

1. *Proof of completion through completion tests*

4. The contract may obligate the contractor, after he considers the entire construction to have been completed, to notify the purchaser of the completion, and to prove the completion through the conduct of successful completion tests. The contract may provide that the construction is to be considered as

completed even if the completion tests disclose that certain minor items (i.e., items the absence of which does not prevent the conduct of performance tests, or, in cases where performance tests are not required, the use of the works) have not been supplied. The contract may provide that the absence of such a minor item is to constitute a defect in the works, and not delay in construction (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 5). When several contractors are engaged for the construction, completion tests may be required from each contractor in respect of the portion of the construction effected by him after the completion of that portion. Even if only one contractor is engaged for the construction, the parties may wish to provide that completion tests in respect of certain portions of the construction are to be conducted before the construction of the entire works is completed (e.g., when the purchaser wishes to use a portion of the works before the construction of the entire works is completed: see also paragraph 33, below).

5. It is desirable that the contract describe the tests which are required to determine whether construction has been completed. These tests may include some or all of the following procedures as are appropriate to the construction effected: visual inspection of the works and its components; checking and calibration of instruments; safety tests; dry runs; mechanical operation of the works and its various components; examination of the technical documentation which the contractor has to supply to assist the purchaser in operating and maintaining the works (e.g., as-built plans, manuals of instruction, and lists of spare parts); and verification of the stock of spare parts which the contractor may be obligated to deliver before completion of the construction (cf. XXVI, "Supplies of spare parts and services after construction", paragraphs 10 to 21). Mandatory legal rules in the country where the works is to be constructed may provide that, upon completion of construction, certain tests must be successfully conducted before the works can be operated. The contract may provide that, in addition to the tests required under the contract, any tests required by such rules must also be conducted.

6. The contract may obligate the contractor to commence the completion tests within a specified period of time after he notifies the purchaser of completion (see paragraph 4, above). The contract may require the parties to agree on a date within this period for the commencement of the tests. The contract may provide that, if the parties fail to agree upon such a date, the contractor is obligated to commence the tests on the last day of the specified period.

7. The construction may be considered as incomplete until the tests are successfully conducted. If completion tests conducted by the contractor are unsuccessful, the contract may obligate him to repeat the tests. In addition, if the tests are not successfully conducted by the date specified in the contract for the completion of construction (see chapter IX, "Construction on site", paragraphs 14 to 17), the contractor may be liable for delay in completion (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 19 to 25). If, however, the contractor was prevented from conducting completion tests within the period specified in the contract for the conduct of tests due to a failure by the purchaser to perform an obligation (e.g., to provide the necessary power: see paragraph 9, below) the construction may be deemed to be completed on the expiry of that period. If, however, the failure to perform by the purchaser was due to an exempting impediment, the contractor may be obligated to repeat the tests.

8. The contract may require the tests to be conducted in the presence of both parties. If the purchaser is prevented from attending the tests by an unavoidable impediment, he may be entitled under the contract to ask that the tests be postponed. If the purchaser fails to attend the tests, and either does not request a postponement, or requests a postponement when he is not entitled to do so, the contractor may be entitled under the contract to conduct the tests in the absence of the purchaser. The contract may provide that tests which are postponed at the request of the purchaser must be held within a specified period after the notification of the completion of construction (see paragraph 4, above).

9. The contractor may be obligated to conduct the tests at his expense. However, the purchaser may be obligated to provide specified forms of assistance for the conduct of the tests (e.g., to provide power needed for running equipment), and to bear the costs of providing such assistance. The contract may determine which party is to bear the costs of tests not required under the contract but which are required by mandatory legal rules in the country where the works is to be constructed which are enacted after the contract is entered into (see paragraph 5, above).

10. Which party is to be required to bear the costs of tests which are repeated or postponed may depend on the cause for the repetition or postponement. If tests have to be repeated because the initial tests are not successful, the contract may provide that the contractor is to bear all costs reasonably incurred by the purchaser as a result of the repetition. If the conduct of tests is prevented because the purchaser has failed to perform an obligation, and the tests have to be postponed, it may be provided that the purchaser is to bear all costs reasonably incurred by the contractor as a result of the postponement. If tests have to be postponed because the purchaser is prevented from attending them by an unavoidable impediment, it may be provided that the parties are to bear the costs of the postponed tests in the same manner in which the costs of the tests which were postponed would have been borne by them.

11. If the contract requires certain formalities (e.g., the participation of an inspecting authority) to be complied with during the conduct of the completion tests, and such formalities cannot be complied with due to an unavoidable impediment, the contract may entitle the contractor to conduct the tests without complying with the formalities. In some cases, the applicable law may require an inspecting authority to participate in the tests. If such an inspecting authority requires alterations to the works, the contractor may be obligated to make the alterations on the basis of procedures provided in the contract for variation of the construction (see chapter XXIII, "Variation clauses", paragraphs 12 to 19).

12. The contract may require the results of the completion tests to be reflected in a report to be signed by both parties. The report may specify the dates when the tests were commenced and completed, and indicate whether the tests were successful or unsuccessful. Where the tests are unsuccessful, the report may indicate in what respects the construction is incomplete. Where the tests are successful, the report may indicate defects in the works discovered during the tests, and specify a period of time within which the contractor is obligated to cure them. The purchaser's remedies for such defects are discussed in chapter XVIII, "Delay, defects and other failures to perform", paragraphs 38 to 42. If

the contractor was entitled to conduct the tests in the absence of the purchaser (see paragraph 8, above), the report may be signed by the contractor alone. The contract may require the contractor to send the report promptly to the purchaser.

2. Date of completion of construction

13. The contract may provide that, where the completion tests are successful, the construction is considered to be completed as of the date agreed by the parties for the commencement of the tests (see paragraph 6, above), or, alternatively, on the date of the completion of the tests. In cases where completion tests were postponed at the request of the purchaser (see paragraph 8, above) and have been successfully conducted, the construction may be considered under the contract to be completed on the date on which the tests were to be conducted before the postponement.

C. Sequence of take-over, performance tests and acceptance: trial operation period

14. The sequence in which the contract provides for take-over, performance tests and acceptance to occur may depend on the contracting approach chosen by the purchaser (see chapter II, "Choice of contracting approach") and, in particular, on whether the parties have provided in the contract for a trial operation period.

15. The contract may provide that after the completion of construction the works is to be operated for a trial period. Such a period enables the works to be run in, to reach normal operating conditions, and to be made ready for the conduct of performance tests. The contract may provide that during this period the contractor is to train the purchaser's personnel, provide technical supervision of the operation and maintenance of the works, and cure with all possible speed any defects discovered in the works.

16. Where the works during construction is to be in the physical possession of the contractor (see chapter XIV, "Passing of risk", paragraphs 20 and 21), and the works is to be operated during the trial operation period by the purchaser under the supervision of the contractor, take-over of the works by the purchaser for the purposes of the trial operation may occur after completion of construction. The contract may provide for the conduct of performance tests at the expiry of the trial operation period, and for acceptance of the works by the purchaser if the performance tests are successful (see section E,1, below).

17. In cases where the works is to be operated during the trial operation period by the contractor (e.g., under a product-in-hand contract: see chapter II, "Choice of contracting approach", paragraph 7), the works may remain in his physical possession during this period. In these cases, performance tests may be conducted at the end of the trial operation period and, if they are successful, the works may be accepted and taken over by the purchaser in that order. Alternatively, the contract may provide that acceptance and take-over are to occur concurrently.

18. When the parties do not provide for a trial operation period, the contract may provide for the conduct of performance tests after completion of construction, and, if the performance tests are successful, for acceptance and take-over of the works to take place in that order. Alternatively, the contract may provide that acceptance and take-over are to occur concurrently.

19. The works will not be taken over by the purchaser if it has already been in his physical possession during construction (e.g., where several contractors are engaged to construct the works simultaneously). In such cases, completion of construction may be followed by the conduct of performance tests, and, if the performance tests are successful, by acceptance.

20. It is advisable for the contract to determine which party is to provide the personnel, energy, raw materials and other items needed to operate the works during the trial operation period, and to allocate between the parties the costs of providing those items. If a product-in-hand contract has been concluded, the costs of training the purchaser's personnel during this period may be allocated to the contractor. It may be provided that the output of the works is to be owned by the purchaser. The contract may specify the length of the trial operation period and the circumstances in which this period may be extended.

D. Take-over of works

1. *Obligation to take-over*

21. If the take-over of the works by the purchaser is to precede acceptance (see paragraph 16, above), the contract may obligate the purchaser to take over the works within a specified period of time after the date of completion of the construction (see paragraph 13, above). If acceptance of the works is to precede take-over (see paragraph 18, above), the contract may obligate the purchaser to take over the works within a specified period of time after the date of acceptance (see section E.2, below).

2. *Take-over statement and date of take-over*

22. It is advisable that the contract obligate the parties to prepare a take-over statement, to be signed by both parties, describing the condition of the works at the date of take-over. The contract may provide that, if the statement does not indicate the date of take-over, the date is to be that on which the statement is signed by the parties. A take-over statement may not be needed if take-over is to occur immediately after the conduct of completion tests, or concurrently with or immediately after acceptance of the works. In such cases, the take-over may be reflected in the completion tests report (see paragraph 12, above) or in the acceptance statement (see section E.2, below).

3. *Legal consequences of take-over*

23. It is advisable for the contract to determine the legal consequences of take-over. The contract may provide that, as from the date of take-over, the risk of loss of or damage to the works passes from the contractor to the

purchaser (see chapter XIV, "Passing of risk", paragraph 20); that the purchaser is obligated to pay a portion of the price (see chapter VII, "Price and payment conditions", paragraph 75); and that the quality guarantee period commences to run (see chapter V, "Description of works and quality guarantee", paragraph 29). Alternatively, the contract may provide that these consequences, or some of them, are to occur upon acceptance, and not upon take-over (see paragraph 34, below). The contract may obligate the purchaser to give the contractor access to the site after take-over, and to protect the works (see chapter IX, "Construction on site", paragraph 32).

E. Acceptance of works

1. *Performance tests*¹

24. Performance tests serve to demonstrate that the works meets the technical characteristics specified in the contract. These technical characteristics may relate not only to the quantity and quality of the output, but also to a number of other parameters, such as the consumption of energy and raw materials by the works (see chapter V, "Description of works and quality guarantee", paragraph 8). The tests may also serve to demonstrate the performance of the works under a variety of operating conditions. The contract may provide that performance tests are to be considered successful if they do not reveal the existence of serious defects in the works (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 27).

25. The contract may provide that acceptance can occur only after performance tests have been conducted. However, in respect of certain elements of the construction (e.g., building, civil engineering), performance tests may not be the appropriate method for determining whether the required technical characteristics have been satisfied, and the contract may require the conduct only of completion tests in respect of those elements.

26. The contract may obligate the contractor to conduct performance tests within a specified period of time after the expiry of the trial operation period, or, if the contract does not provide for a trial operation period, after completion of construction (see paragraph 18, above). The contract may require the parties to agree on a date within this period on which the tests are to commence. The contract may provide that, if the parties fail to agree upon such a date, the contractor is obligated to commence the tests on the last day of the specified period. The contract may provide that, if tests are unsuccessful, the contractor is obligated to repeat them. The contract may also limit the number of times the contractor is permitted to repeat them, and may specify the period of time within which unsuccessful tests must be repeated. The remedies to which a purchaser may be entitled when the last tests the contract permits the contractor to conduct are unsuccessful are dealt with in chapter XVIII, "Delay, defects and other failures to perform", paragraphs 35 to 37. The contract may provide that when the last tests the contract permits the contractor to conduct are unsuccessful, the purchaser is entitled to require the conduct of further tests.

27. It is desirable that the contract describe the tests to be conducted. The description may include the duration of the tests, the performance criteria to be

met, the methods of measurement and analysis to be adopted in the conduct of the tests, and the tolerances permitted. In case of a variation in construction (see chapter XXIII, "Variation clauses", paragraph 1), the performance tests may also be varied so as to be appropriate to the varied construction. Issues such as the responsibility of the contractor for conducting performance tests, the assistance to be provided by the purchaser in the conduct of the tests, the allocation between the parties of the costs of tests, the postponement of tests, the conduct of additional tests required by mandatory legal rules, and compliance with prescribed formalities during the conduct of tests, may be settled in a manner analogous to that in which they are settled in relation to completion tests (see paragraphs 8 to 11, above).

28. The contract may require the results of the performance tests to be reflected in a report to be signed by both parties within a specified period of time. The report may record the dates when the performance tests were commenced and completed, the test procedures followed, and the readings achieved. In addition, the reading and results may be evaluated in the report, and the tests judged to be successful or unsuccessful. If the tests are unsuccessful, the report may indicate a date on which the tests are to be repeated. The contract may provide that any differences of view between the parties concerning the readings and results achieved or their evaluation are to be reflected in the report. If the contractor was entitled to conduct the tests in the absence of the purchaser, the report should be signed by the contractor alone. The contract may require the report to be also signed by an independent expert, if this is permitted by the applicable law. The contract may obligate the contractor to send the report promptly to the purchaser. Where performance tests are successful and the results of the tests may be recorded without difficulty, the parties may not wish to prepare a performance tests report, but instead include those results in the acceptance statement.

2. Acceptance statement and date of acceptance

29. The contract may obligate the purchaser to accept the works within a specified period of time after the conduct of successful performance tests, and also obligate the parties to prepare an acceptance statement, to be signed by both parties, which confirms the acceptance of the works by the purchaser on a stated date.² Such a statement would minimize disputes as to the date on which the works was accepted, and whether the works was accepted despite the discovery of serious defects in it (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 38).

30. The acceptance statement may list the defects in the works discovered during the performance tests. In addition, it may set forth a time-schedule for the cure of the defects, unless the purchaser has chosen to exercise remedies other than cure in respect of the defects (e.g., price reduction: see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 39, 41 and 42). If the parties differ on certain issues, such as the time-schedule for the cure of defects, the statement may reflect the views of both parties. The statement may also indicate measures which need to be taken by the parties in connection with acceptance, e.g., transfer of rights under an insurance policy.

31. The contract may provide that, if the statement does not indicate the date of acceptance, the date is to be that on which the statement was signed by both

parties. If the acceptance statement has not been signed by both parties (e.g., due to the purchaser's failure to attend the performance tests, or due to a dispute between the parties as to whether the performance tests were successful), the date on which the performance tests were successfully completed may be considered as the date of acceptance. In cases where performance tests are not required by the contract (see paragraph 25, above) and the acceptance statement is not signed by both parties, the contract may provide that the date of acceptance is considered to be the date on which completion tests were successfully conducted.

32. The contractor may be prevented from conducting performance tests during the period of time specified in the contract for conducting them due to a failure by the purchaser to perform an obligation (e.g., a failure to provide assistance needed for the conduct of the tests: see paragraph 27, above). The contract may provide that, in such cases, acceptance is deemed to occur on the date when a notice stating that acceptance has occurred is delivered by the contractor to the purchaser. The contract may further provide that, if performance tests cannot be conducted for a specified period of time due to causes for which neither party is responsible (e.g., due to the failure of an inspecting organization to attend the tests, when the attendance of the organization is required under the contract), the works is to be put into operation. If the works is operated successfully and no serious defects in the works are discovered during a period of time equivalent to that which would have been expended in the conduct of performance tests, acceptance may be deemed to occur after expiry of that period.

33. When several contractors are engaged to construct the works (see chapter II, "Choice of contracting approach", paragraphs 17 to 25), and the different contractors complete the portions of the works which they are engaged to construct at different times and performance tests can be conducted independently in respect of each portion, the contract may provide for the portions of the works to be accepted separately. Even when a single contractor is engaged to construct the works, it may be possible in some cases to conduct performance tests independently in respect of portions of the works, and the contract may provide for those portions to be accepted separately. In such cases, issues arising in relation to acceptance of a portion may be settled in the same manner in which they would be settled in relation to acceptance of the entire works. If independent performance tests cannot be conducted in respect of a portion, since the portion cannot be operated separately, the contract may provide that acceptance of that portion is to occur only after completion of construction of the entire works.

3. Legal consequences of acceptance

34. It is advisable for the contract to determine the legal consequences of acceptance. In addition to having the consequences noted in paragraph 23, above, the acceptance of the works may affect certain remedies which might otherwise be available to the purchaser for defects in the works, e.g., acceptance might exclude the right to terminate the contract (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 47 and 48).

4. *Provisional acceptance*

35. In practice, the parties sometimes provide in their contract that the purchaser may accept the works provisionally, in particular in cases where the contract does not recognize the concept of take-over and distinguish it from acceptance. The purpose of permitting provisional acceptance is to enable the purchaser to take physical possession of the works without the occurrence of certain consequences of acceptance (e.g., the loss of some remedies for defects in the works). When he accepts provisionally, the purchaser takes physical possession of the works, but makes acceptance subject to the fulfillment of certain conditions by the contractor, such as the cure of defects in the works discovered during performance tests. However, similar results may be achieved without the use of provisional acceptance by providing in the contract that the purchaser is entitled to take over the works even if performance tests are unsuccessful, and that he is obligated to accept only after successful performance tests have been conducted by the contractor.

36. If the parties prefer to provide for provisional acceptance, it is desirable to clarify the consequences of such an acceptance. In particular, it is desirable to describe clearly the situations in which the purchaser may accept provisionally, and to determine whether the legal consequences of acceptance (see paragraph 34, above) are to arise upon the satisfaction of the conditions attaching to the acceptance, or whether at least some of these consequences are to arise as from the date of the provisional acceptance.

Footnotes to chapter XIII

¹Illustrative provisions

"(1) The contractor must conduct performance tests within ... (indicate a period of time) after [expiry of the trial operation period] [completion of the construction]. If the parties fail to agree upon a date falling within this period for the commencement of the tests, the contractor must commence the tests on the last day of this period.

"(2) The performance tests must be conducted in the presence of both parties. If the purchaser is prevented from attending the tests by an unavoidable impediment, he is entitled to request that the tests be postponed to the earliest date falling within ... (indicate a period of time longer than that indicated in paragraph (1)) on which he can attend the tests. The purchaser is not entitled to require postponed tests to be held after the expiry of this period. If the purchaser fails to attend the tests, and either did not request or was not entitled to request a postponement, the contractor is entitled to conduct the tests in the absence of the purchaser.

"(3) The performance tests to be conducted are described in annex ... to this contract.

"(4) If the performance tests are unsuccessful, the contractor is obligated to repeat them within ... (indicate a period of time) after the date of the unsuccessful tests. The contractor is not permitted to repeat unsuccessful tests more than ... times, or after the expiry of ... (indicate a period of time) from the [expiry of the trial operation period] [completion of the construction]. However, the purchaser may require the contractor to repeat unsuccessful tests even after unsuccessful tests have been repeated ... times (indicate same number as that indicated above), or after the expiry of ... (indicate same period as that last-mentioned) from the [expiry of the trial operation period] [completion of the construction].

"(5) The contractor must bear the costs of conducting the performance tests. However, the purchaser must supply at his own expense the following items needed for the conduct of the tests: ... (indicate items).

“(6) If performance tests are repeated because the initial tests are unsuccessful, the contractor must bear all costs reasonably incurred by the purchaser as a result of the repetition. If the conduct of tests is prevented because the purchaser has failed to perform an obligation, and the tests are postponed, he must bear all costs reasonably incurred by the contractor as a result of the postponement.

“(7) Within . . . (indicate period of time) after the conduct of performance tests, the parties must prepare a report, to be signed by both parties, reflecting the results of the tests. The report must indicate whether the tests were successful or unsuccessful. It must also set forth the following information: . . . (indicate information required).”

²*Illustrative provisions*

“(1) The purchaser must accept the works within . . . (indicate period of time) after the conduct of successful performance tests.

“(2) Within . . . (indicate period of time) after the conduct of successful performance tests, the parties must prepare an acceptance statement. The acceptance statement must contain the following information: . . . (indicate required information).

“(3) Acceptance occurs on the date of acceptance mentioned in the acceptance statement prepared under paragraph (2) of this article. If the acceptance statement does not mention a date, acceptance occurs on the date on which the statement is signed by both parties. If the acceptance statement is not signed by both parties, acceptance occurs on the date on which successful performance tests were completed.

“(4) If the conduct of performance tests is prevented during the period specified in article . . . of this contract because the purchaser has failed to perform an obligation, the contractor may deliver to the purchaser a notice stating that acceptance has occurred, and acceptance occurs on the date on which the notice is delivered.

“(5) If performance tests cannot be conducted during the period specified in article . . . of this contract due to causes for which neither party is responsible, the parties must commence the operation of the works. The works must be operated for . . . (indicate a period of time). If no serious defects are discovered in the works during this period, acceptance occurs on the expiry of this period.”

Chapter XIV. Passing of risk

SUMMARY

Loss or damage may be caused to equipment and materials to be incorporated in the works and to the works before or after completion, as well as to tools and construction machinery to be used by the contractor for effecting the construction. This chapter deals with loss or damage which may be caused by accidental events or by the acts of third persons for whom neither party is responsible, and the issue of allocating the risk of such loss or damage between the parties (paragraphs 1 to 4).

In determining how the risk of loss or damage is to be allocated between the parties, several factors need to be considered and balanced (paragraph 5). The parties may sometimes wish to exclude certain specified events from the risks to be borne by the contractor, and to allocate the risk of loss or damage from that event to the purchaser (paragraph 6).

Mandatory rules in many legal systems provide that, after equipment and materials are incorporated in the works, they lose their separate identity, and the party bearing the risk in respect of the works will also bear the risk in respect of the incorporated equipment and materials. The time at which equipment and materials are considered to be incorporated in the works will be determined by criteria specified in the applicable law (paragraphs 7 and 8).

The parties may wish to determine the allocation of risk in respect of equipment and materials supplied by the contractor, and the time at which the risk is to pass from one party to the other. This may depend, in particular, on which party is to be in physical possession of the equipment and materials and the need to avoid a multiple passing of risk (paragraphs 9 to 15).

Equipment which is supplied by the contractor is sometimes not intended to be incorporated in the works. If they are able to do so under the applicable legal rules, the parties may wish to allocate the risk in respect of such equipment on the basis of which party is to be in physical possession of the equipment prior to the take-over of the works (paragraphs 16 and 17).

In respect of equipment and materials supplied by the purchaser for incorporation in the works, the parties may wish to determine the allocation of risk on the basis of factors similar to those which would be relevant to an allocation of risk in respect of equipment and materials supplied by the contractor (paragraphs 18 and 19).

In respect of the works during construction and the completed works, where only one contractor is engaged to construct the entire works it is advisable to provide that the contractor is to bear the risk until take-over or acceptance by the purchaser (paragraphs 20 and 21). Where several contractors participate in the construction in succession, the contract may provide that the risk is to pass to each contractor at the time the uncompleted works is taken over by him, and pass to the purchaser at the time the works is taken over by the purchaser (paragraph 22).

Where the contractor bears the risk of loss or damage, the contract may require him to cure with all possible speed and at his own expense any loss or damage which occurs. Where the purchaser bears the risk in respect of equipment and materials supplied by the contractor, the contract may obligate him to pay the entire price for equipment and materials which are lost or damaged (paragraph 23).

It is advisable for the contractor to bear the risk in respect of the contractor's tools and construction machinery brought to the site for effecting the construction (paragraph 30).

A. General remarks

1. Loss or damage may be caused to equipment or materials to be incorporated in the works, to the works during construction, or to the completed works, as well as to tools and construction machinery to be used by the contractor for effecting the construction. Liability for damages in cases where such loss or damage is caused by a party to the works contract, or by a third person for whom a party is responsible, is discussed in chapter XX, "Damages". The present chapter deals with loss or damage which may be caused by accidental events, or by the acts of third persons for whom neither party is responsible. Such loss or damage is not uncommon during the construction of an industrial works. It is therefore advisable for the contract to allocate the risk of this loss or damage between the parties.

2. The party bearing a risk of loss or damage will have to bear the financial consequences of the loss or damage without being able to obtain compensation from the other party. For example, if loss or damage is caused to equipment, materials or the works, and the contractor bears the risk of that loss or damage, he will be obligated to cure the loss or damage by replacing the lost items or repairing the damage at his own expense. If the purchaser bears the risk of that loss or damage, he will be obligated to pay the price in respect of the lost or damaged items despite the loss or damage. The party bearing those risks may wish to take out insurance covering the risk, or may even be obligated to do so under the works contract (see chapter XVI, "Insurance", paragraphs 17 to 26). However, a party will be compelled to bear the consequences of those risks against which insurance is not obtained.

3. It may sometimes be difficult to discover whether loss or damage was caused by an accidental event, or by a third person for whom neither party is responsible (e.g., where goods are found to be damaged after transportation, and the damage is of a kind which might have been caused either by an accidental event or by a third person). It is therefore advisable to provide that the risk of loss or damage to be borne by a party includes both loss or damage caused by accidental events and loss or damage caused by a third person for whom neither party is responsible.

4. An accidental event or act of a third person causing loss or damage to the works may also prevent a party from performing his contractual obligations. For example, if the works is damaged by a storm during a period when the contractor bears the risk of accidental damage, the contractor may be prevented from completing the construction in time. The issue of whether the party who has failed to perform his contractual obligations is liable to pay

damages to the other party for financial loss suffered due to the failure should be distinguished from the issue of who should bear the risk of loss or damage caused by the accidental event or act of the third person. Even if the person bearing the risk is liable to cure the loss or damage covered by the risk, he may not be liable to pay damages for his failure to perform due to the loss or damage if the accidental event or the act of the third person constituted an exempting impediment (see chapter XX, "Damages", paragraph 3, and chapter XXI, "Exemption clauses", paragraphs 9 to 26). In the example given above, the contractor may be obligated to repair the damage to the works caused by the storm, but he would not be liable to pay damages to the purchaser for the financial loss arising from his failure to perform if the storm constituted an exempting impediment under the exemption clause contained in the contract.

5. In determining how the risk of loss or damage is to be allocated between the parties, factors such as the following need to be considered and balanced:

(a) First, and most importantly, which party is able to insure the goods at the least cost, or, under the works contract, is to provide the insurance cover for the loss or damage in question, or is in a better position to claim against an insurer;

(b) Which party can better control the circumstances which may result in loss or damage; this party will usually be the party who is in physical possession of the equipment, materials or the works. An allocation of risk to that party may create an incentive to care for the goods with diligence. In addition, allocation of the risk to the party in physical possession of the property may avoid disputes over whether the loss or damage was caused by a failure to take due care of the property, or by an accidental event or act of a third person which could not have been prevented. The parties may wish to attach considerable weight to this factor in allocating risk;

(c) The undesirability of a multiple passing of risk between the parties (e.g., from contractor to purchaser, and then from purchaser to contractor). The parties may also wish to attach considerable weight to this factor;

(d) Which party can best salvage and dispose of the damaged property.

6. The parties may sometimes wish to exclude from the risks to be borne by the contractor the risk of loss or damage caused by certain specified events, for example, war, other military action, riots (unless solely caused by employees of the contractor or his subcontractors), earthquake, or floods (so-called "excepted risks").¹ Since the exclusion will result in those risks being borne by the purchaser, it is advisable for the contract to specify the cases when the purchaser is to bear them. The parties may wish to provide that the purchaser bears those risks only where the loss or damage is caused by the specified events in the country where the works is to be constructed. If, however, the parties wish to provide that the purchaser is to bear the risks even in respect of loss or damage caused outside the country where the works is to be constructed, it is desirable for the contract to specify the time when the purchaser is to commence to bear those risks (e.g., at the time when the equipment and materials are handed over to the first carrier for transportation to the site).

B. Equipment and materials supplied by contractor

1. *Equipment and materials to be incorporated in works*

(a) *Consequences of incorporation under applicable law*

7. Mandatory rules in many legal systems provide that equipment and materials lose their separate identity after they are incorporated in the works. Thereafter, the party bearing the risk in respect of the works will also bear the risk in respect of the incorporated equipment and materials. The time at which equipment and materials are considered to be incorporated in the works will be determined by criteria specified in the applicable law. The parties may find it advisable to ascertain when incorporation takes place under those criteria.

8. Under most legal systems, materials are considered to be incorporated in the works after their use in the construction, since such use often results in a change in the physical characteristics of the materials. In respect of equipment, different approaches are adopted by various legal systems. Under some legal systems, equipment is considered to be incorporated only after it is installed in the works in such a manner that it cannot be separated from the works without damage to the equipment. Under other legal systems, installation of a less permanent character suffices for the equipment to be considered incorporated in the works. If the rules of the applicable law regulating when incorporation takes place are not mandatory, and do not settle the issue in an appropriate manner, the parties may wish to determine in the contract when equipment and materials are to be considered as incorporated in the works (e.g., at the time when equipment is installed in the works, whether or not the equipment could be subsequently removed without damage to the equipment).

(b) *Rules on passing of risk adopted in contract*

9. The parties may wish to determine in the contract which party bears the risk of loss of or damage to equipment and materials supplied by the contractor for incorporation in the works during the period prior to their incorporation. If the equipment and materials are to remain in the physical possession of the contractor until their incorporation in the works by the contractor, it is advisable to provide that the risk of loss or damage is to be borne by the contractor until their incorporation (see footnote 1 to this chapter).

10. In certain circumstances, it may be necessary for the purchaser to take over for the purpose of storage equipment and materials supplied by the contractor (see chapter VIII, "Supply of equipment and materials", paragraphs 21 to 26). In those circumstances, whichever approach is adopted for the allocation of risk will have one of two disadvantages: a multiple passing of risk; or physical possession of the equipment and materials by one party and the bearing of risk in respect of the equipment and materials at the same time by the other. Thus, the contract might provide that the purchaser is to bear the risk in respect of the works during construction, and also in respect of the equipment and materials until their incorporation in the works, thereby avoiding a multiple passing of risk. However, this approach has the disadvantage that, when the contractor takes the equipment and materials out of storage for incorporation in the works, they will be in his physical possession until their incorporation, while the risk of loss or damage during that period is

borne by the purchaser. If, alternatively, it is provided in the contract that the risk is to be borne by whichever party is for the time being in possession of the equipment and materials, that disadvantage is avoided.

11. When the risk of loss or damage to the uncompleted works is to be borne by the purchaser and the equipment or materials are to be taken over by the purchaser for storage and are to be handed back to the contractor only immediately prior to their incorporation in the works, the parties may wish to provide that the risk in respect of the equipment and materials is to pass to the purchaser and is to remain with him until their incorporation in the works. When the risk of loss of or damage to the uncompleted works is to be borne by the contractor, or, whether the purchaser or the contractor is to bear the risk in respect of the uncompleted works, when after the storage the equipment or materials are to be taken over by the contractor and are to remain in his physical possession for a considerable period of time prior to their incorporation in the works, the parties may wish to agree that the risk is to pass back to the contractor and is to remain with him.

12. In all cases where equipment and materials are to be taken over by the purchaser for the purpose of storage or installation by the purchaser or another enterprise engaged by the purchaser (see chapter IX, "Construction on site", paragraphs 27 to 30), the contract should determine when the risk of loss or damage passes to him. The parties may wish to select one of the following times for the passing of risk to the purchaser:

(a) The time when the equipment and materials are handed over to the first carrier for transport to the purchaser, or when they effectively pass the ship's rail at the agreed port of shipment;

(b) The time when the equipment and materials are taken over by the purchaser, or, if he is in delay in taking them over, the time when they are placed at his disposal.²

13. In determining which of these times is appropriate, the parties may wish to select a time at which the purchaser has the possibility of checking the condition of the equipment and materials. If the equipment and materials are not checked at the time when the risk passes, and they are later found to be lost or damaged, it may be difficult to determine when the loss or damage occurred, and who is to bear the consequences of the loss or damage.

14. The approach described in the preceding paragraphs may be used whether the contractor supplies the equipment or materials from his own stocks, or whether he contracts with a subcontractor or a supplier to supply them direct to the place of supply specified in the contract (see chapter VIII, "Supply of equipment and materials", paragraph 5). In the latter case, the supply of the equipment or materials by a subcontractor or supplier may be regarded as the performance by the contractor of his supply obligations under the works contract (see chapter XI, "Subcontracting", paragraphs 27 and 28). The works contract will, therefore, be able to allocate between the contractor and the purchaser the risk of loss of or damage to the supplied items, although it will not be able to allocate that risk between the subcontractor or supplier and the contractor. The latter allocation will be effected by the contract between those parties. To the extent possible, the contractor may wish to protect himself by seeing to it that the risk does not pass to him under his contract with the subcontractor or supplier at a time earlier than when the risk passes from him to the purchaser under the works contract.

15. Where the equipment and materials are being supplied by the contractor to the purchaser under a relevant trade term of the International Rules for the Interpretation of Trade Terms (INCOTERMS) (e.g., f.o.b., c & f), that trade term may determine the time of the passing of risk to the purchaser. This approach may be advisable in cases where the trade term as interpreted in INCOTERMS determines the passing of risk in a manner appropriate to a works contract (see chapter VIII, "Supply of equipment and materials", paragraph 3).

2. Equipment not to be incorporated in works

16. Equipment which is supplied by the contractor is sometimes not intended to be incorporated in the works (e.g., movable equipment for unloading the products of the works). Such equipment is, under some legal systems, considered to be appurtenant to the works, and the risk in respect of the equipment is deemed to pass from the contractor to the purchaser at the same time as the risk in respect of the works. However, the parties are often given the autonomy to determine by agreement that the risk is to pass at some other time. Such an agreement may be desirable when the applicable legal rules do not allocate the risk in respect of such equipment in a manner which is appropriate for a works contract. It may also be advisable for the works contract to determine the time of passing of the risk in respect of such equipment in cases where the applicable law does not consider the equipment to be appurtenant to the works.

17. The parties may wish to allocate the risk on the basis of which party is to be in the physical possession of the equipment prior to the take-over of the works. If the contractor is to be in possession, the risk may be borne by the contractor, and pass to the purchaser when the risk passes in respect of the works. If the purchaser is to take over the equipment prior to the take-over of the works (e.g., for purposes of storage), the risk may pass to the purchaser at a time determined by the parties (see paragraphs 12 to 15, above).

C. Equipment and materials supplied by purchaser

18. Under some works contracts, the purchaser may be obligated to supply equipment and materials to be used by the contractor for incorporation in the works. The parties may wish to provide that, if the contractor bears the risk in respect of the works during construction, the risk in respect of the equipment and materials supplied by the purchaser is to pass from the purchaser to the contractor at the time when they are taken over by the contractor or, if he is in delay in taking them over, at the time when they are placed at his disposal. The contract may provide that the contractor is obligated to inspect the equipment and materials at the time of take-over (see chapter VIII, "Supply of equipment and materials", paragraph 29). This approach has the advantage of reducing disputes between the parties as to which of them should bear the consequences of loss of or damage to the equipment and materials.

19. The advantage of the approach described above is less when the purchaser bears the risk in respect of the works during construction. In such a case, this approach results in a double passing of risk (from the purchaser to the

contractor and from the contractor to the purchaser when the equipment and materials are incorporated in the works). Furthermore, disputes as to the cause of a failure of the works to operate may not be substantially reduced, as the purchaser would bear the risk in respect of the equipment and materials after their incorporation in the works. The parties may wish to provide that, in cases where the equipment and materials are to be stored on the site by the purchaser and are to be taken over by the contractor only immediately before their incorporation in the works, the risk is to borne by the purchaser until the incorporation.

D. Works during construction and completed works

20. When only one contractor is engaged to construct the entire works (in particular, in the case of a turnkey contract), it is advisable for the contract to provide that the contractor is to bear the risk of loss of or damage to the works during construction, and to the completed works until acceptance of the works, or, alternatively, take-over of the works, by the purchaser (see chapter XIII, "Completion, take-over and acceptance", paragraph 23).

21. The advantage of having the contract provide that the risk in respect of the works is to pass from the contractor to the purchaser at the time of the take-over of the works by the purchaser is that, from that time, the works will be in the physical possession of the purchaser and the purchaser can therefore control the circumstances which may result in loss or damage to the works. However, where the works is to be operated under the supervision of the contractor for a trial period commencing to run from the time of the take-over of the works by the purchaser (see chapter XIII, "Completion, take-over and acceptance", paragraph 16), the parties may prefer not to have the risk pass until the time when the works is accepted by the purchaser. The time when take-over and acceptance may occur is discussed in chapter XIII, "Completion, take-over and acceptance", paragraph 22, 25, 29, 31 and 32. The contract may provide that, if the purchaser fails to take over or accept the works when obligated to do so, the contractor is entitled to require him to do so, and that if the purchaser fails to do so within a specified period of time, the risk is to pass on the date when a notice that the risk has passed is delivered to him by the contractor (cf. chapter XVIII, "Delay, defects and other failures to perform", paragraphs 60 and 61). In the exceptional case where the works is to be in the ownership of the contractor during the construction (see chapter XV, "Transfer of ownership of property", paragraph 8), the parties may prefer to provide that the risk is to pass from the contractor to the purchaser at the time of the transfer of ownership of the works to the purchaser.

22. Where several contractors participate in the construction in succession, and each of them is to be in physical possession of the works during the period of construction by him, the contract may provide that the risk is to pass to each contractor at the time the uncompleted works is taken over by him, and pass to the purchaser at the time the works is taken over by the purchaser. Each of the contractors may be obligated to conduct completion tests after completion of the portion of the construction to be effected by him. These tests will involve inspection by the parties of the completed portions (see chapter XIII, "Completion, take-over and acceptance", paragraph 4). Any loss or damage

the risk of which is borne by a contractor may be discovered during the inspection. The contractor who is required to construct next may participate in the inspection, and any loss or damage which is discovered may be reflected in a take-over statement (see chapter XIII, "Completion, take-over and acceptance", paragraph 22).

E. Some consequences of bearing of risk

23. Where the contractor bears the risk of loss of or damage to equipment or materials supplied by him, to the works during construction, or to the completed works until take-over or acceptance, he will be required to cure any loss or damage covered by the risk at his own expense with all possible speed. The contract may provide that, in curing the loss or damage, the contractor has the option of either replacing or repairing property which has been damaged. Under many legal systems, the purchaser is obligated to pay the entire price of property supplied by the contractor in cases where the loss of or damage to the property is covered by the risk to be borne by the purchaser. If the applicable law does not provide that the bearing of risk by the purchaser has these consequences, it is advisable for the contract to do so. Where loss or damage covered by the risk to be borne by the purchaser occurs to equipment and materials supplied by the contractor, and the purchaser has therefore to cure the loss or damage at his own expense, he will in many cases not be able to do so himself. It may be advisable for the contract to determine how this issue is to be resolved (cf. chapter XVIII, "Delay, defects and failures to perform", paragraph 49).

F. Contractor's tools and construction machinery to be used for effecting construction

24. The contractor will bring tools and construction machinery to the site to be used for the construction. The risk of loss of or damage to such property which may be caused by accidental events, or by the acts of third persons for whom neither party is responsible, would be borne under many legal systems by the contractor, and would not pass to the purchaser. The contract may provide that the tools and machinery may, in some situations, be used by the purchaser, or by a third person engaged by him, for the construction. Even in those situations, however, it may be advisable to provide that the risk is to be borne by the contractor if the tools and machinery are used for the construction to be effected under the contract.

Footnotes to chapter XIV

¹Illustrative provisions

"(1) Except as provided in paragraph (2) of this article, the contractor bears the risk of any loss or damage from any cause whatsoever to any equipment and materials supplied by him until their incorporation in the works.

“(2) However, the risk borne by the contractor does not cover any loss or damage caused by the purchaser or any person engaged by him [or caused by . . . (here indicate “excepted risks”; see paragraph 8, above) in the country where the works is being constructed].”

²*Illustrative provisions*

“(1) Except as provided in paragraph (2) of this article, the risk of loss or damage from any cause whatsoever to equipment and materials to be supplied by the contractor for incorporation in the works passes from the contractor to the purchaser at the time when [the equipment and materials are handed over in accordance with this contract to the first carrier for transmission to the purchaser] [the equipment and materials effectively pass the ship's rail at the agreed port of shipment] [the equipment and materials are taken over by the purchaser or, if he is in delay in taking them over, they are placed at the disposal of the purchaser].

“(2) [As in paragraph (2) of the illustrative provisions in note 1]”.

Chapter XV. Transfer of ownership of property

SUMMARY

The issue of whether various types of property involved in the construction of an industrial works are owned by the contractor or the purchaser may be important in connection with questions of insurance, taxation, and liability to third persons arising from the property or its use. The issue is also important because the property may be seized by creditors of its owner and is subject to bankruptcy proceedings against him (paragraph 1). This *Guide* deals with the transfer of the ownership of property as an issue distinct from the passing of risk of loss of or damage to that property (paragraph 2).

The transfer of ownership of equipment and materials which are to be incorporated in the works is often governed by mandatory rules of the legal system where the property is situated (paragraph 3). Many legal systems contain a mandatory rule that all things affixed to land become subject to the ownership of the landowner (paragraph 4). Even if the applicable law permits the parties to regulate through contract provisions the transfer of ownership of property from one party to the other, they may need to include such provisions only where the applicable law does not regulate the transfer in a satisfactory manner (paragraph 5).

Contractual provisions allocating the ownership of equipment and materials to the party who does not own the works may cease to have effect upon the incorporation of the equipment materials in the works (paragraph 6).

In regard to the transfer of ownership of equipment and materials supplied by the contractor, it may be desirable that ownership does not remain with him after the purchaser has paid a substantial portion of the price for them. In regard to the transfer of equipment and materials supplied by the purchaser, it may be desirable that the ownership of the equipment and materials is not to pass to the contractor unless he pays for them before their incorporation (paragraph 7).

It may be desirable for ownership of the works during construction to be allocated in certain circumstances to the purchaser, for example when he pays a substantial portion of the price in the form of progress payments during construction. In other circumstances, an allocation to the contractor may be desirable, for example if credit has been given by the contractor to the purchaser in respect of the payment of the price (paragraph 8).

A. General remarks

1. The issue of whether various types of property involved in the construction of an industrial works are owned by the contractor or the purchaser may be important in connection with questions of insurance, taxation and liability to third persons arising from the property or its use. The issue is also important because the property may be seized by creditors of its owner, and is subject to bankruptcy proceedings against him.

2. The *Guide* deals with the transfer of the ownership of property involved in the performance of a works contract as an issue distinct from the passing of risk of loss of or damage to that property (see chapter XIV, "Passing of risk"). Although under some legal systems the risk of loss of or damage to property passes with the transfer of ownership of the property, under other legal systems this is not the case. For example, under some legal systems the issue of who bears the risk of loss of or damage to property may depend on who has possession of the property. Furthermore, even legal systems under which the risk passes with the transfer of ownership may permit the parties to agree otherwise.

3. The transfer of ownership of equipment and materials which are to be incorporated in the works is often governed by mandatory rules of the legal system where the property is situated, leaving the parties only limited autonomy to specify in the contract the time when ownership is transferred from one party to the other. Under most legal systems, ownership of equipment and materials may not pass till the property is identified as that which is to be supplied in performance of the contract. Some legal systems require, in addition, that the equipment and materials be delivered to the party who is to acquire them.

4. Many legal systems contain a mandatory rule that all things affixed to land become subject to the ownership of the landowner. If that rule exists in the law of the country where the site is located, the works during construction and after its completion will be owned by the owner of the site, who is normally the purchaser. Other legal systems have non-mandatory rules determining the ownership of things affixed to the land, although under many of these legal systems as well the things will become subject to the ownership of the landowner unless the parties provide otherwise. However, under contract provisions or the applicable law, the ownership of the equipment and materials which are to form part of the works may have passed to the purchaser even prior to their incorporation in the works (see section B, below).

5. Even if the applicable law permits the parties to regulate through contract provisions the transfer of ownership of property from one party to the other, they may need to include such provisions only where the applicable law does not regulate the transfer in a satisfactory manner. Sections B and C of this chapter contain suggestions for regulating in an appropriate manner the allocation of ownership in certain circumstances if the allocation by non-mandatory rules of the applicable law in those circumstances is unsatisfactory. When formulating provisions regulating the transfer of ownership, it is in general advisable for the parties to avoid, as far as possible, multiple transfers and retransfers of ownership of property.

B. Transfer of ownership of equipment and materials to be incorporated in works

6. The parties may wish to note that contractual provisions allocating the ownership of equipment and materials to the party who does not own the works may cease to have effect upon the incorporation of the equipment and materials in the works. Under mandatory legal rules existing in many legal systems, equipment and materials which are incorporated in the works become

merged in it upon incorporation, and cease to be objects of independent ownership. The incorporated equipment and materials will thereafter be owned by the party owning the works.

7. In regard to the transfer of ownership of equipment and materials supplied by the contractor, it may be desirable that the equipment and materials do not remain in the ownership of the contractor after the purchaser has paid a substantial portion of the price for them. The purchaser may otherwise suffer serious loss if the property of the contractor is seized by his creditors, or if the contractor is declared bankrupt. In regard to the transfer of ownership of equipment and materials supplied by the purchaser, it may be desirable that the ownership of the equipment and materials is not to pass to the contractor prior to their incorporation in the works, whether the works is to be owned by the purchaser during construction, or, exceptionally, by the contractor. However, if the works during construction is to be owned by the contractor and he pays for the equipment and materials before their incorporation, it may be provided that ownership is to pass to him at the time of payment.

C. Ownership of works during construction and after completion

8. In certain circumstances an allocation by the parties of ownership of the works during construction to the purchaser may be desirable (cf. paragraph 4, above). For example, it may be desirable for ownership to be allocated to the purchaser when he pays a substantial portion of the price in the form of progress payments during construction. It may also be desirable for ownership to be allocated to the purchaser in cases where the allocation to the contractor may lead to difficulties, for example, where several contractors participate in the construction and it is not practicable for each contractor to own the portion of the works constructed by him. In other circumstances, however, an allocation of the ownership to the contractor may be desirable. For example, if credit has been given by the contractor to the purchaser in respect of the price, a substantial portion of which is to be paid on a date after the expiration of the guarantee period, the contractor may be protected by an allocation of ownership until a specified percentage of the price is paid. Such an arrangement may, however, approximate to an agreement for the retention of ownership, and the law of the site may require compliance with certain formalities if the allocation is to be validly effected. Furthermore, the law of the site may require compliance with additional formalities to effect a valid transfer of ownership of the works to the purchaser after the specified percentage of the price has been paid by him.

Chapter XVI. Insurance

SUMMARY

It is desirable for the parties, and particularly for the purchaser, to obtain advice regarding insurance from specialists in the field of insurance of industrial works projects. The works contract need normally deal only with those types of insurance which it is desirable for a party expressly to be obligated to provide (paragraphs 1 to 4).

It is advisable for the contract to require property insurance and liability insurance, and to specify the risks which are to be insured against, the party who is obligated to obtain the insurance, the parties and other entities who are to be named as insured parties, the minimum amount of insurance, the applicable deductible or excess, and the period of time to be covered by the insurance (paragraphs 5 to 15).

It is advisable for the contract to require property insurance against loss of or damage to the works during construction, the completed works, temporary structures and structures ancillary to the works (paragraphs 16 to 23), and equipment and materials to be incorporated in the works (paragraphs 24 to 26).

Where the contractor is to bear the risk of loss of or damage to the entire works during construction and after completion, it may be desirable for the contract to obligate the contractor to obtain property insurance covering the entire works and to keep it in force. Where several contractors are engaged to construct the works, and no single contractor bears the risk of loss of or damage to the entire works, the parties may wish to consider whether it is desirable for each contractor to obtain insurance covering the portion of the works and structures covered by his construction (paragraph 18). It is normally desirable for both the contractor and the purchaser to be named as insured parties (paragraph 19).

Different approaches may be adopted with respect to the risks required by the contract to be covered by property insurance (paragraphs 20 and 21). The parties should consider the nature of the losses to be compensated by the insurance and the amount of insurance to be required (paragraphs 22 and 23).

With respect to insurance covering equipment and materials to be incorporated in the works, the contract might provide for those items to be insured under a cargo policy from the point of shipment to delivery at the site, and after delivery by property insurance as previously discussed. Alternatively, it may be desirable in some cases for a single insurance policy to insure them for the entire period from the time of shipment to the time of incorporation in the works (paragraphs 24 to 26).

In some cases, it may be desirable for the contractor to be obligated to obtain insurance covering machinery and tools used by him for the construction, including hired machinery and tools (paragraph 27).

It is desirable for the contract to obligate the contractor to insure against his extra-contractual liability for loss, damage, or injury caused in connection with his performance of the contract, including acts or omissions of his employees, subcontractors and suppliers, as well as his liability under indemnities which he assumes under the contract (paragraphs 28 to 37).

It may be desirable for the contract to require the contractor also to provide specific types of liability insurance, such as products liability insurance (paragraph 29), professional indemnity insurance (paragraph 30), insurance against liabilities arising from the operation of vehicles (paragraph 31), and insurance to compensate employees for work-related injuries (paragraphs 32 to 35). The contract might require liability insurance to be in effect prior to the time when he or any subcontractor commences construction on the site and might cover loss, damage or injury occurring throughout the construction phase and the guarantee period (paragraph 36).

It is advisable for the contract to obligate the contractor to produce to the purchaser specified types of proof that insurance which the contractor is obligated to obtain is in effect, or instruct his insurer to provide such proof directly to the purchaser. Similar obligations might be imposed upon the purchaser in respect of insurance required to be obtained by him (paragraph 38). The parties may wish to consider provisions to deal with the situation where the obligated party fails to obtain or keep in force any insurance which he is required to provide (paragraphs 39 to 41).

A. General remarks

1. The construction of a large industrial works carries with it the risks of loss, damage and injury resulting from a wide variety of possible accidents and events. One of the functions of the works contract is to allocate these risks between the contractor and the purchaser. This is accomplished by clauses under which a party assumes a particular risk or under which the risk is shared by both parties, for example, clauses relating to passing of risk (see chapter XIV, "Passing of risk"), exemptions (see chapter XXI, "Exemption clauses"), and hardship (see chapter XXII, "Hardship clauses"). Risks which are not allocated by the contract will be imposed upon one party or the other by rules of law. A party may wish to transfer to third parties, such as insurers, certain risks to which he is subject, or portions of those risks.

2. It is usually advisable for the works contract to contain provisions relating to insurance covering certain risks. There may be cases in which the purchaser wishes the contractor to be obligated to provide insurance covering certain risks borne by the contractor. This may be the case with respect to risks which, if they materialized, would produce financial consequences beyond the ability of the contractor to bear and which could impair or prevent performance of the contract by the contractor, or which could otherwise prejudice the purchaser if the contractor failed to bear them. For similar reasons, lending institutions financing the construction of a works often require insurance coverage for certain risks borne by the contractor. In some cases, the parties may agree that the contractor is to arrange and pay for insurance covering certain risks borne by the purchaser (see, e.g., paragraph 21, below). In exceptional cases, the purchaser might undertake in the contract to arrange and pay for insurance covering some of the contractor's risks (see paragraphs 6 and 14, below).

3. It should be noted that the contract need normally deal only with those types of insurance which it is desirable for a party expressly to be obligated to provide; it need not normally deal with other types of insurance which it would be prudent or legally necessary for a party to have. This chapter concerns only those types of insurance which the parties may wish expressly to require in the works contract.

4. The insurance of industrial works projects is a highly specialized field. There exists a wide variety of types of insurance to cover various risks; most of these are subject to a complex array of exclusions and restrictions. Where the overall insurance scheme for a project consists of several policies covering different risks—some policies taken out by the contractor and others by the purchaser—the individual policies must be co-ordinated so as to achieve the intended overall coverage and to avoid undesired gaps in, as well as duplication of, coverage. It is therefore desirable for the parties to obtain advice regarding insurance from specialists in the field of insurance of international industrial works projects. The purchaser, in particular, may wish to obtain a thorough analysis of the risks to which he is subject in connection with the project and advice as to the insurance of those risks. It would be desirable for him to do so even at the pre-contract stage, since professional risk-management and insurance advice will be important for the structuring of risk-allocating and insurance provisions of the draft contract to be presented to prospective contractors. International lending institutions sometimes require purchasers to obtain advice from risk management professionals in connection with projects financed by those institutions.

5. The contract may contain provisions relating to:

(a) *Property insurance*, to insure against loss of or damage to the works during construction, the completed works, temporary structures and structures ancillary to the works, equipment and materials to be incorporated in the works and the machinery and tools used by the contractor for the construction (including hired machinery and tools). This insurance insures property owned by the insured party or in which he otherwise has an insurable interest (e.g., property in respect of which he bears the risk of loss or damage);

(b) *Liability insurance*, to insure the contractor against his extra-contractual liability for loss, damage or injury caused in connection with his performance of the contract, as well as his liability under indemnities which he assumes under the contract.

6. Whether it is desirable for a particular type of insurance to be obtained by the contractor or the purchaser will depend upon a number of factors, many of which are discussed elsewhere in this chapter. In many cases, it may be desirable for the insurance to be obtained by the party who bears the risk covered by the insurance. In some cases, however, it may be preferable for one party to arrange and pay for insurance covering risks borne by the other party. This might be the case, for example, if the party who does not bear the risk can obtain the insurance more cheaply than the other, or if the insurance in question must be co-ordinated with other insurance (see paragraph 13, below). The purchaser may therefore wish to consider whether, taking into consideration the foregoing circumstances, it would be more desirable for him to obtain certain types of insurance covering his own or the contractor's risks, rather than requiring the contractor to do so. The parties may wish to provide that the

insurance required under the contract must be obtained from an insurer acceptable to both parties to the works contract (see, however, paragraph 15, below).

7. It is advisable for the contract to provide that the fact that a party has obtained insurance covering certain risks should not constitute a limitation or discharge of the liabilities of that party under the contract in respect of those risks, even if the contract requires him to insure against them.

8. It is advisable for the insurance provisions in the contract to specify the risks which are to be insured against, the party who is obligated to obtain the insurance, the parties and other entities who are to be named as insured parties, the minimum amount of insurance, the "deductible" (or "excess"), if any, applicable to each risk (i.e., the amount of a financial loss which the insured must bear himself, the insurer compensating under the insurance policy only to the extent the loss exceeds such amount), and the period of time to be covered by the insurance. Due to the complex and often unique nature of industrial works projects, insurance coverage will usually have to be tailored to meet the particular circumstances of the project.

9. The parties should be aware that the type or amount of insurance which can be obtained will be limited by what is available in the insurance market. Some insurance coverage which a party might consider desirable may not be available. Other coverage may be obtainable only at a cost which may not be economically justified in a particular project. Therefore, in drafting insurance provisions, the parties should bear in mind whether it is possible to obtain the contemplated coverage at reasonable rates. It should be noted that due to changing market conditions, the availability of certain types of insurance discussed in this chapter may change after the time of this writing.

10. The amount of insurance required by the contract and the scope of the risks insured against should not exceed those which are necessary or prudent under the circumstances of the project. Purchasers should be aware that even if the contractor obtains insurance, the costs of insurance will usually ultimately be borne by the purchaser. Excessive insurance required by the purchaser will unnecessarily increase the price which he must pay. Moreover, in a lump-sum contract, imposing excessive insurance costs on the contractor might tempt him to reduce other costs in order to maintain the attractiveness of his bid or his profit margin. Such a practice could adversely affect the quality of the works to be supplied to the purchaser.

11. The parties may wish to consider providing in the contract for a means to adjust the amounts of the insurance required by the contract, in order to take account of inflation. The adjustment could be made automatically, in accordance with a change in a relevant index, or the contract could provide for a review of the amounts upon the request of either party. The contract might also specify which party is to bear the increases in the cost of insurance resulting from increases in the amounts of insurance; this might be the party who is obligated to obtain the insurance. To the extent legally possible (see paragraph 15, below), the parties may wish to require that the insurance proceeds in the event of a claim be payable in a freely convertible currency.

12. The purchaser may also wish to consider the amounts of the deductibles (see paragraph 8, above) to which the various types of insurance required by the contract should be subject. The insurer will in most cases require a

minimum deductible, although a higher deductible could be required in the works contract. A higher deductible could reduce the cost of the insurance; however, if the risk insured against materializes, the loss up to the amount of the deductible will have to be borne by the party who bears that risk. If such a risk is borne by the contractor, he might include an increment in his price to account for that contingency.

13. It is advisable that the insurance programme for the works during construction and after completion be co-ordinated to the greatest extent practicable. The existence of numerous separate policies covering different risks and different parties and issued by different insurers, perhaps in different countries, often results in duplication of insurance against some risks and gaps with respect to insurance against other risks. It is often desirable to have a single policy cover as many of the risks and parties as possible. If separate policies are necessary, it may be desirable for them to be issued by the same insurer (see paragraphs 25 and 37, below).

14. A relatively new form of insurance is becoming available, which, in a single policy obtained by the purchaser, provides comprehensive coverage for a wide range of risks. This insurance, sometimes referred to as "wrap-up insurance", might present certain advantages over the traditional approach of having separate insurance policies covering different risks and taken out by several contractors, subcontractors, suppliers, engineers and other participants in the project. For example, it might in some cases be less costly than separate policies, and could provide co-ordinated coverage, avoiding the duplication and gaps which may exist under separate policies. However, at the time of this writing, this form of insurance is not without controversy, and the purchaser should consult with a professional risk manager or insurance specialist as to whether it may be appropriate in connection with the project. If the purchaser does obtain wrap-up insurance, he should be sure that he does not, either directly or indirectly, bear the cost of insurance taken out by contractors, subcontractors or other participants in the construction covering risks which are also covered by the wrap-up insurance.

15. The parties should be aware of any mandatory rules of law relating to insurance in connection with the construction of industrial works. For example, in many legal systems, an insured party must have a legal interest in the property which is the subject of the insurance or bear the risk insured against. In addition, the laws of some countries require that insurance covering loss, damage or injury occurring in connection with the construction of works in those countries be taken out with insurers in those countries. This could affect the scope of coverage available, and might make it necessary for insurance beyond that which is available locally to be obtained elsewhere. In addition, foreign exchange controls might require local insurers to pay their claims in the local currency. The parties may wish to take this into account in particular in connection with insurance covering equipment or materials to be incorporated in the works which can only be replaced from a source outside the country.

B. Property insurance

16. Except to a limited extent, property insurance (see paragraph 5, above) will not compensate for the costs of repairing or replacing defective equipment or materials supplied by the contractor or of portions of the works defectively constructed by him. In addition, property insurance usually will not insure against

loss of or damage to the works resulting from defective design or construction. However, property insurance is generally available where defectively designed or constructed portions of the works cause loss of or damage to other portions of the works. Loss or damage caused by defective design may be covered by professional indemnity insurance (see paragraph 30, below). It should be noted, however, that professional indemnity insurance normally covers only loss or damage resulting from negligent design. Thus, loss or damage resulting from non-negligent defects in the design will often not be covered either by property insurance or professional indemnity insurance. With respect to manufactured equipment to be incorporated in the works, however, it may be possible to obtain insurance covering defective materials, workmanship and design, whether or not due to the manufacturer's negligence.

1. *Insurance of works during construction, completed works, temporary structures and structures ancillary to works*

17. It is advisable for the contract to require insurance against loss of or damage to the works during construction, to the completed works and to temporary structures and structures ancillary to the works until the works has been accepted by the purchaser. After acceptance, the works should normally be covered by insurance obtained by the purchaser; however, the contract need not contain a provision to that effect. The parties may wish to consider whether the contract should also require insurance during the guarantee period to cover any additional construction which was not included in the works accepted by the purchaser, as well as any temporary structures and structures ancillary to the works which exist or remain during that period.

18. In a turnkey contract, and in other types of contracts in which the contractor bears the risk of loss of or damage to the entire works during construction and to the completed works prior to take-over or acceptance, it may be desirable for the contract to obligate the contractor to obtain insurance covering the entire works and to keep it in force (see, however, paragraph 6, above). Where an approach involving several contractors is adopted for the construction of the works (see chapter II, "Choice of contracting approach", paragraphs 17 to 25), and no single contractor bears the risk of loss of or damage to the entire works, the parties may wish to consider whether it is desirable for each contractor to obtain insurance covering the portion of the works and structures covered by his construction. This might result in the overlapping of insurance and duplication of insurance costs, and might present problems in administering claims for loss or damage involving two or more contractors. In such cases, it may be preferable for the purchaser to obtain insurance against loss or damage covering the works as a whole, and temporary structures and structures ancillary to the works. On the other hand, a contractor who has a continuing relationship with a particular insurer and an established and favourable claims history might be able to get more advantageous rates than would the purchaser. When one contractor, in addition to supplying equipment or performing construction services, is to co-ordinate construction by the other contractors, the parties may wish to consider whether that contractor should be obligated to provide and keep in force the insurance in respect of the entire works and of all structures.

19. The contract should stipulate who are to be named as insured parties in the insurance policy. It is normally desirable for both the contractor and the purchaser to be named, regardless of who bears the risk of loss to the insured items. A failure to name both parties could in some cases give an insurer who pays a claim to the named party, in respect of loss or damage caused by the party not named, a right of subrogation against the party not named. This could cause the non-named party to obtain his own insurance covering that liability, resulting in duplication of insurance and higher overall insurance costs. Moreover, naming both parties would entitle each of them to rights under the insurance policy, e.g., participation in legal proceedings under the policy and notification of any changes in insurance conditions.

20. Different approaches may be adopted with respect to the question of which risks should be required by the contract to be covered by the insurance. One approach may be to specify in the contract that the insurance must cover all loss or damage arising from any peril. The parties should be aware, however, that insurance satisfying such an all-encompassing requirement is unlikely to be available. Some insurers make available an insurance policy, sometimes designated as "all-risks" insurance, which insures against loss or damage from all perils, with the exception of certain specifically excluded perils (such as normal wear and tear, and pressure waves caused by aircraft). Loss or damage from some of the excluded perils may be insured against by special endorsements to the policy or under a separate policy, at additional cost. If the contract is to require that an insurance policy of this nature be provided, the parties should carefully consider whether the policy excludes any perils which present risks against which insurance should be provided, given the nature of the construction to be performed under the contract. It may in some cases be preferable for the contract to require an insurance policy of this nature and additional insurance against risks arising from perils excluded from the policy, than to attempt to itemize in the contract the specific perils which are to be covered by insurance.

21. The contractor may be exempted by the contract from bearing risks arising from certain perils (so-called "excepted risks"; see chapter XIV, "Passing of risk", paragraph 6). If that approach is adopted in the contract, it would be desirable, if possible, for the insurance which the contractor is obligated to obtain to cover even risks arising from those excepted risks. (However, certain of those risks, e.g., war and nuclear risks, may not be insurable.) Otherwise, the purchaser would have to obtain separate insurance for them. Such a division of insurance could lead to gaps in or unnecessary duplication of insurance, and higher insurance costs. Moreover, in the event of loss or damage, a time-consuming and costly dispute could arise as to whether the loss or damage was insured against under the insurance taken out by the contractor, or under that taken out by the purchaser.

22. The insurance of the works during construction, the completed works and temporary and ancillary structures will normally compensate for loss or damage to the property. It will usually not compensate for other types of losses, for example, lost profits, and increased loan-servicing costs resulting from the fact that, due to the loss or damage, the works could not be completed on time. However, those losses might be insurable by a special endorsement or policy. If the parties decide that those losses should be covered, that coverage should be specifically required in the contract.

23. It may be desirable for the contract to require the property insurance to compensate for the cost of repairing or replacing the lost or damaged portions of the works. The contract might also require the insurance to compensate for costs connected with the repair or replacement, such as architects', surveyors', lawyers' and engineers' fees, and costs connected with dismantling and removing the damaged portions. The amount of insurance required should be sufficient to cover all of the various types of losses to be compensated by the insurance (see paragraphs 9 to 12, above). The contract might therefore take into account the effects of inflation in determining the amount of insurance.

2. Insurance of equipment and materials to be incorporated in works

24. It is advisable for the contract to require insurance against loss of or damage to equipment and materials to be incorporated in the works. The contract might provide for the equipment and materials to be insured under a cargo policy from the point of shipment to delivery at the site. After delivery, they may be covered by the property insurance discussed in the previous sub-section of this chapter. In order to avoid problems arising from the difficulty of proving whether loss or damage occurred to an item while it was covered by the cargo insurance or by subsequent property insurance, the contract might require both policies to contain a clause whereby, in cases where it is impossible to prove whether the loss or damage occurred during a period covered by one policy or the other, each insurer will pay 50 per cent of the loss or damage. It may be noted that with cargo insurance, coverage is often available also against war risks, while those risks are often excluded from the property insurance discussed in the previous sub-section of this chapter.

25. Alternatively, it may be desirable in some cases for a single insurance policy to insure the equipment and materials for the entire period from the time of shipment to the time of incorporation in the works. If the equipment and materials were to be insured under separate policies for individual stages within this period (e.g., transit, storage off-site and storage on-site), incomplete or overlapping coverage could result. Moreover, insuring under a single policy would avoid questions as to the stage at which loss or damage occurred. Insurance covering equipment and materials during the entire period is available in some of the insurance policies described in paragraph 20, above. In the event that it is not possible to obtain insurance for the entire period in a single policy, the contract might require the separate policies providing insurance during the various individual stages to be taken out, if possible, with the same insurer.

26. The discussion in paragraphs 19 to 23, above, concerning the insured parties, risks to be insured against and the amount of insurance is equally applicable to insurance of equipment and materials to be incorporated in the works.

3. Insurance of machinery and tools used by contractor for construction

27. In some cases, the purchaser may have an interest in seeing that the machinery and tools used by the contractor for the construction (including hired machinery and tools) are insured against loss or damage, so that funds are available to have them replaced or repaired expeditiously and with minimal

interruption of the construction. This insurance will often be taken out and paid for by the contractor in the ordinary course of his business. The purchaser may wish to consult with a prospective contractor to make sure that the insurance is adequate. In particular projects, it may be desirable for the contract itself to obligate the contractor to obtain and maintain insurance, in an appropriate amount to be specified in the contract, against loss of or damage to the machinery and tools during shipment to the site, while they are stored off-site and while they are on the site, and to provide that the cost of the insurance is to be borne by the contractor. It may be possible for such coverage to be included in a comprehensive insurance policy insuring the works (see paragraph 14, above). The parties should be aware of the difficulties which could arise if the contractor were compelled to take out the insurance with an insurer in the country where the works is to be constructed (see paragraph 15, above).

C. Liability insurance

28. It is desirable for the contract to obligate the contractor to insure against his extra-contractual liability for loss of or damage to the property of the purchaser or of a third person, and for injury to any person, caused in connection with the contractor's performance of the contract, including acts or omissions of his employees, subcontractors and suppliers. In addition, the contractor might be obligated to insure against his liability under any indemnities which he assumes under the contract (e.g., undertakings by him to indemnify the purchaser against the purchaser's liability to third persons). A contractor will often maintain blanket insurance for some of these liabilities in the ordinary course of his business. This insurance should not be duplicated; rather, the purchaser may wish to consult with a prospective contractor concerning his existing coverage, and perhaps require him in the contract to obtain and maintain such additional insurance as is needed to cover fully the risks and term, and to meet the amount, as the purchaser may consider desirable.

29. Liability insurance will often not be available to insure the contractor against his liability to the purchaser for defective performance by the contractor of his obligations under the contract. However, some liability insurance policies may insure against the contractor's liability for loss of or damage to portions of the works not being worked on, resulting from acts or omissions of the contractor in the course of construction. It may be desirable for the contract to require such insurance. In addition, the contract might obligate the contractor to insure against his liability for loss of or damage to other property of the purchaser or to the property of a third person, and for injury to any person, due to a defect in the works constructed by him. While such coverage is often included in a liability insurance policy, it may be necessary for the contractor to obtain it under a separate products liability insurance policy.

30. If the contractor is to provide design or similar professional specialist services, it may be desirable for the contract to obligate him to obtain professional indemnity insurance. This insurance insures against the liability of the supplier of such specialist services for loss or damage caused to the purchaser or to third persons or their property as a result of the

negligent performance of the services. However, a contractor who both designs and constructs the works may have difficulty in obtaining this insurance.

31. Liability for loss of or damage to property and for personal injury arising out of the operation of motor vehicles owned or used by the contractor and subcontractors may have to be insured against separately. It may be desirable for such insurance, which is mandatory in many countries, to be specifically required by the contract. Coverage for liability arising out of the operation of aircraft and watercraft might also be required if they are to be used in the construction of the works.

32. Many legal systems have statutory schemes with respect to compensation for injury to workmen on the site and other employees of the parties and of subcontractors. Some of these schemes require employers to obtain insurance to compensate employees for work-related injuries. In other legal systems, workmen may be left to their remedies under general legal principles governing injury and damages. It may be desirable for the contract to obligate the contractor to obtain such insurance as is required under the law of the place where the works is to be constructed and other relevant laws. If insurance is not required by law, the purchaser may wish the contract to obligate the contractor to insure against his liability for injury to his employees and those of his subcontractors, particularly in respect of employees from the country where the works is to be constructed. Moreover, if under relevant laws insurance to compensate for injury suffered by employees is required in a certain amount, but an employee is able to recover an amount in excess of the required amount of insurance, insurance against this excess exposure might be required in addition to the insurance required by law.

33. Some countries have national social security schemes, rather than the statutory schemes mentioned above, under which injured employees may receive compensation from the State. Nevertheless, the contractor or subcontractor who caused the injury may remain liable for all or a portion of the loss suffered as a result of the injury, and the parties may wish to consider ensuring that that liability is covered by insurance.

34. In some legal systems, an injured employee of a contractor or a subcontractor may be able to recover compensation from the purchaser. Therefore, the contract might obligate the contractor to name the purchaser, as well as the contractor, as insured parties in the insurance described in the foregoing paragraphs (see also paragraph 37, below).

35. Employees of a contractor or subcontractor from a country other than the one where the works is to be constructed may have rights under employee compensation or social security schemes in their home countries. The parties may wish to see to it that the liabilities of the contractor, subcontractor and the purchaser in respect of those employees are also covered by insurance.

36. The contract might require the contractor to have the insurance discussed in this sub-section in effect prior to the time when he or any subcontractor commences construction on the site. The required insurance might cover loss, damage or injury occurring throughout the construction phase and the guarantee period. Insurance against liabilities which could arise after those periods (e.g., liability for loss of or damage to property or persons arising from defective equipment, materials or construction) might be required to be

maintained until the expiration of the applicable legal prescription or limitation period. Laws in some countries hold contractors liable for structural defects in the works for the first ten years of the life of the works, and make insurance against such liability mandatory.

37. Because of the possibility that a single incident resulting in loss, damage or injury to a third person could give rise to claims against several or all of the participants in the construction (e.g. purchaser, contractor and subcontractors), it is usually prudent for each of those participants to be insured against their liabilities for such loss, damage or injury. The most desirable way to accomplish this would be for all participants to be named as insured parties in one policy, if possible. If they were to be insured under separate policies, and if the loss, damage or injury suffered by a third person could have been caused by more than one participant, the various participants and their insurance companies may become involved in time-consuming and costly litigation to establish which participant should ultimately bear the loss or the extent to which the participants should contribute to the compensation payable to the claimant. If it is not possible for all participants to be insured under one policy, it would be desirable for all of the policies covering the various participants to be taken out with the same insurer. However, this, too, could be difficult to achieve in practice, particularly with several contractors and subcontractors from different countries, each having his own insurer.

D. Proof of insurance

38. In order for the purchaser to be able to satisfy himself that the contractor has performed his obligations to obtain insurance and to keep it in force, it is advisable for the contract to obligate the contractor to produce to the purchaser, within a specified period of time after being requested by the purchaser to do so, duplicates of the insurance policies, or certificates of insurance showing all of the relevant terms of the policies, and receipts for the payment of premiums. In addition, the contract might require the contractor to instruct his insurer to provide the purchaser directly with proof of insurance, and to notify the purchaser if a premium is not paid when due. The contract might similarly require the purchaser to provide to the contractor proof of insurance required to be obtained by the purchaser. If both parties are named as insured parties in the insurance policy, each party will usually have these rights automatically.

E. Failure of parties to provide insurance

39. The parties may wish to consider how to deal with the situation where the contractor fails to obtain or keep in force any insurance which he is required to provide. One approach may be to provide in the contract that the purchaser may notify the contractor requiring him to obtain or keep in force the insurance, and that if the contractor does not do so within a specified period of time, the purchaser may obtain the insurance himself. If the purchaser obtains the insurance himself, it would be desirable for him to be obligated to notify the contractor of that fact, so that the contractor does not duplicate the insurance. In a lump-sum contract, the purchaser might be permitted to deduct reasonable amounts paid by him for such insurance from sums due to the

contractor, or, alternatively, to recover those amounts from the contractor. In a cost-reimbursable contract, the purchaser might be permitted to deduct from sums due to the contractor, or recover from the contractor a reasonable amount equal to the difference between what the purchaser had to pay for the insurance and the cost of the insurance which would have been reimbursable by the purchaser to the contractor had the contractor fulfilled his obligation to obtain it or keep it in force.

40. In the exceptional cases where the purchaser is unable to obtain the insurance himself, another approach may be to enable the purchaser to terminate the contract if the contractor does not, within a specified period of time after notice by the purchaser, obtain the insurance or keep it in force. In addition the contract might provide for the contractor to be liable to the purchaser for any loss suffered by the purchaser as a result of the contractor's failure. In regard to liability insurance, the parties may wish to provide in the contract that, if the contractor fails to obtain or keep in force such insurance, the purchaser may suspend all payments due to the contractor under the contract until he duly obtains such insurance or keeps it in force.

41. In cases where the contract obligates the purchaser to obtain insurance and keep it in force and the purchaser fails to do so, the contract may entitle the contractor to notify the purchaser requiring him to obtain or keep the insurance in force, and, if the purchaser does not do so within a specified period of time, entitle the contractor to obtain the insurance himself. If the contractor obtains the insurance himself, it would be desirable for him to be obligated to notify the purchaser of that fact so that the purchaser does not duplicate the insurance. The contract may entitle the contractor to claim from the purchaser reasonable costs incurred in obtaining the insurance.

Chapter XVII. Security for performance

SUMMARY

Each party to a works contract may seek security against failure of performance by the other. A security in favour of the purchaser may be in the form of a guarantee, while that in favour of the contractor may be in the form of a guarantee or an irrevocable letter of credit in his favour (paragraph 1). Security interests in property are not a significant form of security for performance under works contracts (paragraph 2).

It is advisable for the works contract to set forth the forms of security to be furnished by each party, and the consequences of a failure to do so (paragraph 4). The law applicable to the security may contain mandatory provisions regulating certain aspects of the security (e.g., form and period of validity) (paragraph 6).

A guarantee for performance by the contractor may provide that, if specified failures to perform by the contractor occur, a third person is to be responsible for those failures in the manner described in the guarantee (paragraph 7). Guarantees of this type are used for the following purposes: that a contractor who has submitted a tender will not withdraw his tender before the date specified in the tender for awarding the contract (tender guarantees: paragraph 9); as security for proper performance under the contract (performance guarantees: paragraphs 9 to 12) and as security that an advance payment made by the purchaser to the contractor will be repaid to the purchaser (repayment guarantees: paragraphs 9 and 13). Performance guarantees may take the form of a monetary performance guarantee or a performance bond (paragraph 11).

The purchaser may wish to consider identifying in the invitation to tender the guarantors whom he is willing to accept. He may also wish to consider whether to specify that the guarantors must be institutions from his own country. There are advantages and disadvantages to these courses of action (paragraphs 14 to 16).

The terms of a guarantee may make a claim under the guarantee independent or accessory (paragraphs 17 to 19). Independent guarantees and accessory guarantees have their respective advantages and disadvantages (paragraphs 20 to 23). The parties may wish to provide that where a monetary performance guarantee is to be furnished, it is to be neither completely accessory nor a pure first demand guarantee (paragraph 24).

The guarantee may be furnished at the time the contract is entered into, or within a specified period of time after it is entered into (paragraph 25). The extent of liability under a guarantee is normally limited to a stated amount (paragraphs 26 to 28).

The parties may wish to consider the effect of a variation of the scope of obligations under the works contract, or a termination of the contract, on the obligations of the guarantor, and to deal with this issue in a suitable

manner (paragraphs 30 to 34). They may also wish to consider the possible duration of the guarantee, and difficulties which may arise if the guarantee has a fixed expiry date (paragraphs 35 to 39).

As security for the payment of the price, the purchaser may be required to arrange for a guarantee (paragraph 40). Alternatively, the purchaser may be required to arrange for a letter of credit to be opened by a bank in favour of the contractor, the bank undertaking to effect payment up to a stated amount within a prescribed time limit against the presentation by the contractor of stipulated documents (paragraph 41). The contractor may wish to determine in the contract the bank which is to open the letter of credit (paragraph 42). It is important that the payment terms under the letter of credit and the payment conditions under the works contract be harmonized (paragraph 43). It is advisable for the parties to agree on the documents against the presentation of which the bank is to make payment (paragraph 44). It is also advisable for the parties to consider the period for which the letter of credit is to remain open (paragraph 45).

A. General remarks

1. A failure by a party to a works contract to perform his contractual obligations can cause considerable loss to the other party. While, under the works contract, the aggrieved party will have contractual remedies against the other for the failure, he may also wish to arrange for some form of security upon which he can rely in place of, or in addition to, his contractual remedies. The security may take different forms. A security in favour of the purchaser may be in the form of a guarantee (see paragraphs 7 and 9, below). A security in favour of the contractor may be in the form of a guarantee or an irrevocable letter of credit in his favour for the payment of the price (see paragraphs 39 and 40, below).
2. Security interests over the property of one party in favour of the other may also constitute a form of security for performance. Those security interests may be created independently of the agreement of the parties by the operation of mandatory provisions of law (e.g., a contractor who supplies labour and materials for construction may under some legal systems be given a security interest in the works constructed as security for payments due to him). They may also be created by agreement of the parties (e.g., a security interest in the construction machinery of the contractor may be created in favour of the purchaser as security for performance by the contractor). Security interests in property are not, however, a significant form of security for performance under works contracts.
3. It may be noted that a party may obtain protection against a failure to perform by the other party through means other than a security. The purchaser, for example, may obtain protection against a failure to perform by the contractor through the formulation of the payment conditions (see chapter VII, "Price and payment conditions", paragraphs 75 and 76), while the contractor, for example, may obtain protection against a failure by the purchaser to pay the price through a suspension clause which entitles him to suspend construction in the event of a failure (see chapter XXIV, "Suspension of construction", paragraphs 5 to 7).
4. It is advisable for the invitation to tender (where tender procedures are adopted) and for the works contract to set forth the forms of security to be furnished by each party, and the consequences of a failure by a party to do so.

Since the furnishing of security entails costs for the party who furnishes it, the parties may wish to determine the degree of protection that they reasonably require, and avoid over-protection. In addition, they may wish to compare the costs of different forms of security in order to secure the necessary protection with the minimum outlay.

5. The works contract may obligate a party to arrange for a security to be furnished through third persons, and determine the kind of security to be furnished (see sections B and C, below). However, the arrangements made by the obligated party with the third person with a view to furnishing the security required under the works contract will create a contractual relationship between them which is independent of the works contract. After the security is furnished, a third legal relationship will arise between the third person and the other party to the works contract in whose favour the security is furnished.

6. A law applicable to the security, which may not be the same as that applicable to the contract, may contain mandatory provisions regulating certain aspects of the security, such as its form and its period of validity. Where the security consists of a guarantee, the applicable law may contain mandatory provisions on, for example, who can give the guarantee (e.g., either by stipulating that it must be given by a financial institution in the purchaser's country, or by stipulating that it must be given by a financial institution which is authorized to issue guarantees involving payment in a foreign currency) or the rights arising from retention by the purchaser of the guarantee document after the expiry date of the guarantee. That law may also regulate the relationship between the security and the works contract. The parties should, therefore, take account of that law in determining the type of security to be furnished, and the contractual terms regulating the security. In addition, it may be necessary to take account of the law of the country of the person furnishing the security, which may contain mandatory provisions regulating the issuance of the security, or imposing ceilings on the amounts which may be guaranteed.

B. Security for performance by contractor: guarantees

7. Guarantees of the kind dealt with in this chapter provide that, if specified failures to perform by the contractor occur, a third person (the guarantor) will be responsible for that failure in the manner described in the guarantee. The term "guarantee" is not the only term used to describe such agreements, and the terms "bond", "suretyship agreement" and "indemnity" are sometimes used. In some countries, banks are prohibited from issuing guarantees. However, "standby letters of credit", having the same function as guarantees, may be issued by banks. In the context of a works contract, a standby letter of credit may be issued by a bank on the instructions of the contractor in favour of the purchaser (the beneficiary) to provide security for the purchaser in the event of a failure to perform by the contractor. The purchaser is entitled to claim funds up to a stated limit from the bank in the circumstances specified in the standby letter of credit (e.g., upon the presentation of stipulated documents). Accordingly, the discussion in section B on guarantees for security of performance by the contractor applies to standby letters of credit.¹

8. The guarantees dealt with in this chapter are to be distinguished from guarantees of quality. The latter type of guarantee consists of contractual

undertakings by a party warranting the quality of his performance, e.g., that equipment or materials to be supplied by him will be of a stated quality. That type of guarantee is dealt with in chapter V, "Description of works and quality guarantee", paragraphs 26 to 31.

9. Guarantees as security in favour of the purchaser are frequently used in the following contexts:

(a) As security that a contractor who has submitted a tender will not withdraw his tender before the date specified in the invitation to tender, that he will enter into a contract if the contract is to be concluded with him, and that he will submit any performance guarantees (see below) specified in the invitation to tender. These guarantees, commonly known as tender guarantees, are dealt with in chapter III, "Selection of contractor and conclusion of contract", paragraphs 28 to 30;

(b) As security against loss that a purchaser might suffer if a contractor who has entered into a contract fails to perform in accordance with the contract. These guarantees are commonly known as performance guarantees;

(c) As security that an advance payment made by the purchaser to the contractor will be repaid, if so required by the contract. These guarantees are commonly known as repayment guarantees.

1. *Performance guarantee: function*

10. A purchaser who is entering into a works contract will seek a contractor who possesses the financial as well as the technical and operational resources needed to complete the work. Often, however, a purchaser may not have full information concerning a prospective foreign contractor's finances, the extent of his other work commitments (which could interfere with his performance), his prior performance record, or other factors bearing on the contractor's ability to see the project through to completion. Furthermore, unforeseen factors occurring after the contract is entered into may affect the contractor's ability to perform the contract. Invitations to tender and works contracts may therefore provide that performance guarantees must be furnished by the contractor, so that means are available to satisfy the liabilities of the contractor in the event of a failure to perform. Requiring performance guarantees may have the additional advantage of preventing contractors who are unreliable or have no financial resources from tendering. Guarantor institutions generally make careful inquiries about the contractors whom they are asked to guarantee, and will normally provide guarantees only when they have reasonable grounds for believing that the contractor can successfully perform the contract.

11. Performance guarantees are generally of two types. Under one type, hereinafter referred to as a "monetary performance guarantee", the guarantor undertakes only to pay the purchaser funds up to a stated limit to satisfy the liabilities of the contractor in the event of the contractor's failure to perform. Monetary performance guarantees, which may take the form of a standby letter of credit, are often furnished by banks. Under the other type, hereinafter referred to as a "performance bond", the guarantor at his option undertakes either himself to cure or complete defective or incomplete construction effected by the contractor, or to obtain another contractor to cure or complete the

construction, and also to compensate for other losses caused by the failure to perform. The value of such undertakings is limited to a stated amount. The guarantor under a performance bond also frequently reserves the option to discharge his obligation solely by the payment of money to the purchaser up to the stated amount. This type of guarantee is generally furnished by specialist guarantee institutions, like bonding and insurance companies. The purchaser may wish to specify in the invitation to tender which of the two types of guarantee is to be furnished by a tendering contractor. Alternatively, he may permit a tendering contractor to furnish either type of guarantee, as the contractor may have business relations with a guarantor institution willing to make available one or other of those types to the contractor at an inexpensive rate. From the point of view of the purchaser, each type of guarantee has its own advantages and disadvantages (see paragraphs 20 to 23, below). For the possible relevance of liability insurance in this connection, see chapter XVI, "Insurance", paragraph 29.

12. In most works contracts, the contractor undertakes not merely to complete the construction, but also to cure defects notified to him by the purchaser before the expiry of the period of the quality guarantee (see paragraph 8, above). The contractor's performance during this guarantee period may be secured either by the same performance guarantee which covers performance up to the acceptance of the works, or by a separate performance guarantee, sometimes called a maintenance guarantee. The considerations set forth below as relevant to a performance guarantee are also relevant to a separate maintenance guarantee.

2. Repayment guarantee: function

13. In order to assist the contractor in the mobilization of capital necessary to commence construction (e.g., the purchase of construction machinery and materials), a purchaser often makes an advance payment to the contractor of part of the price (see chapter VII, "Price and payment conditions", paragraph 67). To protect the purchaser against failure of repayment by the contractor, the contract may provide that the contractor must furnish a monetary performance guarantee which secures the repayment to the purchaser of the advance payment in case the contractor does not do so.

3. Choice of guarantor

14. The purchaser may wish to consider naming in the invitation to tender specified guarantors whom he is willing to accept. The purchaser may also wish to consider whether to specify that the guarantors must be institutions from his own country. The advantage of specifying guarantors is that guarantors may be identified who have the financial reserves to satisfy the obligations in the guarantee, and have a satisfactory record of settling claims. The advantage of specifying that guarantors must be institutions from the purchaser's country is that guarantees furnished by those institutions can be more easily enforced by the purchaser. In some countries, mandatory regulations provide that only guarantees furnished by local institutions may be accepted by purchasers.

15. Possible disadvantages to the purchaser in naming specific guarantors are that some potential contractors with no access to the specified guarantors may be prevented from tendering, while others may be prevented from using guarantors with whom they have a close relationship and who are willing to provide them with guarantees inexpensively. Possible disadvantages of the purchaser specifying that the guarantors must be institutions from his own country are that those institutions may charge more for guarantees (e.g., when they have to obtain counter-guarantees from foreign institutions in order to ensure that convertible currency is available to satisfy possible payment obligations). They may also not be prepared to give certain forms of guarantees, such as performance bonds. Furthermore, a first-class financial institution from a country which is neither that of the purchaser nor of the contractor might be as dependable as an institution in the purchaser's country, although it may be more difficult for the purchaser to enforce a guarantee as given by such an institution as compared to a guarantee given by an institution in his own country.

16. A possible approach is to provide in the invitation to tender and in the contract that contractors who tender may in the first instance submit guarantors of their choice. Where the guarantors submitted are not acceptable to the purchaser, the contractors may be required within a specified period of time to submit different guarantors acceptable to the purchaser, or to have the guarantees furnished by the guarantors confirmed by a financial institution in the purchaser's country. A guarantee involving confirmation may, however, entail more expense than one involving a single financial institution.

4. *Nature of guarantor's obligation*

17. The terms of the guarantee, and the law applicable to the guarantee, will establish the legal relationship between the purchaser and the guarantor and determine in what circumstances a claim may successfully be made under the guarantee. Those terms may make the guarantee independent of the works contract or accessory to it. Under an independent guarantee (often called a first demand guarantee), the guarantor is obligated to make payment on demand by the purchaser, and the latter is entitled to recover under the guarantee upon his bare statement that the contractor has failed to perform. The guarantor is not entitled to refuse payment on the ground that there has in fact been no failure to perform under the works contract; however, under the law applicable to the guarantee the right of the purchaser to claim under the guarantee may in very exceptional circumstances be excluded (e.g., when the claim by the purchaser is fraudulent). Under a standby letter of credit, the issuing bank is obligated to make payment upon the presentation by the purchaser to the bank of a document containing his bare statement that the contractor has failed to perform. As with an independent guarantee, the bank is not entitled to refuse payment on the ground that there has in fact been no failure to perform under the works contract, although under some legal systems in exceptional circumstances the bank may be restrained from making payment.

18. It is advisable for the works contract to provide that, even when the guarantee is independent, the purchaser is entitled to claim under the guarantee only if there is in fact a failure to perform by the contractor. If the purchaser makes a claim when there has been no failure to perform, the purchaser will be liable in damages to the contractor for loss suffered as a result of the improper claim.

19. A guarantee is accessory when the obligation of the guarantor is linked to evidence of liability of the contractor for failure to perform under the works contract. The nature of the link may vary under different guarantees, e.g., the purchaser may have to establish the contractor's liability by producing an arbitration award which holds that the contractor is liable. Performance bonds usually have an accessory character.

20. The advantage to the purchaser of a first demand guarantee is that he is assured of prompt recovery of funds under the guarantee, without evidence of failure to perform by the contractor or of the extent of the purchaser's loss. A purchaser may frequently lack the technical knowledge required to prove the contractor's failure to perform. Furthermore, guarantors furnishing monetary performance guarantees, in particular banks, prefer first demand guarantees, as the conditions are clear as to when their liability to pay accrues, and they are not involved in disputes between the purchaser and the contractor as to whether or not there has been a failure to perform under the works contract.

21. A disadvantage to the purchaser of a first demand guarantee is that a contractor who furnishes such a guarantee may wish to take out insurance against the risk of recovery by the purchaser under the guarantee when there has been in fact no failure to perform by the contractor, and to include in the price the cost of that insurance. The contractor also may include in the price the potential costs of any action which he may need to institute against the purchaser to obtain the repayment of the sum improperly claimed under the guarantee. In addition, since the purchaser can obtain the sum payable under the guarantee upon his bare statement that the contractor has failed to perform (see paragraph 17, above), the contractor may wish to fix the sum payable under the guarantee at a small percentage of the contract price, and thereby limit the loss he may suffer through having to indemnify the guarantor in the event of a claim by the purchaser when there has been no failure to perform.

22. A disadvantage to the contractor of a first demand guarantee is that, if there is recovery by the purchaser under the guarantee when there has been no failure to perform by the contractor, the latter may suffer immediate loss through the guarantor reimbursing himself from the assets of the contractor after payment to the purchaser, and also experience difficulties and delays in compensating himself for that loss through the subsequent recovery from the purchaser of the sum improperly claimed.

23. The terms of a performance bond (see paragraph 11, above) usually require the purchaser to prove the failure of the contractor to perform, and the extent of the loss suffered by the purchaser. Furthermore, the defences available to the contractor if he were sued for a failure to perform are available to the guarantor. Accordingly there is a possibility that the purchaser will face a protracted dispute when he makes a claim under the bond. However, as a reflection of the lesser risk borne by the guarantor, the monetary limit of liability of the guarantor may be considerably higher than under a first demand guarantee. A performance bond may also be advantageous if the purchaser cannot conveniently arrange for the cure or completion of construction himself, but would need the assistance of a third person to arrange for cure or completion. Where, however, the construction involves the use of a technology known only to the contractor, cure or completion by a third person may not be feasible, and a performance bond may not have the last-mentioned advantage over a monetary performance guarantee.

24. The manner in which guarantees are to be formulated may be agreed between the purchaser and the contractor, though the formulation agreed to must also be acceptable to the guarantor. The parties may wish to provide that where a monetary performance guarantee is to be furnished, it is to be neither completely accessory nor a pure first demand guarantee. In deciding on the terms of such a guarantee, they may wish to consider one of the following possible arrangements:

(a) That the guarantor is obligated to make payment only if the demand is made in writing, and is accompanied by a written statement identifying the failure to perform which has resulted in the demand. The guarantor would, however, be under no duty to investigate the correctness of the statements made regarding the failure to perform;

(b) That before making a claim under the guarantee, the contractor must be given notice of the failure to perform in respect of which a claim is to be made, and that the claim can be made only after the lapse of a specified time period from the delivery of that notice. The existence of an interval between the notice and the claim may enable negotiations to take place between the purchaser and the contractor with a view to settling the dispute between them;

(c) That on demand by the purchaser, in cases where a dispute exists between the purchaser and the contractor as to whether the contractor has failed to perform, the guarantor is obligated to make payment not to the purchaser but to a third person. The third person would hold the money until the dispute between the purchaser and the contractor was decided in dispute settlement proceedings, and he would thereafter hand over the money in accordance with the decision;

(d) That the guarantor is obligated to make payment only if the demand of the purchaser is accompanied by a certificate of the consulting engineer, or an independent third person, deciding that there has been failure to perform by the contractor.

5. Time of furnishing guarantee

25. Disputes between the parties as to the terms and nature of guarantees to be furnished may be minimized if the guarantee becomes effective concurrently with the parties' entering into the contract. Alternatively, the parties may wish to provide that the guarantee is to be furnished within a specified period of time after the contract is entered into, since this may be less expensive. In order to assure the purchaser that a contractor with whom a contract was or is to be concluded will furnish the required performance guarantee, the tender guarantee to be furnished may provide that it is not to expire until the performance guarantee is furnished (see chapter III, "Selection of contractor and conclusion of contract", paragraphs 28 to 30). The parties may also wish to agree on the purchaser's rights under the works contract in case the guarantee is not furnished within the specified period of time, for example, that he may terminate the contract and recover damages. However, before deciding to rely on this remedy, the purchaser may wish to consider possible difficulties in enforcing an unsecured right to damages in a foreign country. Another approach is for the invitation to tender to require that a tender is to be accompanied by a certificate from an institution qualified to be a guarantor to the effect that, if the contract were concluded with the tenderer, the institution

would be prepared to give a performance guarantee of the kind required in the invitation to tender. However, under many legal systems the institution could not be compelled by the purchaser to give the guarantee if it subsequently refused to do so.

6. Extent of liability under guarantee

26. The liability of the guarantor is normally limited to a stated amount. In the case of a performance guarantee, this amount may be determined as a percentage of the contract price, and in the case of a repayment guarantee as a percentage of the advance payment. The exact percentage may be determined by an assessment of the risk of a failure to perform, of the losses likely to be suffered by a failure, and by a consideration of the limits which guarantors would usually observe when providing guarantees in respect of the construction of the type of works in question. A requirement of a very large guarantee sum may prevent smaller enterprises from tendering, as they might be unable to obtain guarantees for that sum. The parties may also wish to determine the currency in which payment is to be made under the guarantee. In the case of both repayment guarantees and performance guarantees, it may be the currency in which the contract price is to be paid. If the price is to be paid in more than one currency, a particular currency may have to be specified.

27. Where a guarantee is accessory (e.g., in the case of a performance bond), the law applicable to the guarantee may provide that the extent of liability of the guarantor under the guarantee is co-extensive with that of the contractor to the purchaser under the works contract (e.g., in respect of the types of losses which are compensable). If, therefore, under the works contract or the law applicable to the works contract the liability of the contractor to the purchaser is limited, the guarantor's liability would be limited to the same extent. If, however, the law applicable to the guarantee is not clear as to whether the guarantor's liability is coextensive with that of the contractor, the parties may wish to so provide in the guarantee.

28. The parties may also wish to consider whether the works contract and the guarantee are to provide that the amount of the guarantee is to be reduced after contract performance has progressed to a specified stage. In respect of performance guarantees one approach is to make no provision for a reduction. This may be justified by the view that a failure to perform even at a late stage of the construction may require for its compensation the full amount of the guarantee. Furthermore, the parties should be aware that some failures of performance, such as delay, tend to occur after construction is well under way, and not at the early stages. It may, however, be acceptable to provide for a reduction upon acceptance of the works by the purchaser, since the completion tests and performance tests held prior to acceptance (see chapter XIII, "Completion, acceptance and take-over", paragraphs 4 and 24) will have shown that performance by the contractor has been free of serious defects (see chapter XVIII, "Delay, defects and other failures to perform", paragraph 27).

29. In order to give the purchaser a comprehensive security, the guarantee may provide that liability under it arises upon any failure to perform an obligation to which the guarantee relates. Thus, in respect of a performance guarantee, liability under the guarantee may arise upon any defective performance or delay in performance.

7. Effect of variation or termination of contract

30. The parties may wish to consider the effect of a variation of the scope of obligations under the works contract (see chapter XXIII, "Variation clauses") on the obligations of the guarantor. A variation is of concern to the guarantor, since it may result in a substantial extension of the contractor's responsibilities and thereby increase the risk to which the guarantor is exposed. In the case of a performance bond, an extension may also affect the guarantor's capability to cure or complete defective or incomplete construction (see paragraph 11, above). Under some legal systems, unless otherwise provided in the guarantee, an alteration of the underlying contract may operate to release the guarantor; under others, the guarantee may be deemed to cover only obligations of the contractor existing at the date of the issuance of the guarantee. Since variations are frequently made during the performance of a works contract, it is advisable for the guarantee to determine the effect on it of a variation of the contract.

31. Different approaches may be adopted. If the amount of the guarantor's liability is limited to a stated amount, and the duration of the guarantee is also limited (see paragraphs 35 to 38, below), the guarantor may be prepared to assume the obligations as so limited even if variations to the contract may to some extent increase the likelihood that a failure to perform will occur. In those cases, the guarantee may provide that it remains valid as limited by its original terms despite any variation of the contract. Another approach may be for the guarantee to provide that it is to remain valid as limited by its original terms despite variation of the contract, provided that variations do not collectively result in an increase in the contract price by more than a stated percentage of the price. If the stated percentage is exceeded, the consent of the guarantor may be required for the guarantee to remain valid. Yet another approach may be to provide that the guarantee is to remain valid only in respect of the contractual obligations that are not varied; if the guarantee is to remain valid in respect of obligations that are varied, the consent of the guarantor may be required.

32. It is advisable to ensure that the provisions in the contract concerning variations and those in the guarantee concerning the effect of variations on the guarantee are in harmony. For example, if the contract gives the purchaser a unilateral right to order certain types of variations (see chapter XXIII, "Variation clauses", paragraphs 12 to 18), it is advisable for the guarantee to provide that it is not invalidated by the exercise of that right, and that the guarantee continues to apply to the obligations as varied. A lack of harmony may deter the purchaser from exercising his right.

33. Provisions in the guarantee which would maintain its validity despite a variation of the contract may not suffice to protect the purchaser in certain situations. The variation of the contract may extend the period for performance by the contractor, or impose greater responsibilities on him which in turn may increase the extent of his liability in the event of a failure to perform. The parties may therefore wish to provide in the works contract that in those cases the contractor is obligated to ensure that the guarantor makes appropriate modifications to the expiry date, amount or other relevant terms of the guarantee. The cost of arranging for such modifications may be borne by the party bearing the cost of the variations (see chapter XXIII, "Variation clauses", paragraph 8).

34. The parties may also wish to deal with the situation where the contract is terminated prior to the expiry date of the guarantee (see paragraph 36, below). The parties may wish to provide that claims may be made under the guarantee up to its expiry date despite the termination.

8. *Duration of guarantee*

35. It is in the interest of the purchaser that the guarantee cover the full period during which any obligation of the contractor guaranteed may be outstanding. Thus, a performance guarantee may cover not only the period during which the construction is to be effected, but also the period covered by the quality guarantee (see paragraph 12, above).

36. Institutions providing a guarantee may require it to have a fixed expiry date on which the obligations of the guarantee are to cease. Commercial banks, in particular, will generally insist that a fixed expiry date be specified in monetary performance guarantees furnished by them. One technique used to delimit the period covered by a monetary performance guarantee is to provide in the guarantee that claims may not be made under the guarantee after a specified date. In such cases, the parties may wish to agree at the time of entering into the contract upon a date to be inserted in the guarantee, calculated on the basis of an estimated period of time for the completion of performance of the obligations to be guaranteed. However, while such a fixed date may satisfy the interests of the guarantor, it may create difficulties for the purchaser, since for various reasons the period of time for the performance of the contractor's obligations may extend beyond the fixed date, e.g., because of delay in performance by the contractor, or by the operation of exemption clauses (see chapter XXI, "Exemption clauses", paragraph 8). Accordingly, it is advisable for the works contract to provide that, should the performance of the contractor's obligations be extended beyond the expiry date of the guarantee, the contractor is obligated, upon the request of the purchaser, to arrange within a reasonable time after the request, an extension of the period of validity of the guarantee for such further period as is necessary for the complete performance of the contractor's obligations. It is advisable for the purchaser's request to be made in sufficient time to enable the contractor to arrange for the extension before the date when the guarantee is to expire. The party responsible for the extension of the performance of the contractor's obligations may be obligated to bear the costs of the extension of the guarantee period.

37. If the guarantor under a performance bond does not insist on a fixed expiry date, the bond may continue to cover the obligations guaranteed until their complete performance. However, because of the accessory character of the bond, the guarantor will cease to be liable when the contractor has performed his obligations even if no expiry date had been specified in the bond. Another approach may be for the performance bond to provide that claims may not be made after the date of the payment to the contractor of the final instalment of the price. The final instalment would be paid only after the purchaser was satisfied that the contractor had performed his obligations, and that, accordingly, it would be reasonable to exclude the making of claims against the guarantor after that date (see chapter VII, "Price and payment conditions", paragraph 76).

38. The parties to the works contract should be aware that, under some legal systems, a guarantee may remain in force beyond the term stated in the guarantee if it is not returned or delivered up by the purchaser. It is therefore advisable for the contract to obligate the purchaser to return the guarantee promptly upon fulfilment of the guaranteed obligation.

39. Providing for expiry of a repayment guarantee on a fixed date may present the same difficulties as may arise in respect of the expiry of a performance guarantee on a fixed date (see paragraph 36, above), and the approaches adopted in relation to performance guarantees may be adopted in relation to repayment guarantees. If, however, the guarantor does not insist on a fixed expiry date, a possible approach may be to provide for the guarantee to expire when the contractor has supplied equipment, materials and services in the value of the guarantee amount. That supply may be proved either by a certificate of the consulting engineer or the purchaser, or by documents evidencing supply (e.g., invoices or transport documents certified by the purchaser, or site receipts from the purchaser's representatives).

C. Security for payment by purchaser: guarantees or letters of credit

40. The parties may wish to consider whether the contract should require security for the performance of the main obligation of the purchaser, i.e., the payment of the price (see chapter VII, "Price and payment conditions"). One approach that the parties might adopt is to provide in the works contract that the purchaser is obligated to pay the price, and to further obligate him to arrange for a guarantee to be furnished by a third person under which that third person undertakes to pay the price if the purchaser fails to pay it. If this approach is adopted, the parties may wish to consider the contents of section B, above, in deciding on the terms of the guarantee. The guarantee could consist of a standby letter of credit.

41. An alternative approach which would assure the contractor of payment is to provide that the price is to be paid under an irrevocable documentary letter of credit opened by a bank on the instructions of the purchaser. Such a letter of credit consists of an irrevocable written undertaking by a bank (the issuing bank) given to the contractor. The bank undertakes to effect payment up to a stated amount within a prescribed time-limit against the presentation by the contractor of stipulated documents. Under this approach, the contractor would be entitled to claim the price as it fell due direct from the bank.

42. The contractor may wish to determine in the contract the bank which is to open the letter of credit. One approach may be to provide that the letter of credit is to be opened by any recognized bank. The contractor may, however, obtain greater security if the contract requires the letter of credit to be opened by a bank in the contractor's country, or to be opened by a bank situated outside the contractor's country but confirmed by a bank in the contractor's country. Under a confirmation the confirming bank accepts a liability equivalent to that of the opening bank. Confirmation by a bank in the contractor's country would enable the contractor to recover payment under a letter of credit without facing administrative difficulties in the transfer of funds, or difficulties created by exchange control or other financial regulations in the purchaser's country. However, requiring such confirmation may increase the

costs to the purchaser of arranging for the issuance of the letter of credit. The parties may also wish to agree on the time when the letter of credit is to be opened. The contractor may prefer to have the letter of credit opened concurrently with the parties entering into the contract, as he will then have security covering the earliest instalments of the price to fall due. The parties may wish to agree on the contractor's rights under the works contract in case the letter of credit is not opened at the time agreed upon, for example, that he may terminate the contract and recover damages.

43. The terms of payment to be required by the works contract in the letter of credit may be agreed taking into account the commercial practices of banks in relation to letters of credit and the costs of different possible arrangements. It is important that the payment terms under the letter of credit be harmonized with the payment conditions under the contract (e.g., in respect of the currency of payment, the amount of each instalment payable, and the time of payment). The parties may wish to consider how the amount payable under the letter of credit should be quantified. The contract may specify the total amount which may be claimed under the letter of credit to be the full amount of the contract price. The various instalments of the price could be claimed from the bank as they fell due. An alternative approach which might be less expensive to the purchaser is to provide that the amount which may be claimed under the letter of credit is to remain constant during the period of validity of the letter of credit, so that whenever a claim is paid under the letter of credit that amount becomes immediately available again automatically. That amount could be fixed, not at the full amount of the contract price, but at a sum sufficient for the payment of any one of the instalments of the price falling due. The letter of credit would also limit the total amount cumulatively payable under it to the amount of the contract price.

44. It is advisable for the parties to agree clearly on the documents against which the bank is to make payment, and the wording and data content of those documents. The required documents may be such as would evidence the supply of equipment, materials or services under the works contract, and may accordingly be of different types (e.g., certificates of the consulting engineer evidencing the progress of construction, certificates of an inspecting organization, or site receipts by the purchaser's representatives in respect of the supply of equipment or materials).

45. It is advisable for the contractor to require that the letter of credit cover the full period during which any payment obligation of the purchaser may be outstanding. The bank opening the letter of credit may insist that it have a fixed expiry date. Determining the expiry date may present difficulties, for while the payment conditions in the contract may specify a date by which payment is to be completed, that date may be postponed for various reasons (e.g., delay in performance by the contractor, or exempting impediments preventing construction or payment). A possible approach may be to fix the expiry date of the letter of credit by adding to the date specified in the contract by which payment is to be completed a reasonable period for possible postponements of that date. Another possibility is for the contract to provide that, should the performance of the payment obligations of the purchaser be extended beyond the expiry date of the letter of credit, the purchaser is obligated, upon the request of the contractor, to arrange for an extension of the period of validity of the letter of credit for such further period as is necessary

for complete performance. The party responsible for the extension of the payment obligations may be obligated to bear the costs of the extension of the period of validity. If the purchaser fails to arrange for an extension, the contractor may be entitled to the same remedies to which he would be entitled in the event of a failure by the purchaser to pay the amount of the price to be covered by the extended letter of credit (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 57 and 58).

Footnote to chapter XVII

¹Documentary letters of credit, including standby letters of credit that call for payment against a document, are usually governed by the Uniform Customs and Practice for Documentary Credits of the International Chamber of Commerce. The Uniform Customs and Practice set forth rules relating to the opening and operation of letters of credit. The Commission, at its seventeenth session in 1984 (A/39/17, paragraph 129) commended the use of the latest revision of the Uniform Customs and Practice (ICC Document No. 400).

Chapter XVIII. Delay, defects and other failures to perform

SUMMARY

This chapter deals with certain remedies to which the purchaser may be entitled for delayed or defective performance by the contractor. It also deals with the remedies to which the contractor may be entitled in respect of the following failures to perform by the purchaser: delay in payment of the price or in providing security for payment of the price; delay in taking over or accepting the works; and failure to supply design, equipment or materials for construction. It also deals with the remedies available to both parties for delay in payment of sums other than the price, or the failure to perform auxiliary obligations. It is advisable that the contract specify the remedies for the failures to perform mentioned above. In drafting contractual provisions on remedies, account should be taken of the remedies provided by the law applicable to the contract (paragraphs 1, 2, 6 and 7).

Delay in performance occurs when a party performs his contractual obligations later than the time stipulated in the contract for their performance, or does not perform them at all. Defective performance occurs when a party fails to comply with those contract terms which describe the technical characteristics of the construction to be effected (paragraph 4).

Because of the complex and long-term character of the performance undertaken by the contractor under a works contract, the purchaser needs a detailed system of remedies. The system of remedies set forth in this chapter emphasizes two elements: the initial remedy usually given to the purchaser is to require the completion or cure by the contractor of performance which is delayed or defective; and the remedy of termination is given as one of last resort (paragraphs 9 to 12).

It is sometimes recommended that the purchaser be given a choice of alternative remedies upon certain failures to perform by the contractor. The contract may provide that the purchaser may not alter a choice of remedy he has made unless the contractor consents to the alteration. When the contractor is required to cure defects, it may be provided that he is to have freedom as to the manner in which the cure is to be effected (paragraphs 14 and 15).

In view of the detailed character of the system of remedies given to the purchaser, this chapter sets out in paragraph 50 a summary of those remedies.

The purchaser may delay in payment of the price or in providing security for payment of the price (paragraph 52). The parties may wish to provide for the payment of interest if the purchaser delays in payment of the price (paragraphs 53 to 56). Where the purchaser is in delay in paying a specified percentage of the price, or in furnishing security for payment of a specified percentage of the price, the contract may entitle the contractor to grant the purchaser an additional period of time to perform, and if the

purchaser fails to perform within the additional period, to suspend the contract and, if the failure continues for a specified period after the suspension, the contractor may be entitled to terminate the contract. Alternatively, the contract may entitle the contractor to immediate termination of the contract, if the purchaser fails to pay or furnish security within the additional period (paragraphs 57 and 58).

The contract may provide that acceptance of the works by the purchaser is deemed to occur in certain circumstances. In cases where this approach is not feasible in regard to acceptance, and in all cases of take-over, the contract may provide that, where the purchaser is in delay in accepting or taking over, the contractor is entitled to require the purchaser to accept or take over within an additional period. If he fails to accept or take over within the additional period, the contract may provide that the consequences of acceptance or take-over arise as from the date when a written notice stating that the consequences are to arise is delivered to the purchaser (paragraphs 59 to 61).

The contract may specify the remedies to which the contractor may be entitled if the purchaser fails to supply a design, equipment or materials which he is obligated to supply, e.g., to require the purchaser to supply the design, equipment or materials within an additional period, and if the purchaser fails to do so, to terminate the contract (paragraphs 62 and 63).

The contract may specify the remedies to which a party may be entitled if the other party is in delay in payment of a sum other than the price, or fails to perform an auxiliary obligation (paragraphs 64 to 66).

A. General remarks

1. Strict adherence to contract terms relating to the performance of obligations is particularly important in works contracts, as a failure by a party to adhere to those terms could have serious financial repercussions for the other party. The issues of whether a failure of performance has occurred and, if so, what are the legal consequences of the failure, are frequently the cause of long and complicated disputes. It is therefore advisable to agree upon clear contractual stipulations defining the obligations to be performed, and the consequences of a failure to perform those obligations (see chapter IV, "General remarks on drafting" and chapter V, "Description of works and quality guarantee").

2. This chapter deals with some of the remedies which might be available under the contract to a party if the other party fails to perform his obligations under the contract or under the law applicable to the contract.

3. It may be noted that the *Guide* envisages that a failure to perform an obligation by a party usually gives the other party a right to recover damages, unless performance was prevented by an exempting impediment (see chapter XX, "Damages" and chapter XXI, "Exemption clauses"). The parties may also have provided for the payment of an agreed sum upon a failure to perform certain obligations (see chapter XIX, "Liquidated damages and penalty clauses"). The parties should note that the remedies discussed in this chapter may be supplemented by the recovery of damages or payment of an agreed sum.

4. As used in the *Guide*, the term "failure to perform" covers two situations, i.e., delay in performance and defective performance. Delay in performance

occurs when a party performs his contractual obligations later than at the time stipulated in the contract or in the law applicable to the contract, or does not perform them at all. A party will be in delay from the date when performance of an obligation is due until the date when he performs it, or until the date on which the contract is terminated or the obligation becomes otherwise extinct. However, the contract may provide that a party is not entitled to exercise the remedy given to him for delay by the other party if the delay is due to an act or omission of the first party or a person engaged by him (see paragraphs 16 and 66, below). Defective performance occurs when a party fails to comply with those contract terms which describe the technical characteristics of the equipment, materials and construction services to be supplied, and of the works to be constructed (see chapter V, "Description of works and quality guarantee", paragraphs 8 and 9, chapter VIII, "Supply of equipment and materials", paragraphs 6 and 7, and chapter IX, "Construction on site", paragraph 2).

5. For practical reasons, the contract may provide that the construction is to be considered as completed even if completion tests disclose that certain minor items are missing (e.g., items the absence of which does not prevent the operation of the works; see chapter XIII, "Completion, take-over and acceptance", paragraph 4). In respect of such missing items, the contract may give the purchaser the same remedies as it gives him for defects in the accepted works (see paragraphs 38 to 42, below).

6. It is advisable for the parties to consider what remedies are to be available for delay in construction by the contractor (see section B, 2, below), for defective construction by the contractor (see section B, 3, below), for delay by the purchaser in providing security for payment of the price, or in payment of the price (see section C, 2, below), for delay by the purchaser in taking over or accepting the works (see section C, 3, below) and for a failure by the purchaser to supply the design, equipment or materials for construction (see section C, 4, below). In addition, it is advisable that the parties consider what remedies are to be available for delay by the contractor in paying a sum of money due to the purchaser, and for delay by the purchaser in paying a sum of money other than the price (see section D, 1, below). The parties may also wish to consider the remedies that a party might have if the other party fails to perform an auxiliary obligation (see section D, 2, below). The parties may wish to provide that the engagement by a party of another person to perform his contractual obligations does not diminish or eliminate the liability of the party for a failure to perform those obligations (see also chapter XI, "Subcontracting", paragraph 27).

7. In determining the remedies to be provided in the contract for failure to perform, the parties should take into consideration the remedies provided under the law applicable to the contract (see chapter XXVIII, "Choice of law", paragraph 1). Some of these remedies may be mandatory, while others may be non-mandatory and capable of exclusion or modification. Where non-mandatory remedies under the applicable law are unsuitable, they should be clearly modified or excluded by the contractual provisions. It would also be advisable for the party to consider not only the remedies available to each party, but the relationship between those remedies (see section B, below).

8. Under the law applicable to the contract the purchaser may lose his remedies in respect of defects which he could have been expected to discover at the time of inspection or take-over of equipment or take-over or acceptance of

the works. Nevertheless, where permissible, it is advisable to stipulate in the contract that the purchaser does not lose those remedies in those cases (see chapter VIII, "Supply of equipment and materials", paragraph 20; chapter XII, "Inspections and tests during manufacture and construction", paragraphs 1 and 8, and chapter XIII, "Completion, take-over and acceptance", paragraph 12). The contract may, however, obligate the purchaser to inform the contractor without delay of defects which he did discover. The contract may provide that the purchaser bears any additional reasonable costs incurred by the contractor and attributable to the purchaser's failure to inform.

B. Purchaser's remedies

1. *Salient features*

9. The summary of the purchaser's remedies contained in paragraph 50, below, is intended to assist the reader in understanding the somewhat detailed system of remedies available to the purchaser set forth in this chapter. The summary does not deal with the remedies available to the contractor, as their structure and content are readily understandable. The detailed nature of the purchaser's remedies results from certain features of a works contract. The complete performance by the contractor of his contractual obligations occurs over a long term and covers more than one well defined period (e.g., the period of construction, the period covering the conduct of performance tests, and the guarantee period). The contractor's obligations are complex, including the supply of equipment and materials, and construction on site. Furthermore, both where the construction is delayed and where it is defective, the failures to perform may take different forms (e.g., in respect of delay, the delay may be in commencing construction or in completing construction, while in respect of defects, these may be serious or not serious, known to be incurable or not known to be incurable). Each form of failure may require a somewhat different set of remedies.

10. It is advisable for the purchaser's remedies to be set forth in the contract. This would result in greater certainty as to the consequences of the contractor's failure to perform than would result if the parties relied only on the remedies available to the purchaser under the law applicable to the contract. In addition, the remedies available under some legal systems may be inappropriate to a failure to perform a works contract by a contractor. However, it is extremely difficult for the parties to envisage a system of remedies which contains a remedy which is appropriate in every circumstance, in particular when it is noted that some remedies require that the contractor be willing and able to act in accordance with that remedy. Therefore, while the remedies set forth in the contract or contained in the law applicable to the contract establish the rights of the purchaser when the contractor fails to perform, in the event of such a failure the purchaser may in many cases find it desirable to negotiate with the contractor in the light of his rights before resorting to the procedures available to enforce them (see chapter XXIX, "Settlement of disputes", paragraphs 10 and 11).

11. The purchaser's remedies are dealt with in relation to three broad categories: delay in construction by the contractor; defective construction by the contractor; and defects for which the contractor is not liable. The remedies for defective construction by the contractor are linked to four sub-categories:

defects discovered during construction; construction which is deemed to be defective because performance tests are not conducted; defects discovered during performance tests; and defects discovered after acceptance and notified during the guarantee period.

12. In paragraph 50, below, the summary only sets out the various remedies in outline. However, cross-references are given to the sections in the chapter where they are treated in detail. Because of the difficulties that are caused to both parties by the termination of a long-term works contract, the system of remedies recommended by this *Guide* emphasizes two elements. Firstly, the initial remedy usually given to the purchaser is to require the contractor to complete or cure performance which is delayed or defective. However, under the contract or the law applicable to the contract, the purchaser may not be permitted to require performance during the period of time when performance is prevented by an exempting impediment (see chapter XXI, "Exemption clauses", paragraphs 9 to 26). Moreover, in some legal systems, a party cannot enforce performance by the other party in arbitral or judicial proceedings. Secondly, the remedy of termination is given as one of last resort (see also chapter XXV, "Termination of contract", paragraph 2).

13. In certain situations the contract may give the purchaser the remedy of claiming a price reduction. The purpose of this remedy is to restore an equivalence between the value of what the purchaser receives and the price he has to pay. The remedy is of particular value to a purchaser where defects in the works result from failures to perform due to exempting impediments and, under the contract, the contractor is not liable to pay damages for loss caused by such failures (see chapter XXI, "Exemption clauses", paragraph 8). Where the purchaser claims a price reduction, and the remedy of damages is also available, he should not be permitted to claim damages for the loss covered by the price reduction, since that would, in essence, give him double compensation for the same loss. The parties may also wish to note that the contract may permit the purchaser to claim a price reduction even if he has already paid the price. In such a case, the excess amount paid by the purchaser, taking the price reduction into account, may be reimbursable by the contractor to the purchaser directly, or by way of set-off against later sums payable to the contractor.

14. It is sometimes recommended in this chapter that the purchaser be given a choice of alternative remedies upon certain failures of performance by the contractor. The contract may provide that, after the purchaser chooses one of those remedies, he is not entitled to alter his choice without the consent of the contractor. However, where the purchaser is given a choice between the remedy of engaging a new contractor to cure defects at the expense and risk of the contractor, and certain other remedies, and the purchaser chooses the remedy of engaging a new contractor, the purchaser may be entitled to choose one of the other remedies (e.g., price reduction) if the defects prove to be incurable. The particular remedy he may exercise in the event of a failure by the new contractor is indicated below in relevant paragraphs of the chapter. It may be noted that some remedies might be available to a party concurrently (e.g., cure of defects and damages), while other remedies might be available successively (i.e., termination to be available only if cure of defects has been required and has not been effected).

15. It is usually recommended in this chapter that, where performance by the contractor is delayed or defective, the contract may require the purchaser to

grant to the contractor an additional period of time to complete the delayed construction or cure the defective construction (see paragraph 12, above). It is advisable that the contract not permit this additional period to be regarded as an extension of the time for performance so as to affect the purchaser's rights arising from the delayed or defective construction. Where cure is required, the contract may provide that the contractor is to have freedom as to the manner in which the cure is to be effected (e.g., by the repair or replacement of defective equipment or materials). The contract may provide that the costs incurred in effecting the cure are to be borne by the contractor even when the cost-reimbursable pricing method is adopted in the contract (see chapter VII, "Price and payment conditions", paragraphs 10 to 24).

16. The contract may provide that the purchaser is not entitled to exercise the remedies granted to him under the contract after the lapse of a specified period of time (for example, after the lapse of a specified period from the expiry of the quality guarantee period: see chapter V, "Description of works and quality guarantee", paragraphs 28 to 30). Such a provision will enhance certainty in the legal relationship between the parties. The contract may also provide that the purchaser is not entitled to exercise the remedies granted to him for the contractor's failure to perform if this failure is caused by an act or omission of the purchaser.

2. *Delay in construction by contractor*

(a) *Delay in commencing construction*

17. If the contractor fails to commence construction at the time stipulated in the contract, the contract may entitle the purchaser by written notice to require the contractor to commence construction within an additional period of a specified or reasonable length commencing to run from the date of the delivery of the notice. If the contractor does not commence within the additional period, the contract may entitle the purchaser to terminate the contract. However, the contract may entitle the purchaser to immediate termination of the contract if the contractor states to the purchaser that he will not commence construction. In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

(b) *Delay in completing portion of construction by obligatory milestone date*

18. If the contractor fails to complete a portion of the construction by an obligatory milestone date set out in the construction time-schedule (see chapter IX "Construction on site", paragraph 21), the contract may entitle the purchaser by written notice to require the contractor to complete that portion within an additional period of a specified or reasonable length commencing to run from the date of the delivery of the notice. If the contractor fails to complete the portion within the additional period, the contract may entitle the purchaser to terminate the contract in respect of the portion of the construction in delay, or, in certain situations, in respect of the entirety of the uncompleted construction (see chapter XXV, "Termination of contract", paragraph 7). The parties may wish to consider whether the purchaser is to be entitled to terminate the contract only if certain additional conditions are satisfied, e.g.,

only if a specified limit of an agreed sum (see chapter XIX, "Liquidated damages and penalty clauses") has become due in respect of all delays in construction by the contractor. Such a limitation may prevent termination in cases where only a small portion of the construction has not been completed. In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

(c) Delay in completing entire construction

19. If the contractor fails to complete the construction on the date for completion specified in the contract, the contract may entitle the purchaser by written notice to require the contractor to complete the construction within an additional period of a specified or reasonable length commencing to run from the date of the delivery of the notice. If the contractor does not complete the construction within the additional period, the contract may entitle the purchaser either to terminate the contract or to complete the construction by engaging a new contractor at the expense and risk of the contractor. The latter remedy, which is seldom exercised in practice, would usually involve an increase in the price owing to the substantially higher risk to be borne by the contractor. Under some performance bonds, the consent of the guarantor may be required for the engagement of a new contractor at the expense and risk of the contractor. In addition to the remedies discussed in this sub-section, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

(i) Termination of contract

20. The contract may entitle the purchaser to terminate the contract in respect of the uncompleted portion of the construction (see chapter XXV, "Termination of contract"). The payment of an agreed sum (see chapter XIX, "Liquidated damages and penalty clauses" or damages (see chapter XX, "Damages") may compensate the purchaser for the difference between the price that was to be paid to the contractor before termination of the contract and a reasonable price paid to a new contractor to complete the construction.

(ii) Engagement of new contractor at expense and risk of contractor

21. The contract may provide that, if the purchaser chooses to engage a new contractor at the expense and risk of the contractor, the choice of the new contractor and the terms agreed with him must be reasonable. The contract may obligate the purchaser, prior to engaging a new contractor, to notify the contractor in writing of the new contractor whom the purchaser intends to engage, and the terms of the new contract. By delivering a written notice to the purchaser, the contractor may be entitled to object to the intended new contractor, or to the contractual terms to be agreed with him by the purchaser, on the grounds that the new contractor is not a reasonable choice as a contractor (e.g., he lacks the necessary experience), or that the intended terms with the new contractor are not reasonable. The contract may nevertheless entitle the purchaser to engage the new contractor even though the contractor has objected to the new contractor or to the intended contractual terms, although at some potential risk to the purchaser, as described below.

22. The contract may provide that, when the purchaser decides to engage a new contractor, he remains obligated to the contractor for the price, including the price in respect of the portion of the works constructed by the new contractor. The contract may also provide that the contractor is obligated to pay to the purchaser the price that the purchaser must pay to the new contractor, which the purchaser may be entitled to set off against the price to which the contractor may be entitled under the contract. In addition, the contractor may be obligated to pay to the purchaser other reasonable costs incurred by him in connection with the engagement of the new contractor. However, when the purchaser has engaged the new contractor without notifying the contractor of the choice of the new contractor or of the contractual terms that the purchaser intends to conclude with the new contractor, or when the purchaser has engaged the new contractor despite valid objections by the contractor (see paragraph 21, above), the contract may entitle the purchaser only to the price and other costs that would have been incurred by him in connection with the engagement of the new contractor if the choice of the new contractor and the terms agreed with him had been reasonable.

23. The contract may provide that the contractor is liable for a failure by the new contractor to complete the construction to the same extent as if the new contractor were a subcontractor engaged by the contractor (see chapter XI, "Subcontracting", paragraphs 27 and 28). Alternatively, the contract may provide that the contractor is liable for any defect discovered in the completed works, but that he is entitled to exclude this liability by proving that the defect was caused by the new contractor. However, if the purchaser has engaged the new contractor without notifying the contractor of his intention to engage the new contractor or of the terms under which he is to be engaged, or when the purchaser has engaged the new contractor despite valid objections by the contractor (see paragraph 21, above), the risk connected with the engagement of the new contractor may be borne under the contract by the purchaser. The contract may also provide that, where the contractor is held liable by the purchaser for a failure of the new contractor to perform, the purchaser must transfer to the contractor any rights which the purchaser may have against the new contractor arising from that failure, if such a transfer is permitted by the applicable law.

24. It may be desirable to provide that, if the purchaser chooses the remedy of engaging a new contractor to complete the construction, the contractor must cease construction and leave the site so that it can be occupied by the new contractor. The contractor may be obligated to cease construction and leave the site at the time he is notified by the purchaser of the choice of this remedy, or at a later time to be specified in the notification by the purchaser. The contract may prohibit the contractor from removing from the site without the consent of the purchaser any of the contractor's construction machinery and tools, or equipment and materials to be incorporated in the works, since those items may be needed by the new contractor to complete the construction.

25. Where the purchaser chooses this remedy, it is advisable for him not to terminate the works contract with the contractor, since it is desirable that the liability of the contractor for the construction to be effected by the new contractor (see paragraph 23, above) not be eliminated by the termination of that works contract (see chapter XXV, "Termination of contract"). However, the works contract with the contractor may provide that the purchaser is

entitled to terminate it and to claim any remedies available upon termination if and when the works contract with the new contractor is terminated. The rights of the purchaser upon termination are discussed in chapter XXV, "Termination of contract", paragraphs 30 and 31. The purchaser will also be entitled to remedies against the new contractor under the works contract between him and the purchaser if the new contractor fails to perform.

3. *Defective construction by contractor*

26. Whether the works, or equipment and materials, contain defects for which the contractor is liable under the contract will depend on whether they are in conformity with the description in the contract of the technical characteristics of the works to be constructed, of the equipment and materials to be supplied, and of the construction processes to be used, taken together with the construction obligations assumed by the contractor. The description of the works, equipment and materials, and construction processes are dealt with in chapter V, "Description of works and quality guarantee", chapter VIII, "Supply of equipment and materials", paragraphs 6 and 7, and chapter IX, "Construction on site", paragraph 2. The contractual obligations which may be assumed by the contractor, which will be determined in part by the contracting approach chosen by the purchaser, are dealt with in chapter II, "Choice of contracting approach".

27. The remedies available to the purchaser where the construction is defective may depend on whether the defects are serious or not serious. It is advisable that the contract define what defects are serious, taking into consideration the nature of the works to be constructed and the expected performance parameters of the works specified in the contract. Serious defects may be defined as those which prevent the works from operating within certain parameters specified in the contract. Examples of serious defects would be those which reduce the production capacity of the works, lower the quality of the output of the works or increase the consumption of raw materials by the works outside the limits of tolerances specified in the contract which are acceptable to the purchaser.

(a) *Defects discovered during manufacture and construction*

28. The contract may entitle the purchaser to inspect during their manufacture, or upon shipment to the site, equipment and materials to be incorporated in the works (see chapter XII, "Inspections and tests during manufacture and construction", paragraphs 8 to 11 and 21). If they are found upon inspection to be defective, the contract may entitle the purchaser to require cure of defects, and to forbid the shipment of the defective equipment and materials to the site.

29. Equipment and materials supplied by the contractor may be discovered to be defective upon arrival at the site (e.g., upon inspection on arrival: see chapter XII, "Inspections and tests during manufacture and construction", paragraph 23) or at a later stage. In addition, construction services supplied by the contractor may be discovered to be defective at any stage during the construction. The contract may entitle the purchaser by written notice to require cure of the defects, to forbid the incorporation of the defective

equipment and materials in the works, to forbid the supply of the defective services, and to refuse to pay the price for the defective items. The contract may, in addition, entitle the purchaser to require the contractor to supply different equipment, materials and services which are in accordance with the contract. The contract may provide that, if the defects in equipment and materials are cured, the equipment and materials are deemed to have been supplied at the time when the cure is effected. If the defects are not cured by an obligatory milestone date for supply, the contractor may be in delay in the supply (see chapter IX, "Construction on site", paragraph 21). In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

30. Disputes may arise between the parties as to the validity of claims made by the purchaser that equipment, materials or services being supplied are defective. The contract may obligate the contractor to comply with the directions of the purchaser (see previous paragraph) even if the contractor considers that the equipment, materials or services are not defective. If the contractor is forbidden to use equipment, materials or services for the purposes of the construction (see previous paragraph) and it is later determined in dispute settlement proceedings that the equipment, materials or services were not defective, the contractor may be given the same rights against the purchaser as in cases where the purchaser suspends the construction for his convenience (see chapter XXIV, "Suspension of construction", paragraph 4). If the contractor is, in addition, required to supply different equipment, materials or services (see previous paragraph), the contractor may be given the same rights against the purchaser as if the construction had been varied under a variation order (see chapter XXIII, "Variation clauses", paragraph 8).

31. If the contractor fails within a reasonable or specified period after the delivery of the notice (see paragraph 29, above) to stop the incorporation in the works of defective equipment or materials or the supply of defective construction services, or if he refuses to stop the incorporation or supply, and if the use of the equipment, materials or construction services would result in serious defects in the works, the contract may entitle the purchaser to terminate the contract (see chapter XXV, "Termination of contract").

32. The contract may provide that defective equipment or materials for which the purchaser has paid at least in part cannot be removed from the site without the purchaser's approval, or without being replaced by equivalent new equipment or materials. However, if, due to the nature of the defects, the contractor must take the defective equipment or materials from the site to be repaired, the contract might permit the contractor to do so on condition that, if no other guarantee is applicable, he arranges for a suitable third party to guarantee that in the event the equipment and materials are not returned, the guarantor will reimburse the purchaser for the price already paid by him for the equipment and materials.

33. It is advisable for the parties to pay particular attention to problems that could arise where a design supplied by a contractor is defective. In particular where other contractors are to construct some portions of the works in accordance with that design, the purchaser could suffer serious losses due to the need to suspend or vary contracts concluded with those other contractors. Accordingly, the contract might entitle the purchaser by written notice to

require the contractor to cure the design defects within an additional period of a specified or reasonable length commencing to run from the delivery of the notice, and to cure any defects which have been caused in equipment and materials supplied by him as a result of the design defects. If the contractor fails to do so within the additional period, the contract may entitle the purchaser to engage a new contractor to cure the defects at the expense and risk of the contractor, or, alternatively, to terminate the contract. In addition, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses" and chapter XX, "Damages".

(b) *Construction deemed defective because performance tests not conducted*

34. If the contractor fails to conduct performance tests within the period specified in the contract for conducting the tests, and the failure to conduct the tests was not due to causes for which the contractor was not responsible (see chapter XIII, "Completion, take-over and acceptance", paragraph 32), the contract may provide that the performance tests are to be deemed unsuccessful, and the works deemed to have serious defects. Accordingly, the purchaser would be entitled to the same remedies to which he is entitled when he refuses to accept the works due to the discovery of serious defects during the conduct of performance tests (see paragraphs 35 to 37, below).

(c) *Defects discovered during performance tests*

(i) *Refusal to accept works¹*

35. If serious defects in the works are discovered during the conduct of any of the performance tests envisaged under the contract (see chapter XIII, "Completion, take-over and acceptance", paragraphs 24 to 28), the contract may entitle the purchaser to refuse to accept the works. If serious defects still exist after the conduct of the last performance tests envisaged in the contract, the purchaser may be entitled to certain remedies, depending on whether the defects are not known or known to be incurable at the time of the refusal to accept.

a. *Defects not known to be incurable at time of refusal*

36. If the defects are serious but not known to be incurable at the time of the refusal to accept, the contractor may be obligated to cure the defects and prove their cure through a repetition of the performance tests within a specified period of time. If the contractor fails to repeat the tests within this period of time, the contract may provide that they are to be deemed unsuccessful. If the tests are repeated, but the last performance tests envisaged under the contract are unsuccessful (see chapter XIII, "Completion, take-over and acceptance", paragraph 26), the purchaser may be entitled to terminate the contract, or to engage a new contractor to cure the defects at the expense and risk of the contractor. If the latter remedy is invoked, the legal position of the parties may be analogous to that where the purchaser chooses to engage a new contractor to complete the construction at the expense and risk of the contractor (see section B, 2 (c), (ii), above). In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

b. *Defects known to be incurable at time of refusal*

37. If the serious defects are known to be incurable at the time of the refusal to accept, the purchaser may be entitled to terminate the contract. In addition, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

(ii) *Acceptance of works despite defects²*

38. If the defects in the works discovered during the conduct of performance tests are not serious, the contract may provide that the purchaser is to accept the works (see paragraph 26, above, and chapter XIII, "Completion, take-over and acceptance", paragraph 29). It may also entitle him to accept the works even if the defects discovered are serious. In either case, the contract may entitle the purchaser to the following remedies in respect of defects in the accepted works.

a. *Defects for which price reduction is sole agreed remedy*

39. The parties may wish to provide that for certain defects that are not serious defects (e.g., a loss of production capacity not exceeding a specified tolerance) the purchaser's sole remedy is to be price reduction. It is advisable to define these defects precisely in the contract. Furthermore, the parties may wish to agree upon a method of calculating the amount of the price reduction, if possible by the use of a mathematical formula.

b. *Defects for which price reduction is not sole agreed remedy*

i. *Defects not known to be incurable at time of acceptance*

40. The contract may provide that the purchaser is entitled to require the contractor, by written notice, to cure the defects within an additional period of a specified or reasonable length commencing to run from the delivery of the notice. If the defects are not cured within the additional period, the purchaser may be entitled either to a price reduction, or to engage a new contractor to cure the defects at the expense and risk of the contractor. In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

41. If the purchaser chooses price reduction, the contract may provide that the amount of the reduction is to be the reasonable costs which would be incurred in curing the defects. If the failure to cure the defects was due to the discovery during the attempt to cure them (see previous paragraph) that the defects were incurable, the amount of the reduction might be the difference between a reasonable price which would have paid for the works without defects and a reasonable price which would have been paid for works with defects at the time when it is discovered that the defects are incurable. If the purchaser chooses the remedy of engaging a new contractor, the legal position of the parties may be analogous to that where the purchaser chooses to engage a new contractor to complete the construction at the expense and risk of the contractor (see section B, 2 (c), (ii), above).

ii. *Defects known to be incurable at time of acceptance*

42. If it is known at the time of acceptance that the defects are incurable, the purchaser may be entitled only to a price reduction. The contract may provide in these cases that the amount of the reduction is to be the difference between a reasonable price which would have been paid for the works without the defects and a reasonable price which would have been paid for the works with the defects at the time the defects are discovered. It may not be advisable for the amount of the price reduction to be calculated by comparing the prices prevailing at the time of the conclusion of the contract for works with and without defects, since changes in the price level occurring during the period of time between the conclusion of the contract and the discovery of the defects would not be taken into account. Similarly, if the amount of the price reduction were calculated by comparing the contract price with a reasonable price which would be paid for the works at the time the defects were discovered, changes in the price level which would have affected the contract price would not be taken into account. In addition to a price reduction the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses" and chapter XX, "Damages".

(d) *Defects discovered after acceptance and notified during guarantee period*

(i) *Procedure for claims*

43. This section deals only with the procedure for claims relating to defects discovered after acceptance and notified during the guarantee period. The procedure to be followed when defects are discovered during construction is discussed in chapter XII, "Inspections and tests during manufacture and construction". The procedure to be followed when defects are discovered during completion tests and performance tests is dealt with in chapter XIII, "Completion, take-over and acceptance".

44. The contract may require the purchaser to give written notice to the contractor as soon as possible of all defects which he discovers or could reasonably be expected to discover. The contract may provide that if the purchaser fails to notify the contractor of such a defect as soon as possible, but nevertheless notifies the contractor of the defect before the expiry of the guarantee period, he retains all his contractual rights and remedies in respect of the defect, but is liable to pay damages to the contractor for any loss suffered by the latter as a result of the failure to give timely notice of the defect. Alternatively, the contract may provide that the purchaser forfeits his remedies if he has failed to notify the contractor of the defects in time.

45. The contract may provide that the contractor is not liable for defects notified to him after the expiration of the guarantee period. However, the parties may wish to note that exceptions to this principle may exist under mandatory provisions of the law applicable to the contract (for example, the contractor may be liable for defects discovered and notified by the purchaser after the expiration of the guarantee period if the contractor had known of the defects at the time of acceptance and had fraudulently concealed them).

46. The contract may require the notice to specify the defects and the date of their discovery, and may give the contractor an opportunity to inspect the defects within a reasonable period of time after the notification. The contractor

may be obligated to inform the purchaser in writing, within a specified or reasonable period commencing to run from the date of the delivery of the notice, whether he admits or denies his liability for the defects. If the contractor denies his liability but the purchaser continues to assert it, the contract may require the contractor to cure the defects with all possible speed. If it is later determined in dispute settlement proceedings that the contractor is not liable for the defects, he may be entitled to a reasonable price for curing the defects. The contractor may be obligated to give the purchaser an estimate of the period of time needed to cure the defects, if this information is requested by the purchaser.

(ii) *Liability for defects*

a. *Defects not known to be incurable at time of discovery*

47. If the defects are not known to be incurable at the time of discovery, the purchaser may be entitled to require the contractor, by written notice, to cure the defects within an additional period of time of a specified or reasonable length commencing to run from the date of the delivery of the notice. If the defects are not cured within the additional period of time, the purchaser may be entitled either to a price reduction or to engage a new contractor to cure the defects at the expense and risk of the contractor. However, under some performance bonds the consent of the surety may be required for the engagement of a new contractor at the expense and risk of the contractor. The contract may provide that the amount of the reduction is to be equal to the reasonable costs that would be incurred in curing the defects. If the purchaser chooses the latter remedy, and the contract with the new contractor is terminated because the defects are incurable, the purchaser may be entitled to a price reduction. The contract may provide that the amount of the price reduction is to be the difference between a reasonable price that would have been paid for the works without the defects and a reasonable price that would have been paid for the works with the defects at the time when the new contractor fails to cure the defects. In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

b. *Defects known to be incurable at time of their discovery*

48. If defects are known to be incurable at the time of their discovery, the purchaser may be entitled to a price reduction. The amount of the reduction might be the difference between a reasonable price that would have been paid for the works without the defects and a reasonable price that would have been paid for the works with the defects at the time the defects were discovered. In addition, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

4. *Defects for which contractor is not liable*

49. The contract may obligate the contractor, at the purchaser's request, to cure defects for which the contractor is not liable, provided they are notified before the expiry of the guarantee period. The contract may require the contractor to cure the defects within a reasonable period of time of the notification, and may entitle him to a reasonable price for doing so.

5. *Summary of purchaser's remedies*

50. The remedies for a failure by the contractor to perform that may be considered by the parties in drafting their contract, in addition to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages", can be summarized as follows:

1. *Delay in construction by contractor* (section B, 2)
 - (a) *Delay in commencing construction* (paragraph 17)
 - require commencement;
if contractor fails to commence within additional period,
 - terminate contract.
 - (b) *Delay in completing portion of construction by obligatory milestone date* (paragraph 18)
 - require completion of portion;
if contractor fails to complete portion within additional period,
 - terminate contract.
 - (c) *Delay in completing entire construction* (paragraphs 19-25)
 - require completion of entire construction;
if contractor fails to complete entire construction within additional period,
either
 - terminate contract
or
 - engage new contractor to complete construction at expense and risk of contractor;
if contract with new contractor is terminated,
 - terminate contract with contractor.
2. *Defective construction by contractor* (section B, 3)
 - (a) *Defects discovered during manufacture and construction* (paragraphs 28-33)
 - i. *Defects in equipment and materials discovered during manufacture or upon shipment* (paragraph 28)
 - require cure of defects; and
 - forbid supply of the defective equipment and materials for the purposes of construction.
 - ii. *Defects in equipment and materials discovered on arrival at site or later, and defects in construction services discovered during construction* (paragraphs 29-33)
 - require cure of defects in equipment and materials;
 - refuse to pay price for defective equipment, materials or services; and
 - forbid incorporation of defective equipment and materials in the works, or the supply of defective services;

- if contractor does not cease incorporating defective equipment and materials in the works, or supplying defective services, and such incorporation or supply would cause serious defects in the works,
 - terminate contract.
- (b) *Construction deemed defective because performance tests not conducted* (paragraph 34)
 - same remedies as on refusal by purchaser to accept works when defects are serious (see (c), below).
- (c) *Defects discovered during performance tests* (paragraphs 35-42): purchaser may
 - refuse to accept works if defects are serious, or
 - accept works if defects are not serious, or accept despite serious defects.
- (i) *Refusal to accept works if defects serious* (paragraphs 35-37)
 - a. if defects not known to be incurable at time of refusal,
 - require cure of defects:
 - if serious defects discovered during last performance tests envisaged in contract
 - either
 - terminate contract
 - or
 - engage new contractor to cure defects at expense and risk of contractor;
 - if defects cannot be cured by new contractor,
 - terminate contract with contractor
 - b. if defects known to be incurable at time of refusal,
 - terminate contract.
- (ii) *Acceptance if defects not serious, or despite serious defects* (paragraphs 38-42)
 - a. Defects which are not serious for which price reduction is sole agreed remedy
 - claim price reduction.
 - b. Defects for which price reduction is not sole agreed remedy
 - i. if defects not known to be incurable at time of acceptance,
 - require cure of defects:
 - if defects not cured within additional period,
 - either
 - claim price reduction
 - or
 - engage new contractor to cure defects at expense and risk of contractor;
 - if defects cannot be cured by new contractor,
 - claim price reduction.

- ii. if defects known to be incurable at time of acceptance,
 - claim price reduction.
 - (d) *Defects discovered after acceptance and notified during guarantee period* (paragraphs 43-48)
 - a. if defects not known to be incurable at time of discovery,
 - require cure of defects;
 - if defects not cured within additional period,
 - either
 - claim price reduction
 - or
 - engage new contractor to cure defects at expense and risk of contractor;
 - if defects cannot be cured by new contractor,
 - claim price reduction;
 - b. if defects known to be incurable at time of discovery,
 - claim price reduction.
- 3. *Defects for which contractor not liable* (paragraph 49)
 - require cure of defects at expense of purchaser.

C. Contractor's remedies

1. Salient features

51. In drafting provisions concerning the contractor's remedies, the parties should bear in mind the issues described in paragraphs 9 to 16, above, since some of them are also relevant in formulating the contractor's remedies.

2. Delay in payment of price or in providing security for payment of price

52. The payment conditions in the contract determine when the price or a portion thereof falls due (see chapter VII, "Price and payment conditions", paragraphs 63 to 79). The contract may also require security for payment of the price (e.g., a letter of credit) to be furnished at a specified time by the purchaser (see chapter XVII, "Security for performance", paragraphs 40 to 45).

(a) Requiring payment of price and interest

53. If the purchaser fails to pay the price or a portion of it on the date when it falls due, the contractor will, under the law applicable to the contract, be entitled to require payment; under many legal systems he may also be entitled to claim interest for the delay in payment. However, the parties may wish to include in the contract provisions dealing with the payment of interest. If they so decide, they should take into consideration any mandatory legal rules of the applicable law regulating the payment of interest, such as restrictions on the interest rate. They may also wish to consider whether interest should be payable in cases where an exempting impediment prevents the purchaser from

paying the price (see chapter XXI, "Exemption clauses"), and whether, in addition to interest, damages are to be payable for loss suffered by the contractor which is not compensated by an interest payment. If interest may not be claimed under the applicable law for delay in payment of sums due, the parties may wish the contract to contain an adequate remedy that could be permitted under that law, such as payment of an agreed sum (see chapter XIX, "Liquidated damages and penalty clauses").

54. If the parties decide to provide in the contract for the payment of interest, they may wish to agree upon the period of time during which the interest is to be payable. The parties may wish to provide that interest is payable from the date on which the price is due until the date on which the contractor receives payment.

55. The parties may decide either to determine the interest rate in the contract or to leave that issue to be resolved by the law applicable to the contract. However, the rules in some legal systems governing payment of interest for delay in payment of the price may not adequately resolve that issue. If the parties decide to determine the interest rate in the contract, it would be preferable to provide a formula for determining the rate of interest rather than to stipulate a specific rate, since it may not be possible to predict accurately what specific rate might be appropriate during the period that interest is due. One approach may be to base the interest rate on a bank rate (e.g., the London Inter-bank Offering Rate) for the time being prevailing during the period when the purchaser is in delay in payment.

56. Other possible approaches may be to provide that the interest rate is to be either a specified rate prevailing in the purchaser's country, or a specified rate prevailing in the contractor's country, during the period when the purchaser is in delay in payment. It may be advisable for the contract to determine which of several interest rates prevailing in the chosen country is to apply. One rate which might be adopted is the official discount rate. If a specified rate prevailing in the contractor's country is to apply, the purchaser might be tempted to delay payment when the rate he would earn on his funds on deposit in his own country, or at which he would have to borrow to finance the payment, is higher than the specified rate prevailing in the contractor's country. If a rate prevailing in the purchaser's country is to apply, there would be no such inducement. However, if the latter approach is adopted, and the rate prevailing in the contractor's country is higher than the specified rate prevailing in the purchaser's country, the contractor might suffer a loss due to his inability to earn the higher interest by putting the funds on deposit in his own country, or due to the necessity of borrowing the unpaid amount in his country and paying the higher interest rate on the loan. This may be prevented by permitting the contractor to claim damages for the loss caused by the difference in interest rates.

(b) Suspension of construction and termination of contract

57. If the purchaser is in delay for a specified period of time in paying a specified percentage of the contract price, or in furnishing security for payment of a specified percentage of the price, the contract may entitle the contractor to give written notice to the purchaser requiring him to make the payment or furnish the security within an additional period of a specified or reasonable

length commencing to run from the date of the delivery of the notice. The notice should state that the contractor will suspend the construction if the purchaser fails to pay or furnish the security within that additional period. The contract may entitle the contractor to suspend the construction if the purchaser fails to pay the price or specified portion of the price or furnish the security within the additional period (see chapter XXIV, "Suspension of construction", paragraph 6). The contract may further entitle the contractor to terminate the contract if the purchaser fails to pay the price or specified portion of the price or furnish the security within a specified period of time after the suspension.

58. An alternative approach may be to entitle the contractor to immediate termination of the contract if the purchaser fails to pay or furnish security within the additional period (see previous paragraph). However, it may be noted that termination of the contract by the contractor for a failure to pay the price is usually not of advantage to him after the completion of construction (cf. XV, "Transfer of ownership of property", paragraph 4, and chapter XXV, "Termination of contract", paragraph 32).

3. *Delay in taking over or accepting works*

59. When the construction has been completed, the contract may obligate the purchaser to take over and accept the works (see chapter XIII, "Completion, take-over and acceptance", paragraphs 21 and 29). The contract may provide for the legal consequences of the purchaser's delay in doing so. Due to the nature of the acts required of the purchaser in take-over and acceptance, it may not be possible or practical under many legal systems to compel the purchaser to perform those acts through the institution of arbitral or judicial proceedings. Moreover, since take-over or acceptance occurs only after the completion of the construction, terminating the contract for failure by the purchaser to take over or accept the works may not confer any advantage on the contractor.

60. If the purchaser is in delay in accepting the works, the contract may provide that acceptance is deemed to occur upon the completion of successful performance tests (see chapter XIII, "Completion, take-over and acceptance", paragraph 31). In the exceptional cases where this approach is not feasible (e.g., the contract does not require the conduct of performance tests), the contract may entitle the contractor to require the purchaser by written notice to perform the act of acceptance within an additional period of a specified or reasonable length commencing to run from the date of the delivery of the notice, and provide that if he fails to do so, the legal consequences of acceptance (e.g., the obligation of the purchaser to pay a portion of the price, or the commencement of the guarantee period) arise as from the date when a written notice stating that the consequences are to arise is delivered to the purchaser by the contractor. In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

61. As conceived in the *Guide*, take-over consists of the purchaser taking physical possession of the works (see chapter XIII, "Completion, take-over and acceptance", paragraph 1), and it may be difficult to provide for a legal presumption that take-over has occurred. For this reason, if the purchaser is in delay in taking over the works, the contract may entitle the contractor to

require the purchaser by written notice to take over the works within an additional period of a specified or reasonable length commencing to run from the date of the delivery of the notice, and provide that, if he fails to do so, the legal consequences of take-over (e.g., passing of risk, commencement of the trial operation period) arise as from the date when a written notice stating that the consequences are to arise is delivered to the purchaser by the contractor. In addition, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

4. *Failure to supply design, equipment or materials for construction in time and free of defects*

(a) *Failure to supply design in time and free of defects*

62. Under some works contracts, the purchaser may be obligated to supply a design according to which the contractor is to construct the works (see chapter II, "Choice of contracting approach"). The contract may provide for the legal consequences if the purchaser fails to perform this obligation in time and free of defects. For example, the contract may provide that the period of time within which the construction is to be completed by the contractor commences to run only from the date that a design free of defects is supplied by the purchaser. The contractor may also be entitled to grant the purchaser an additional period of a specified or reasonable length to supply the design and, if the purchaser fails to do so within the additional period, the contractor may be entitled to terminate the contract. In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

(b) *Failure to supply equipment and materials in time and free of defects*

63. Under some works contracts, the purchaser may be obligated to supply certain equipment and materials to be incorporated by the contractor in the works (see chapter VIII, "Supply of equipment and materials", paragraph 27). If the equipment and materials supplied by the purchaser are defective, and their incorporation results in defects in the works, the contract may exclude the liability of the contractor for those defects. If the purchaser fails to supply the equipment and materials in time or to supply them free of defects, the contractor may be entitled to suspend the construction affected by the failure (see chapter XXIV "Suspension of construction", paragraphs 6 and 7). In addition, the contract may entitle the contractor to require the purchaser by written notice to supply the equipment and materials, or to supply equipment and materials which are free of defects, within an additional period of time of a specified or reasonable length commencing to run from the date of delivery of the notice, and provide that if the purchaser fails to do so within the additional period, the contractor is entitled to obtain them himself and to claim from the purchaser all reasonable costs incurred by the contractor in doing so. If the equipment and materials cannot be obtained by the contractor, he may be entitled to terminate the contract in respect of those portions of the construction which cannot be effected without the equipment and materials. In addition to the remedies discussed in this paragraph, the purchaser may be entitled to remedies discussed in chapter XIX, "Liquidated damages and penalty clauses", and chapter XX, "Damages".

D. Remedies of both parties

1. *Delay in payment of sums other than price*

64. In some situations, the purchaser may be obligated under the contract or the law applicable to the contract to pay the contractor a sum of money other than the price, and the contractor may be obligated to pay a sum to the purchaser (e.g., reimbursement of insurance premiums paid by one party for the account of the other party). If these obligations are to be performed by separate payments and not by addition to or subtraction from the amount due as the price, the contract may entitle the party to whom such a payment is due to require payment, and, if payment is not made, entitle him to recover the amount due. If the parties wish to provide that interest is to be paid for the delay in payment, the issues related to the payment of interest may be settled in a manner similar to the settlement of issues related to the payment of interest for delay in payment of the price (see section C, 1, (a), above). The contract may provide that a party is not entitled to suspend performance of his obligations or to terminate the contract due to the delay by the other party in payment of sums other than the price.

2. *Failure to perform auxiliary obligations*

65. The contract may provide for the consequences of failure by a party to perform obligations of an auxiliary character (e.g., an obligation to notify). The contract may limit the consequences to a liability to pay damages (see chapter XX, "Damages" and chapter XXI, "Exemption clauses"). In some cases, they may wish to provide for the payment of an agreed sum (see chapter XIX, "Liquidated damages and penalty clauses"). Other additional consequences may include, for example, the loss by the party failing to perform an obligation of a particular right (e.g., loss of the right to invoke an exemption clause if a party fails to inform the other of the occurrence of an exempting impediment) or the occurrence of a presumption (e.g., the purchaser may be presumed to have given his consent to the engagement of a subcontractor proposed by the contractor if the purchaser does not approve of the subcontractor within a specified period of time of the proposal). Again, the contract may provide that when a party is in delay in taking over equipment or materials to be incorporated in the works the risk of loss of or damage to the equipment and materials is to pass to the party in delay as of the time when he ought to have taken them over. In addition, the contract may entitle a party to terminate the contract for specified failures by the other party; for example, the purchaser may be entitled to terminate the contract if the contractor fails to perform his obligation to extend a performance guarantee (see chapter XVII, "Security for performance", paragraph 36). Some of these cases are discussed in other chapters of the *Guide*. It may be advisable to specify those consequences in the contractual provisions dealing with the obligations in question. Consequences which may be appropriate to failures to perform particular auxiliary obligations are noted in the respective chapters of the *Guide* where those obligations are discussed.

66. In cases where the contract obligates a party to co-operate with the other party in order to make possible the performance of an obligation by the other

party, the contract may provide that the first party is not entitled to exercise the remedies given him for the failure of the other party to perform the obligation if this failure is due to a lack of the co-operation required of the first party by the contract.

Footnotes to chapter XVIII

¹Illustrative provisions

“(1) If serious defects in the works are discovered during performance tests conducted under article . . . , the purchaser is entitled either to refuse to accept the works, or to accept the works.

“(2) If the purchaser exercises his right to refuse to accept the works, and the defects are not known to be incurable at the time of refusal, the contractor must cure the defects and prove that the works is free of serious defects through a repetition of the performance tests within . . . (indicate a period of time) after the conduct of the previous unsuccessful tests. If the contractor fails to repeat the tests within this period, the performance tests are deemed to be unsuccessful.

“(3) If the tests are repeated, but the last performance tests envisaged under article . . . are unsuccessful, the purchaser is entitled either to terminate the contract or to engage a new contractor to cure the defects at the expense and risk of the contractor.

(The article should include provisions mentioned in paragraphs 21 to 25 dealing with the rights of the parties where the purchaser chooses to engage a new contractor at the expense and risk of the contractor.)

“(4) If the defects are known to be incurable at the time of the refusal to accept, the purchaser is entitled to terminate the contract.”

²Illustrative provisions

“(1) Where the purchaser accepts the works, he is entitled to the following remedies in respect of defects discovered during performance tests.

“(2) In respect of the defects described in this paragraph, the purchaser is only entitled to the price reduction indicated below:

Reduced production capacity of the works	Price reduction
1 per cent	per cent of the price
(other defects and the consequent price reductions may be included).	

“(3) If defects other than those noted in paragraph (2) of this article are not known to be incurable at the time of acceptance, the purchaser may deliver to the contractor a written notice requiring him to cure the defects within an additional [. . . days (period of time to be specified in contract)] [period of time of reasonable length to be specified in notice], and indicating that, if the contractor fails to cure the defects within the additional period, the purchaser intends either to claim a price reduction or to engage a new contractor to cure the defects at the expense and risk of the contractor.

“(4) If the contractor fails to cure the defects within the additional period indicated in paragraph (3) of this article, the purchaser is entitled in accordance with the notice given under that paragraph either to claim a price reduction or to engage a new contractor to cure the defects at the expense and risk of the contractor.

“(5) If the purchaser claims a price reduction, he is entitled to a reduction in an amount equivalent to the reasonable costs which would be incurred in curing the defects.

(The article should contain provisions modelled on those contained in note 1 dealing with the rights of the parties where the purchaser chooses to engage a new contractor at the expense and risk of the contractor.)

“(6) If defects other than those noted in paragraph (2) of this article are known to be incurable at the time of acceptance, the purchaser is only entitled to claim a price reduction. The purchaser is entitled to a price reduction in an amount equal to the difference between a reasonable price which would have been paid for the works without the defects and with the defects at the time the defects are discovered.

Chapter XIX. Liquidated damages and penalty clauses

SUMMARY

Liquidated damages clauses and penalty clauses provide that, upon a failure of performance by one party, the aggrieved party is entitled to an agreed sum of money from the party failing to perform. In works contracts, these clauses are usually included in respect of failures of performance by the contractor (paragraph 1).

The clauses have certain advantages. Since the agreed sum is recoverable without the need to prove that losses have been suffered, the expenses and uncertainty associated with the proof of losses are removed (paragraph 2). The sum may also serve as the limit to the liability of the contractor, who will be assisted by knowing the maximum liability to which he is likely to be exposed (paragraph 3).

Many legal systems have rules, which are sometimes mandatory, regulating liquidated damages clauses and penalty clauses. Under some legal systems, only clauses under which the agreed sum serves as compensation are valid. Under other legal systems, clauses under which the agreed sum serves as compensation, or is intended to stimulate performance, or has both those functions, are valid (paragraph 5). The parties may wish to provide that if the failure to perform is caused by an exempting impediment, the agreed sum is not due (paragraph 6).

The law applicable to the contract often regulates the relationship between recovery of the agreed sum and enforcement of the performance of obligations. That law also often regulates the relationship between the recovery of the agreed sum and the recovery of damages. The parties may, however, be permitted by the applicable law to regulate these relationships to some extent, and the parties may wish to do so to the extent permitted by the applicable law (paragraphs 7 and 8).

It is in the interests of both parties to delimit clearly the failure to perform upon which the agreed sum is payable (paragraph 9). In quantifying the agreed sum, if the applicable law so permits, the purchaser may find it beneficial to provide for an agreed sum in an amount which both provides reasonable compensation to the purchaser and puts a moderate pressure on the contractor to perform. Excessive sums should be avoided; under many legal systems those sums would be set aside or reduced (paragraphs 10 and 11).

The agreed sum to be paid is often fixed by way of increments, and a limit may be placed on the amount to which the increments can escalate. A limit may have advantages and disadvantages to the purchaser (paragraph 12). The parties may wish to consider whether the limit is to apply in all cases (paragraph 13), and the remedies which the purchaser might have after the limit is reached (paragraph 14).

In order to facilitate recovery of the agreed sum, the contract may authorize the purchaser to deduct the agreed sum from funds of the

contractor in the hands of the purchaser (paragraph 15). The contract may also provide for a guarantee to be given by a financial institution in respect of the agreed sum (paragraph 16).

When an agreed sum is stipulated for delay in performance, the date fixed for performance may become inapplicable in certain circumstances, and this may create difficulties in the operation of liquidated damages clauses and penalty clauses. The parties may wish to include in the contract a mechanism for determining a new date for performance, and provide that delay is to be measured by reference to the new date (paragraph 17).

The parties may wish to consider the circumstances in which the payment of an agreed sum is to be provided for delay by the contractor in completing a portion of the works. The quantification of the agreed sum will depend on those circumstances (paragraphs 18 and 19).

Where the payment of an agreed sum is stipulated by way of increments with a limit on the amount recoverable, the parties should determine the availability of the remedies of termination, damages and the recovery of the agreed sum, and also the relationships between those remedies (paragraph 21).

A. General remarks

1. Liquidated damages clauses and penalty clauses provide that, upon a failure to perform a specified obligation by one party, the aggrieved party is entitled to a sum of money agreed at the time the contract is entered into from the party failing to perform. Liquidated damages clauses and penalty clauses are most frequently provided for delay in performance.¹ The agreed sum may be intended to stimulate performance of the obligation, or to compensate for losses caused by the failure to perform, or both.² These clauses are inserted in respect of failures to perform construction obligations, rather than in respect of failure to make payment. Accordingly, in works contracts, they are usually included in respect of failure to perform by the contractor, although they may also be included in respect of failure to perform by the purchaser.

2. Agreement on a sum to be paid upon a failure to perform has certain advantages in the context of a works contract. Firstly, the sum constitutes agreed compensation for a failure to perform, and the expenses incurred in proving the extent of losses resulting from the failure are therefore eliminated. Those expenses might be considerable, especially if a purchaser had to establish his losses in legal proceedings held outside the country where the works is being constructed. Furthermore, because of difficulties sometimes encountered in proving the extent of losses under a works contract, the amount of damages which might be awarded in legal proceedings may be uncertain. An agreed sum is certain, and this certainty may be of benefit to both parties in assessing the risks to which they are subject under the contract.

3. Secondly, the agreed sum may serve as the limit to the liability of the contractor for the failure to perform a particular obligation (see section E, below). The contractor is assisted by knowing in advance the maximum liability to which he is likely to be exposed.

4. Liquidated damages clauses and penalty clauses (hereinafter referred to as clauses for the payment of an agreed sum) should be distinguished from two other types of clauses which are sometimes found in works contracts, i.e.

clauses limiting the amount recoverable as damages, and clauses providing alternative obligations. A clause limiting the amount recoverable as damages fixes a maximum amount payable if liability is proved. A plaintiff must prove the amount of his losses, and if the amount falls below the maximum, only the amount proved is recoverable. In the case of clauses for the payment of an agreed sum, in general the agreed sum is recoverable without proof of loss. A clause providing an alternative obligation in favour of a contractor gives him the option either of performing a specified obligation or paying an agreed sum. By exercising either option, he discharges his obligation and may become entitled to the performance promised to him by the purchaser in exchange. Under clauses for the payment of an agreed sum, the parties do not usually intend that payment of the agreed sum is to entitle the contractor to any performance in exchange, or that the payment is to constitute a discharge of the obligation to perform for which the agreed sum was provided (see also paragraph 7, below).

5. Many legal systems have rules, which are sometimes mandatory, regulating clauses for the payment of an agreed sum, and such rules will often restrict what the parties may achieve through those clauses. Under some legal systems, clauses by which the parties, at the time of contracting, fix an agreed sum payable as compensation for losses caused by a failure to perform are valid. In contrast, clauses fixing an agreed sum to stimulate performance are invalid, and the party who fails to perform is liable only for the damages recoverable under the general law. Under other legal systems, however, clauses fixing an agreed sum payable as compensation, or fixing an agreed sum to stimulate performance, or fixing a sum which has both these purposes, are in principle valid. The courts may have the power to reduce the agreed sum in specified circumstances, e.g., if the amount is grossly excessive in the circumstances, or there has been part performance. Parties are not permitted by agreement to derogate from the power to reduce the agreed sum. The choice by the parties of the law applicable to the contract (see chapter XXVIII, "Choice of law", paragraph 1) is therefore of particular importance in relation to clauses for the payment of an agreed sum.

6. The rule in many legal systems is that the agreed sum is not due if the failure to perform is caused by an exempting impediment (see chapter XXI, "Exemption clauses"), or by the acts or omissions of the other party. The parties may wish to maintain the applicability of this rule (Uniform Rules, article 5).

B. Relationship of recovery of agreed sum to enforcement of performance and to recovery of damages

7. The law applicable to the contract often regulates the relationship between recovery of the agreed sum and enforcement of the performance of obligations, though it generally does so by rules for interpreting the agreement between the parties. Under certain legal systems, enforced performance is not usually granted, and therefore the purchaser will be restricted to claiming the agreed sum. Where enforced performance is granted, however, it is advisable for the contract to clarify the relationship between enforcement of performance and recovery of the agreed sum. In respect of an agreed sum payable for delay in performance, for example, the agreed sum normally only compensates for the

losses suffered by the purchaser during the period of delay. Accordingly, the contract may provide that the purchaser can, in addition to the agreed sum, claim performance (Uniform Rules, article 6).³

8. The law applicable to the contract often regulates the relationship between the recovery of the agreed sum and the recovery of damages. Since one of the objectives of an agreed sum is to avoid the difficulties of an inquiry into the extent of recoverable damages (see paragraph 2, above), under some legal systems the purchaser is not permitted, in cases where recoverable damages under the rules relating to damages exceed the agreed sum, to waive the agreed sum and claim damages. Nor is the contractor permitted, in cases where the amount recoverable as damages is less than the agreed sum, to assert that he should only be liable for damages. Under some legal systems, however, where the losses exceed the agreed sum, the purchaser can prove this fact and, in addition to the agreed sum, recover damages to the extent of the excess, either unconditionally or subject to satisfying certain conditions (for example, that the failure of performance was negligent, or was committed with an intention to cause loss, or that there was an express agreement that damages for the excess is to be recoverable). Parties may therefore find it desirable to regulate these issues in the contract to the extent permitted by the applicable law (Uniform Rules, article 7).⁴

C. Delimiting failure of performance

9. It is in the interests of both parties to delimit clearly the failure to perform upon which the agreed sum is payable. Thus, when an agreed sum is payable if construction is not completed by a specified date, a clear definition of completion is needed in order to determine whether the agreed sum is payable after that date (see chapter XIII, "Completion, take-over and acceptance", paragraphs 1 and 4).

D. Quantification of agreed sum

10. Determining the appropriate amount for the agreed sum presents certain difficulties. In a long-term contract, it is extremely difficult to estimate at the time of contracting the losses which may be suffered at the time of a failure to perform, and accordingly it is difficult to determine at what amount the agreed sum should be quantified either to be truly compensatory or to stimulate performance. From the point of view of the purchaser, the agreed sum should not be fixed at such a low level that he will suffer serious uncompensated losses upon a failure to perform. Furthermore, a sum which is less than the amount the contractor would save by failing to perform would not act as a stimulus to the contractor to perform properly and on time.

11. If the applicable law so permits, the purchaser may find it beneficial for the contract to fix an agreed sum for a failure to perform by the contractor at an amount which both provides reasonable compensation to the purchaser and puts a moderate pressure on the contractor to perform. In determining what sum is reasonable, parties may consider such factors as the losses which might be caused to the purchaser by the failure, the possible effect of payment of the agreed sum on the financial position of the contractor, and the fact that the

sum should be substantial enough to induce the contractor to perform. Excessive sums should be avoided, as their stipulation in tender requirements or during negotiations may deter some reputable contractors from undertaking the construction, and may also have no special deterrent effect if it can be predicted that in all likelihood they will be declared invalid or reduced in legal proceedings. Furthermore, when accepting the provision of excessive sums in the contract, contractors may as a counterbalance increase their prices, or their safety margins in respect of the performances undertaken (e.g., by fixing later dates for completion, or lower guaranteed performance standards, or by over-designing the works). Where a legal system permits an agreed sum to serve only as compensation, parties should attempt to estimate as accurately as possible the losses which the purchaser is likely to suffer. Any records relating to the basis of the estimate and the calculations should be preserved as evidence that the sum was not fixed arbitrarily. The quantification of a sum due upon delay in completion of a portion of the works is dealt with in paragraph 18, below.

E. Limit on recovery of agreed sum

12. An agreed sum to be paid is often fixed by way of increments, a specified amount being due for a specified time unit of delay or for a specified unit by which performance standards are not met. Very often, however, the function of the payment of an agreed sum as imposing a limitation on liability is enhanced by placing a limit on the amount to which the increments can escalate.⁵ The provision of a limit of liability may lead to a reduction of the price quoted by the contractor. A purchaser should, however, only agree to a limit after careful consideration, as he may suffer serious uncompensated losses after the limit is reached.

13. The parties may wish to consider whether the limit referred to in the previous paragraph is to apply under all circumstances, or is to be excluded in certain cases. Parties may wish to consider the insertion of a provision under which the limit is excluded, for example, where loss results from a failure committed with the intent to cause loss, or recklessly and with knowledge that loss would probably result.⁶

14. The parties may wish to consider what remedies the purchaser might have if the failure to perform continues after the limit is reached. If the law applicable to the contract permits enforced performance, the contract may provide that the purchaser may claim performance (see paragraph 7, above). With respect to the right to recover damages (see paragraph 8, above), a possible approach is to provide that, after the limit is reached, the purchaser is not entitled to recover either further increments in the liquidated damages or penalty, or damages for losses suffered by failure to perform after the date on which the limit was reached. An alternative approach is to provide that the purchaser is not entitled to recover further increments, but may recover damages for losses which he proves he has suffered after the date on which the limit was reached. Under either approach it is advisable to provide that the purchaser is entitled to terminate the contract once the limit is reached (see paragraph 21, below, and the illustrative provision referred to therein).

F. Obtaining agreed sum

15. While liquidated damages clauses or penalty clauses entitle the purchaser to recover from the contractor the agreed sum in the event of failure of performance, legal proceedings for recovery often entail time and expense. The need for the purchaser to institute legal proceedings may be reduced if the contract authorizes the purchaser to deduct the agreed sum from funds of the contractor in the hands of the purchaser (e.g., a deposit) or from funds due from the purchaser to the contractor (e.g., the price). It may be noted, however, that under some legal systems provisions authorizing deductions are regulated by mandatory rules. Furthermore, a deduction might later be invalidated by the operation of certain legal rules (e.g., if the agreed sum deducted was later held by a court to be excessive, and was reduced). Accordingly, provisions authorizing deductions should be formulated taking into account the relevant rules of the law applicable to the contract.

16. It is advisable for the clause to clarify that deduction is an optional mode of obtaining the agreed sum. Where the same purchaser and contractor have entered into more than one contract with each other, each contract might authorize deduction of the agreed sum from funds due under the other contract or contracts.⁷ The purchaser can also enhance the chances of obtaining the agreed sum through a provision in the contract that the contractor must arrange for a financial institution to give the purchaser a guarantee in respect of the agreed sum. The purchaser could claim the agreed sum from the financial institution after proof of a failure to perform by the contractor (see chapter XVII, "Security for performance", paragraphs 10 to 12).

G. Agreed sum payable on delay: some issues

17. In works contracts the payment of an agreed sum is most commonly stipulated for delay in performance by the contractor. Under some legal systems, however, certain supervening circumstances may cause the date fixed for performance to become inapplicable, and this may create difficulties in the operation of these clauses. Such circumstances may consist of a failure to perform by the purchaser (e.g., by handing over the site late, or handing over necessary drawings or specifications late), or may consist of acts of the purchaser which are not failures to perform (e.g., ordering extra work under a variation clause), or of occurrences for which neither party is responsible (e.g., exempting impediments preventing the contractor from performing). The result under those legal systems is that the contractor is only bound to perform within a reasonable time, and that consequently the liquidated damages clause and penalty clause will be inoperative by reference to the date originally fixed for performance. Accordingly, if the parties wish to retain the applicability of the clause for the payment of an agreed sum despite the occurrence of such supervening circumstances, they may include in the contract a mechanism for determining a new date for performance, and provide that the agreed sum is payable if the contractor is in delay by reference to the new date for performance (see chapter XXIII, "Variation clauses", paragraph 8, and chapter XXIV, "Suspension of construction", paragraphs 13 and 18).

18. The parties may wish to consider the circumstances in which the payment of an agreed sum is to be provided for delay by the contractor in completing a portion of the works. The purchaser may wish to impose an obligation on the

contractor to complete portions of the works by specified dates to ensure steady progress in the construction, even though delay in completion of the portion does not by itself cause him losses (see chapter IX, "Construction on site", paragraphs 18 to 23). In those cases, the parties may wish to provide that an agreed sum becomes due upon a failure to complete portions by the specified dates, but that the agreed sum is repayable to the contractor if the date fixed for completion of the entire works is met by the contractor (i.e. through subsequent acceleration of the construction). The agreed sum will be imposed to stimulate performance and, if the law applicable to the contract permits the imposition of agreed sums for this purpose, the agreed sum may be quantified as a percentage of the value of the delayed portion.

19. The purchaser may also sometimes find it advantageous to impose an obligation to complete a particular portion by a specified date if he can enter and use that portion independently of the completion of the rest of the works. The imposition of such an obligation may also be advantageous where more than one contractor is engaged for the construction, and failure to complete a portion on schedule by one contractor may result in the purchaser having to pay damages to other contractors whose work cannot as a result be started at the time agreed. In those cases, the parties may wish to provide for the payment of an agreed sum which will compensate the purchaser for the losses caused by the delay.

20. The parties may wish to consider the situation when the payment of an agreed sum is only provided for delay in completion of the whole works, and on the date specified for completion certain portions are completed and may be operated by the purchaser, although the whole is still incomplete. In those circumstances one approach may be for the parties to provide that the agreed sum is to be reduced if the contractor can prove that the purchaser's losses are less than the agreed sum. The contractor may be able to prove this, for example, if the purchaser has entered upon the completed portions and is operating them. Another approach, however, is not to provide for any reduction of the agreed sum in such circumstances, since the quantification of the reduction may lead to those disputes and difficulties of proof which the agreed sum is intended to eliminate. Furthermore, if the agreed sum is to be reduced in such circumstances to accord with the actual losses suffered by the purchaser, it might be suggested that the agreed sum should also be increased if the actual losses suffered by the purchaser exceed that sum. The absence of certainty created by the possibility of an increase or reduction of the agreed sum could deprive it of much of its utility.

H. Termination of contract and clauses for payment of agreed sum

21. Parties may wish to provide that, where an agreed sum is payable by way of increments with a limit on the amount recoverable (see paragraph 12, above), the works contract may not be terminated by the purchaser on the ground of the failure of performance for which the agreed sum is provided until the limit is reached. The parties may also wish to provide that termination after the limit is reached is not to affect the payment of an agreed sum which has become due before the termination (see chapter XXV, "Termination of contract"). If, however, termination by the purchaser occurs before the limit is reached (e.g., if the purchaser terminates for a failure other than the one for

which the agreed sum has been stipulated), the parties may wish to provide that the termination does not affect the right to recover an agreed sum due on the date of termination, but that no amount becomes due as the payment of an agreed sum after the termination.⁸ The purchaser may, however, be entitled to recover damages for losses suffered after the termination (see chapter XXV, "Termination of contract" and chapter XX, "Damages").

Footnotes to chapter XIX

¹*Illustrative liquidated damages clause or penalty clause for delay in completion*

"(1) If the contractor fails to complete the works on the date fixed for completion, the purchaser is entitled to recover from the contractor . . . (insert currency and amount) for each day of delay which elapses from that date till the date of completion."

²Studies on the nature and operation of liquidated damages and penalty clauses in international contracts are contained in *Yearbook of the United Nations Commission on International Trade Law, Volume X: 1979*, Part Two, I, A, and *Ibid., Volume XII: 1981*, Part Two, I, B, 1. "Uniform rules on contract clauses for an agreed sum due upon failure of performance" adopted by the Commission are set forth in the *Report of the United Nations Commission on International Trade Law on the work of its sixteenth session (A/38/17)*, Annex 1 (*Yearbook of the United Nations Commission on International Trade Law, Volume XIV: 1983*, Part One, I, A). By its resolution A/RES/38/135 of 19 December 1983, the General Assembly recommended that States should, where appropriate, implement the uniform rules in the form of either a model law or a convention. The uniform rules (hereinafter referred to as *Uniform Rules*) may be used to assist in resolving certain issues which arise in regard to liquidated damages and penalty clauses.

³*Illustrative provision (delay in completion)*

"(2) Without prejudice to any right to recover the sum referred to in paragraph (1) of this clause, the purchaser is entitled to require the contractor to complete the works."

⁴*Illustrative provision (delay in completion)*

"(3) Without prejudice to any right to recover the sum referred to in paragraph (1) of this clause, no damages are recoverable in respect of the delay in completion referred to in that paragraph for any period in respect of which the sum referred to in that paragraph is payable."

⁵*Illustrative provision (delay in completion)*

"(4) The amount payable under paragraph (1) of this clause cannot exceed a maximum of . . . (insert currency and amount)."

⁶*Illustrative provision (delay in completion)*

"(5) The maximum specified in paragraph (4) of this clause does not apply to a failure to perform with the intent to cause loss, or which occurred recklessly and with knowledge that loss would probably result."

⁷*Illustrative provision (delay in completion)*

"(6) Without prejudice to any other remedy to which the purchaser may be entitled to recover the sum referred to in paragraph (1) of this clause, he is entitled to deduct that sum, in whole or in part, from any sums due from him to the contractor, either under this contract, or under any other contract between the purchaser and the contractor."

⁸*Illustrative provision (delay in completion)*

"(7) (a) The purchaser is entitled to terminate the contract on the ground of the delay in completion specified in paragraph (1) of this clause after the sum payable under that paragraph reaches the maximum specified in paragraph (4).

(b) If the delay specified in paragraph (1) of this clause occurs, and the contract is terminated by the purchaser for reasons other than that delay before the sum payable under that paragraph reaches the maximum specified in paragraph (4), this clause will not apply after the time of termination, and the purchaser is entitled to recover damages from the contractor for losses suffered after that time by reason of the delay in completion. The purchaser is also entitled to recover the sum which is due under paragraph (1) at the time of termination."

Chapter XX. Damages

SUMMARY

The law applicable to the contract will determine the conditions under which, and the extent to which, a party who fails to perform a contractual obligation is liable to pay damages. The legal rules on some issues relating to liability may be mandatory, while on other issues the legal rules may be capable of modification by the parties. Most legal systems, however, permit the parties to settle through contract provisions issues relating to the extent to which damages may be recoverable (paragraph 1).

The parties may wish to leave to the applicable law the determination of the conditions under which, and the extent to which, damages are recoverable from a party who has failed to perform. However, if they adopt this approach, the parties should include in their contract the other remedies recommended in the *Guide* for a failure to perform only after careful consideration, since these remedies may be inconsistent with the rules governing the recovery of damages under the applicable law (paragraph 2).

Alternatively, the parties may provide in the contract that a party who fails to perform an obligation is liable to pay damages. They may also wish to include an exemption clause which would exclude this liability in specified circumstances. They may also wish to determine the extent to which the party who is aggrieved by the failure to perform is to be compensated (paragraph 3).

Damages may be distinguished in certain respects from payment of an agreed sum and from interest (paragraph 4). The purchaser may also arrange for security to compensate him in the event of a failure to perform by the contractor, or may take out insurance to obtain financial protection (paragraph 5). Moreover, the contract or the law applicable to the contract may provide that one party is to compensate the other in circumstances where there has been no failure to perform by the party from whom compensation is payable (paragraph 6).

Different approaches are available to identify the kinds of losses for which an aggrieved party is entitled to compensation (paragraph 7). In respect of compensation for lost profits, different approaches are available to delimit the amount of compensation payable (paragraph 8).

The contract may exclude the recovery of compensation for losses which the party failing to perform could not have been reasonably expected to foresee. The contract may specify whether foreseeability is to be determined at the time of entering into the contract, or at the time of the failure to perform. Furthermore, the contract may clarify whether the aspect to be foreseen is the kind or the amount of the losses suffered (paragraphs 9 and 10). The parties may also wish to decide on the mechanism by which losses which are causally remote from the failure to perform are excluded from compensation (paragraphs 11 and 12).

If benefits or savings are gained by the aggrieved party from a failure to perform, the parties may provide that they are to be deducted from losses resulting from the failure in determining the amount to be paid as compensation (paragraph 13). The parties may wish to consider whether the contract is to limit the amount of damages recoverable, and, if so, how the limitation is to be determined in the contract (paragraph 14).

The parties may wish to provide that the aggrieved party is obligated to mitigate his losses. They may provide that if he does not do so, he may not be entitled to compensation for losses which could have been prevented if he had fulfilled his obligation (paragraph 15).

Defective construction may result in death or personal injury to third persons, or damage to their property. Liability for damages to the third persons in those cases is often determined by mandatory extra-contractual legal rules. The parties may, however, wish to provide for the internal allocation of risks between them in respect of damages paid to third persons (paragraphs 16 to 18).

The parties may wish to determine in which currency or currencies damages are to be paid (paragraph 19).

A. General remarks

1. The law applicable to the contract (see chapter XXVIII, "Choice of law", paragraph 1) will determine the conditions under which, and the extent to which, a party who fails to perform a contractual obligation is liable to pay damages. The damages serve to compensate the aggrieved party for losses suffered as a result of that failure. The conditions under which the liability to pay damages arises differ under various legal systems. In addition, the legal rules on some issues relating to liability may be mandatory, while on other issues the legal rules may be capable of modification by the parties. Most legal systems, however, permit the parties to settle through contract provisions the issues discussed in this chapter relating to the extent to which damages may be recoverable. However, in formulating provisions regulating particular issues, the parties should make sure that they have the power to do so under the law applicable to the contract.

2. The parties may wish to leave to the law applicable to the contract the determination of the conditions under which, and the extent to which, damages are recoverable from a party who has failed to perform. Even when the rules of the law applicable to the contract are not mandatory, the parties may wish to adopt this approach if the rules of the applicable law settle in an appropriate manner the issues which arise in regard to the recovery of damages for failure to perform a works contract. However, if they adopt this approach, the parties should include in their contract the other remedies recommended in the *Guide* for a failure to perform only after careful consideration, since those remedies may in some instances lead to inconsistencies with the rules governing the recovery of damages under the applicable law.

3. In many cases, it may be advisable for the parties to deal in the contract with the issues that could arise in relation to damages. If they provide for an obligation to pay damages, they may also wish to include a clause (referred to in this *Guide* as an exemption clause: see chapter XXI, "Exemption clauses") which would negate this obligation in certain circumstances (e.g., if performance is

prevented by a specified kind of impediment). The parties may also wish to determine the extent to which a party who is aggrieved by a failure of the other party to perform is to be compensated. The latter issue is discussed in section C, below.

B. Damages distinguished from other remedies and compensation

4. Damages may be distinguished from obligations under clauses for payment of an agreed sum (see chapter XIX, "Liquidated damages and penalty clauses") in that the amount to be paid as damages is assessed after failure to perform has occurred so as to compensate for the losses proved to have been suffered by the aggrieved party; on the other hand, obligation under clauses for payment of an agreed sum involves payment of an amount agreed upon at the time the contract is entered into and payable by a party who fails to perform an obligation without proof of loss by the aggrieved party. Interest, which consists of a sum payable by a party whose failure to perform consists of the non-payment of money, is discussed in chapter XVIII, "Delay, defects and other failures to perform", paragraphs 53 to 56.

5. In addition to his potential rights under the contract to damages or to the payment of an agreed sum, the purchaser may arrange for some form of security upon which he can rely to compensate him in the event of a failure to perform by the contractor. This security is discussed in chapter XVII, "Security for performance", paragraphs 10 to 12. A party may also take out insurance to obtain financial protection against a failure to perform by the other party (see chapter XVI, "Insurance", paragraph 28). Other remedies which may be available upon a failure to perform are discussed in chapter XVIII, "Delay, defects and other failures to perform".

6. The contract or the law applicable to the contract may provide that one party is to compensate the other even in circumstances where there has been no failure to perform by the party by whom the compensation is payable. Instances where such compensation is payable are referred to in the *Guide*. For example, such compensation may be payable by a purchaser who suspends or terminates the contract for convenience (see chapter XXIV, "Suspension of construction", paragraphs 15 and 16, and chapter XXV, "Termination of contract", paragraphs 34 and 35).

C. Liability for damages

1. *Types of losses*

7. The parties may wish to provide that an aggrieved party is entitled to be compensated for all losses caused by a failure to perform, except for certain kinds of losses which are expressly excluded (see paragraphs 9 to 12, below). An alternative approach may be to provide that an aggrieved party is entitled to be compensated only for certain kinds of losses expressly mentioned in the contract. Provisions of both kinds may also operate as a limitation of the damages recoverable (see sub-section 5, below). The kinds of losses which the parties might wish to take into account in formulating provisions dealing with the recovery of damages are as follows:

(a) A diminution in the value of assets of the aggrieved party not supplied by the other, e.g., damage to property of a party not supplied by the other party resulting from defects in equipment supplied or construction effected by the other;

(b) Expenses reasonably incurred by the aggrieved party which would not have been incurred if the other party had performed his obligations, e.g., wages paid to personnel hired by the contractor to commence construction during a period in which construction cannot be commenced because of a failure by the purchaser to hand over the site;

(c) Payments which the aggrieved party makes to a third person by reason of a liability to make those payments arising as a result of a failure to perform by the other party;

(d) Loss of the profits which would have accrued to the aggrieved party if the contract had been properly performed.

8. It may often be difficult to determine the amount of lost profits; furthermore, this amount could potentially be very large. As a result, contractors are reluctant to assume unlimited liability for lost profits. In addition, such unlimited liability may not be insurable. One approach to limiting liability may be to provide under a clause for the payment of an agreed sum to compensate for lost profits (see chapter XIX, "Liquidated damages and penalty clauses"). Another approach may be to restrict liability for lost profits only to certain cases of delay or defective performance. Yet another approach may be for the contract to limit compensation for lost profits to a certain amount or to profits lost during a limited period of time after a failure to perform.

2. *Unforeseeable losses*

9. The parties may wish to exclude the recovery of compensation by the aggrieved party for losses which the party failing to perform could not have been reasonably expected to foresee. The relevant time for determining foreseeability may be either the time of entering into the contract or the time of the failure. The former time may be justified on the basis that, when he entered into the contract, the party failing to perform assumed those risks of loss which he could reasonably have foreseen at that time as the consequences of his failures to perform. Because of the long-term and complex character of a works contract, however, many losses which occur would not have been foreseeable at the time of entering into the contract. Accordingly, it may also be appropriate to fix the time at which the failure to perform occurs as the time relevant for determining foreseeability. Such a stipulation would expand the scope of recovery since a particular type of loss may become foreseeable between the time of entering into the contract and the time of the failure to perform. One drawback of the latter method, however, is that in cases other than delay it might sometimes be difficult to establish the time of the failure.

10. The parties may wish to clarify in the contract the aspect of the loss which must be foreseen to entail liability. For example, they may provide that the aspect to be foreseen is the kind of the loss suffered (see paragraph 7, above). Alternatively, they may provide that the aspect to be foreseen is the amount of the loss, and that no damages exceeding that amount are recoverable.¹

3. *Losses causally remote from failure to perform*

11. As a result of a failure to perform, an aggrieved party may suffer losses whose causal connection with the failure to perform is remote. Most legal systems have rules for determining when compensation is not recoverable for losses because they are too remote. The parties may therefore wish to leave this issue to be resolved under the rules of the law applicable to the contract. In addition, if the parties have identified specific kinds of losses which they wish to exclude from compensation because they would be too remote, the parties may so provide.

12. Parties sometimes seek to resolve the issue of excluding compensation for remote losses by providing that no compensation is recoverable for "indirect" or "consequential" losses. However, the terms "indirect" and "consequential" are vague and could give rise to differing interpretations. The parties may therefore find it advisable not to adopt this approach, unless the law applicable to the contract uses these terms to resolve the issue of excluding compensation for remote losses.

4. *Benefits gained from failure to perform*

13. A failure to perform may result in some benefits or savings to the aggrieved party (for example, he may save certain costs in the operation of the works which he would have incurred if there were no failure). The parties may provide that those benefits or savings are to be deducted from losses in determining the amount to be paid as compensation. The parties may wish to provide that insurance indemnification received under a policy covering losses caused by a failure to perform do not have to be taken into account, as the indemnification is not a benefit resulting from the failure to perform. It may also be noted that when the aggrieved party receives insurance indemnification for the losses suffered, the claim for damages may be subjected to subrogation by, or assignment to, the insurer to the extent of losses indemnified. A reduction of the damages payable to the aggrieved party by the amount of the insurance payment received by him could prejudice the insurer's rights against the party failing to perform, and could be a violation of the insurance policy.

5. *Limitation of amount*

14. The parties may wish to consider whether the contract is to include an overall limit upon the amount of damages recoverable from the contractor in respect of all possible failures to perform by him. The amount of such a limit may be determined as a fixed sum. Alternatively, the amount may be determined as a percentage of the price of the works, as the amount recoverable by the party failing to perform under insurance covering that failure to perform, or as the latter amount together with a percentage of the price. In contracts in which the exact price is not known at the time of entering into the contract (for example, in the case of a cost-reimbursable contract) a combination of these approaches may be used, for example, by limiting damages to the greater of a percentage or a specified amount. A clause for the payment of an agreed sum can also serve as a limitation upon the extent of

recovery (see chapter XIX, "Liquidated damages and penalty clauses", paragraph 3). Parties may, however, wish to provide that a limitation of amount contained in the contract is inoperative if certain types of failures to perform occur (e.g., where the failure to perform consists of an act or omission done with the intent to cause loss, or recklessly and with knowledge that loss would probably result).

6. *Mitigation of losses*

15. Mandatory rules of the applicable law often require an aggrieved party to endeavour to mitigate the losses resulting from a failure to perform. If the applicable law does not contain such rules, or if the rules are unsuitable to a works contract, the parties may wish to provide in the contract that the aggrieved party must endeavour to mitigate his losses. The contract may further provide that, if the aggrieved party fails to fulfill his obligation to mitigate his losses, he is not entitled to compensation for losses which could have been prevented if he had fulfilled this obligation. However, the aggrieved party may be obligated under the contract to take only measures which can reasonably be expected to mitigate the losses and which are reasonable for a party in his position to take (for example, he need not take any measures which might endanger his own commercial reputation or which are too onerous). If the aggrieved party takes reasonable measures he may be entitled, subject to limitations contained in the contract or imposed by the law applicable to the contract, to recover compensation for his losses, including costs reasonably incurred in taking those mitigating measures. He may be so entitled even if the measures were unsuccessful.²

D. *Personal injury and damage to property of third persons*

16. Defective construction may result in the death of or personal injury to the employees of the purchaser or other third persons, or in damage to their property. The issues concerning damages to be paid to third persons in such cases are complex, and may be governed not by rules of the law applicable to the contract governing contractual liability, but rather by applicable legal rules governing extra-contractual liability. The latter rules are often mandatory. Moreover, the contract cannot limit the liability of the contractor or the purchaser to compensate third persons who are not parties to the contract. The parties may wish to provide for the internal allocation of risks between them in respect of damages to be paid to third persons due to death or personal injury or damage to their property, to the extent that this allocation is not governed by mandatory legal rules. The parties may also wish to provide for insurance against such risks (see chapter XVI, "Insurance", paragraph 36).

17. If a person suffers personal injury or damage to his property as a result of the construction, and brings a claim against the purchaser, the contract may obligate the contractor to indemnify the purchaser against such a claim to the extent of the purchaser's liability. Alternatively, the contract may provide for an obligation to indemnify only if the injury or damage was caused by the contractor's failure to use proper skill and care in constructing the works. The extent to which the contractor may be obligated to indemnify the purchaser

against claims arising from construction effected by subcontractors employed by the contractor is dealt with in chapter XI, "Subcontracting", paragraphs 27 and 28.

18. The purchaser against whom a claim is made in respect of injury or damage to property of a third person may be obligated to notify the contractor of that claim, at least in those instances where he proposes to rely on the contractor's indemnity (see previous paragraph). The contractor may be entitled, if he wishes, to participate in all negotiations for the settlement of the claim and to join in any legal proceedings which are instituted, to the extent permitted by the law of the country where the legal proceedings are instituted.

E. Currency of damages

19. As a general principle, the contract may require damages to be paid in the same currency in which the price is to be paid. However, in some cases, in particular if the price is to be paid in a currency which is not freely convertible, the contract may provide for damages to be paid in the currency in which the losses have been suffered (e.g., if, as a result of the failure to perform, the aggrieved party is obligated to pay compensation to a third person in a freely convertible currency, the damages in respect of the payment of such compensation may be paid to the aggrieved party in the freely convertible currency).

Footnotes to chapter XX

¹Illustrative provision

"Subject to the other provisions of the contract, damages are recoverable [only in respect of a kind of loss] [only in the amount of the loss] which the party failing to perform foresaw or could have been reasonably expected to foresee at the time of [entering into the contract] [the failure to perform] in the light of the facts and matters of which he then knew or could reasonably have been expected to know, as a possible consequence of the failure to perform."

²Illustrative provision

"A party who suffers loss as a result of a failure to perform by the other party must take all measures which he can reasonably be expected to take to mitigate the loss. If he fails to take those measures, compensation is not recoverable for any loss which could have been prevented by those measures. If he takes those measures, he is, subject to limitations on recovery contained in this contract, entitled to recover compensation for the full extent of his loss, including costs reasonably incurred by him in taking those measures, even if those measures were not successful in mitigating the loss."

Chapter XXI. Exemption clauses

SUMMARY

During the course of construction, events may occur which impede the performance by a party of his contractual obligations. The present chapter concerns clauses under which a party who fails to perform a contractual obligation due to an impediment is exempted from certain legal consequences of the failure. It would be in the interest of the purchaser if the scope of the exemption clause were limited, both as to the events which constitute exempting impediments and the legal consequences of exempting impediments. The parties may wish to enable both parties to invoke an exemption clause (paragraphs 1 to 4).

Rules in some legal systems concerning exemption from legal consequences of a failure to perform may lead to results which are incompatible with the circumstances and needs of international trade. The parties may, therefore, wish to include in the contract an exemption clause defining exempting impediments and specifying the legal consequences of those impediments (paragraphs 5 to 7).

In order to limit the scope of an exemption clause, the parties may wish to provide that a party failing to perform is exempt only from the payment of damages or of an agreed sum to the other party (paragraph 8).

The parties might also limit the scope of the exemption clause by adopting a restricted definition of exempting impediments. One approach may be to provide only a general definition of exempting impediments (paragraphs 10 to 12). Another approach may be to provide a general definition together with an illustrative or exhaustive list of events to be considered exempting impediments, or a list of events to be considered exempting impediments whether or not they come within the general definition (paragraphs 13 to 16). A third approach may be to provide an exhaustive list of events to be considered exempting impediments without a general definition (paragraph 17). The parties may wish to consider various types of events to be included in a list of exempting impediments (paragraphs 18 to 22).

The scope of an exemption clause might be further clarified by expressly excluding some events which might otherwise come within the scope of the clause. The parties may wish to consider whether certain acts of a State or of State organs, such as the denial or withdrawal of a licence or approval, are to be regarded as exempting impediments (paragraphs 23 and 24).

The parties may wish to provide in the contract the conditions under which a contractor is exempt when his failure to perform is due to a failure by a third person engaged by him (paragraphs 25 and 26).

It is desirable for the contract to obligate a party invoking an exempting impediment to give written notice of the impediment to the other party. The contract might provide that a party who fails to give such notice loses his right to invoke the exempting impediment. Alternatively, the contract may provide that the party remains entitled to invoke the exempting

impediment, but that he is liable to compensate the other party for losses resulting from the failure. The contract might also require verification of an impediment for it to be relied upon. Further, the parties may wish to provide that, upon notification of an exempting impediment, they are to meet and consider what measures to take in order to prevent or limit the effects of the impediment (paragraphs 27 and 28).

A. General remarks

1. During the course of construction, events may occur which impede the performance by a party of his contractual obligations. These impediments may be of a physical nature, such as a natural disaster, or they may be of a legal nature, such as a change in the law in the purchaser's country after the contract is entered into preventing the use of certain equipment specified in the contract. The impediments may prevent performance by a party permanently or only temporarily. Under the law applicable to the contract, a permanent impediment may result in the termination of the contract.

2. A works contract may contain various types of provisions to deal with impediments to performance. The present chapter concerns clauses under which a party who fails to perform a contractual obligation due to an impediment is exempted from certain legal consequences of the failure. Impediments which give rise to such an exemption are referred to in the *Guide* as "exempting impediments". A party who is faced with an impediment to performance might also have other rights under the contract. For example, the purchaser might be permitted to vary the contractual term affected by the impediment under a variation clause (see chapter XXIII, "Variation clauses", paragraphs 5 to 19); a party might be permitted to terminate the contract (see chapter XXV, "Termination of contract", paragraph 22); or a party might have rights under a hardship clause (for the relationship between hardship clauses and exemption clauses, see chapter XXII, "Hardship clauses", paragraph 2).

3. While the purchaser must usually perform only a single principal obligation (i.e., to pay the price), the contractor must normally perform a number of major obligations in the course of constructing the works. The contractor, therefore, will have more interest in an exemption clause than the purchaser. However, the financial consequences to a purchaser from a failure of the contractor to perform could be severe. It would, therefore, be in the interest of the purchaser if the scope of the exemption clause were limited, both as to the events which constituted exempting impediments (see paragraphs 9 to 23, below) and the legal consequences of exempting impediments (see paragraph 8, below).

4. Even though the performance of the contractor is more likely to be affected by an impediment than is the performance of the purchaser, cases could arise in which an impediment affects the purchaser's performance. The purchaser might, for example, be prevented by a legal impediment from making a payment to the contractor; or, he might be prevented by a physical impediment from performing certain limited construction obligations he has undertaken. The parties may therefore wish to enable both parties to invoke the exemption clause.

5. Many legal systems contain rules under which a party who fails to perform a contractual obligation is exempted from certain legal consequences of his failure. However, those rules may lead to results which are incompatible with

the circumstances and needs of international trade. Therefore, the parties may wish to include in their contract an exemption clause defining exempting impediments and specifying the legal consequences of those impediments. In structuring an exemption clause, the parties should consider whether and the extent to which mandatory rules of the law applicable to the contract limit their power to do so. It is advisable for the parties to take note of the fact that using in the clause the same terminology in relation to exemption that is used in the law applicable to the contract will often carry with it certain legal implications that may not be consistent with the parties' intentions.

6. The treatment in various legal systems of the subject of exemption differs with respect to the conceptual underpinnings of the subject and the terminology used. In relation to exemptions in the context of sales contracts, these differences have been bridged by the United Nations Convention on Contracts for the International Sale of Goods (Vienna, 1980), article 79.¹ The approach adopted in that Convention has been designed to take into account the particular circumstances and needs of international trade. The parties may find that approach to be a useful guide in formulating an exemption clause in a works contract. The discussion in this chapter of the legal consequences of exempting impediments and the definition of exempting impediments (sections B and C, below, respectively) is based upon the approach taken in the Convention.

7. The question of exemption, and its relation to remedies for a failure to perform, has implications with respect to a number of other issues discussed in the *Guide*. The discussion of those issues conforms to the approach taken in this chapter with respect to exemptions. To the extent that the parties adopt a different approach, the discussion of those other issues, and the suggested approaches for dealing with them, may not apply.

B. Legal consequences of exempting impediments

8. The parties may wish to provide that a party who fails to perform due to an exempting impediment is exempt from the payment of damages or an agreed sum to the other party. If the parties wish to treat differently other remedies for a failure to perform that might otherwise arise under the contract or the law applicable to the contract, such as enforcement of performance (see chapter XVIII, "Delay, defects and other failures to perform") or termination of the contract (see chapter XXV, "Termination of contract"), they should so provide in the contract. References to exempting impediments throughout this *Guide* assume that the exemption relates only to the payment of damages or of an agreed sum, and not to other remedies for failure to perform. Additional legal consequences that the contract may provide in cases of exempting impediments are discussed in other chapters (see, e.g., chapter VII, "Price and payment conditions", paragraph 53).

C. Definition of exempting impediments

9. The parties might also limit the scope of the exemption clause by adopting a restricted definition of exempting impediments. They may adopt one of several approaches in defining exempting impediments, for example:

- (a) Providing only a general definition of exempting impediments;
- (b) Combining a general definition with a list of exempting impediments;
- (c) Providing only an exhaustive list of exempting impediments.

1. *General definition of exempting impediments*

10. A general definition of exempting impediments would enable the parties to ensure that all events having the characteristics set forth in the definition will be considered as exempting impediments. This approach would avoid the need to compile a list of exempting impediments, and would avoid the risk of excluding from the list events which the parties would have considered as exempting impediments. On the other hand, it could be difficult in some cases to determine whether or not a particular event was covered by the general definition. The parties may wish to consider including the following elements in a general definition.

11. As a first element, the parties may wish to stipulate that performance of a contractual obligation must be prevented by a physical or legal impediment (see paragraph 1, above), and not, for instance, only made inconvenient or more expensive. The parties may wish to provide that if an impediment prevents a party from performing his obligation during only a temporary period of time, he is exempt in respect of a failure to perform only during that period.

12. As an additional element, the parties may wish to provide that the impediment must be beyond the control of the party failing to perform and that he could not reasonably be expected to have taken the impediment into account at the time the contract was entered into or to have avoided or overcome the impediment or its consequences.²

2. *General definition followed by list of exempting impediments*

13. A general definition of exempting impediments might be followed by either an illustrative or exhaustive list of events which are to be regarded as exempting impediments.³ This approach would combine the flexibility afforded by a general definition with the certainty arising from the specification of exempting impediments.

(a) *General definition followed by illustrative list*

14. Examples of exempting impediments to be included in an illustrative list may be chosen so as to clarify the scope of the general definition. Such an approach could give guidance to the parties and to persons or tribunals settling disputes under the contract as to the intended scope of the general definition. In addition, it could ensure that the events set forth in the list would be treated as exempting impediments if they met the criteria set forth in the general definition.

(b) *General definition followed by exhaustive list*

15. A general definition of exempting impediments might be followed by an exhaustive list of events which are to be regarded as exempting impediments if

they meet the criteria contained in the general definition. An exhaustive list may be inadvisable unless the parties are certain that they can foresee and list all events which they wish to be regarded as exempting impediments.

(c) *General definition followed by additional list of exempting impediments whether or not they come within definition*

16. A general definition of exempting impediments might be followed by a list of events which are to be regarded as exempting impediments whether or not they come within the general definition. This approach may be useful where parties choose a narrow general definition of exempting impediments, but wish certain events which do not fall within the scope of that definition to be regarded as exempting impediments. Since those events would constitute exempting impediments independently of the general definition, the remarks in paragraph 17, below, concerning safeguards which may be adopted when providing a list of exempting impediments without a general definition, are also applicable here.

3. *Exhaustive list of exempting impediments without general definition*

17. It is possible for an exemption clause simply to provide an exhaustive list of events which are to be considered exempting impediments, without a general definition. This approach has the disadvantage of not providing general criteria which the listed events must meet in order to be regarded as exempting impediments. If the approach is adopted, it would be advisable for the parties to set forth for each event criteria which must be met for the event to be regarded as an exempting impediment. For example, if the parties wish to specify "war" or "military activity" as an exempting impediment (see paragraph 20, below), it would be advisable to specify, for example, whether the commencement of hostilities involving the country where the construction site was located was sufficient or whether hostile action at the construction site must have occurred or be likely to occur.

4. *Possible exempting impediments*

18. If the parties set forth in the exemption clause a list of events which are to be considered exempting impediments, with or without a general definition, they may wish to consider whether it is desirable to include any of the following events in the list.

19. *Natural disasters.* Natural disasters such as storms, cyclones, floods or sandstorms may be normal conditions at a particular time of the year at the site. In such cases, the contract might preclude a party from invoking them as exempting impediments (see paragraph 12, above).

20. *War (whether declared or not) or other military activity.* It may be difficult to determine when a war or a particular military activity can be considered as preventing performance of an obligation. For instance, frequent air raids near the construction site may create a high risk to the safety of the contractor's employees, but may not actually prevent them from continuing with the construction. Moreover, it may be possible for a party to avoid a military

blockade by running the blockade, but in doing so he might face a high risk. It may be desirable, therefore, to specify clearly when a war or other military activity is considered to prevent performance (see, e.g., paragraph 17, above).

21. *Strikes, boycotts, go-slows and occupation of factories or premises by workers.* The parties may wish to consider whether and the extent to which these events are to be considered as exempting impediments. On the one hand, such events could in a real sense prevent the contractor from performing. On the other hand, the parties might consider that it was not advisable for a party to be exempted from the consequences of a failure to perform an obligation when the failure resulted from the conduct of his own employees. In addition, it may be difficult to determine whether or not strikes by employees and other labour disputes are avoidable by a party, and what measures the party might reasonably be expected to take to avoid or to end the strike or dispute (e.g., meeting the strikers' demands). In that connection, the parties may wish to provide that only strikes that do not arise from labour relations between the party and his employees (e.g., sympathy strikes) are to be regarded as exempting impediments. If, under the contract, the contractor is required to employ personnel of the purchaser, a strike by those personnel might in appropriate cases be regarded as an exempting impediment for the contractor.

22. *Shortages of raw materials needed for the construction.* The parties may wish to consider whether this is to be considered as an exempting impediment. They might, for example, wish to obligate the contractor to procure raw materials in time and to preclude his claiming an exemption if he fails to do so. In some cases, the contractor may fail to have the materials available on time due to a delay by his supplier. For those cases, however, it would be advisable for the contractor to ensure that under his contract with his supplier he is able to claim damages against the supplier for the delay.

5. *Exclusion of impediments*

23. Whichever approach to defining exempting impediments is adopted, the parties may wish further to clarify the scope of an exemption clause by expressly excluding some events which might otherwise come within the scope of the clause. For example, the parties may wish to preclude a party from claiming an exemption if he is prevented from performing due to his own adverse financial position. They may also wish to consider excluding from exempting impediments events which occur after a breach of contract by a party and which, but for the breach, would not have prevented performance by that party.

24. The parties may wish to consider whether certain acts of a State or of State organs are to be regarded as exempting impediments. A party may be required to secure a licence or other official approval for the performance of certain of his obligations. The contract might provide that if the licence or approval is refused by a State organ, or if it is granted but later withdrawn, the party who was required to obtain the licence or approval cannot rely on the refusal or withdrawal as an exempting impediment. The parties might consider that it is equitable for the loss caused by the failure to perform resulting from the absence of the licence or approval to be borne by the party who had the duty to obtain it, since that party undertook his obligations knowing of the

necessity to obtain the licence or approval and the possibility of its being refused. Moreover, it might be difficult for the other party to determine whether the measures taken to obtain the licence or approval were reasonable (see paragraph 12, above). The parties may wish to note that, under some legal systems, if a licence or approval is not granted, the contract is invalid, and the legal consequences of the failure of the party to obtain the licence or approval will be determined by the applicable law.

6. *Failure to perform by third person engaged by contractor*

25. It is common in a works contract for the contractor to engage third persons (e.g., subcontractors) to perform some of his obligations under the contract (see chapter XI, "Subcontracting"). Where the contractor fails to perform the obligation under the works contract due to a failure to perform by the third person, the question arises whether and to what extent the contractor is exempt from the payment of damages to the purchaser for that failure.

26. In general, the parties may consider it advisable to provide that the engagement by the contractor of a third person to perform the contractor's contractual obligation does not diminish or eliminate the contractor's liability to the purchaser for the performance of that obligation (see chapter XI, "Subcontracting", paragraphs 27 and 28). Consistently with that approach, the parties may wish to provide that a contractor is exempt from the payment of damages when his failure to perform is due to a failure by a third person engaged by him only if two conditions are satisfied: firstly, if the criteria for exempting the contractor under the exemption clause in the works contract are satisfied (for example, if the failure of the third person to perform was unavoidable and if the contractor could not reasonably be expected to have taken the failure into account at the time the contract was entered into or to have avoided or overcome the failure or its consequences); and secondly, if the third person would be exempt under the exemption clause in the works contract if that clause were contained in the contract between the contractor and the third person.⁴

D. Notification of impediments

27. It is desirable for the contract to obligate a party invoking an exempting impediment to give written notice of the impediment to the other party without undue delay after the party invoking the impediment learned or could reasonably have been expected to learn of the occurrence of the impediment. This notification could facilitate the taking of measures by the other party to mitigate the loss caused or which is likely to be caused by the failure of performance. The contract might require the notice to specify details of the impediment, together with evidence that performance by the party is prevented or is likely to be prevented, and, if possible, the anticipated duration of the impediment. The party invoking the exempting impediment might also be required to continue to keep the other party informed of all circumstances which may be relevant for an appraisal of the impediment and its effects, and to notify the other party of the cessation of the impediment. The contract might provide that a party who fails to notify in time the other party of the exempting impediment loses his right to invoke the exempting impediment. Alternatively,

the parties may provide that a party who fails to give the required notification in time remains entitled to invoke the clause, but is liable to compensate the other party for losses resulting from the failure. The contract might also require for an impediment to be relied upon that it be verified, for example, by a public authority, notary public, a consulate or chamber of commerce in the country where the impediment occurs.

28. Further, the parties may wish to provide that, upon notification of an exempting impediment, they are to meet and consider what measures to take in order to prevent or limit the effects of the impediment, and to prevent or mitigate any loss which may be caused by it. These measures might include variation of the contractual obligation affected by the impediment (see chapter XXIII, "Variation clauses"), or, in some cases, re-negotiation of the contract (see chapter XXII, "Hardship clauses").

Footnotes to chapter XXI

¹*Official Records of the United Nations Conference on Contracts for the International Sale of Goods* (United Nations publication, Sales No. E.81.IV.3).

²*Illustrative provision*

(General definition of exempting impediments)

"(1) A party is exempt from the payment of damages, or of an agreed sum, in respect of a failure to perform an obligation under this contract if he proves that the failure was due to a physical or legal impediment beyond his control and that he could not reasonably be expected to have taken the impediment into account at the time of the conclusion of the contract or to have avoided or overcome it or its consequences.

"(2) A party is exempt from the payment of damages or an agreed sum pursuant to the preceding paragraph in respect of a failure to perform only during the period of time when his performance was prevented by the impediment."

³*Illustrative provision*

(General definition followed by illustrative or exhaustive list)

"(1) [As fn. 2, para. (1)]

"(2) [*Illustrative list*]: The following are examples of events which are to be regarded as exempting impediments, provided they satisfy the criteria set forth in paragraph (1), above: . . . [*Exhaustive list*]: The following events are to be regarded as exempting impediments pursuant to paragraph (1), above, provided they satisfy the criteria set forth in that paragraph; and only those events are to be so regarded: . . .

"(3) [As fn. 2, para.(2)]."

⁴ *Illustrative provision*

"If the party's failure to perform an obligation is due to a failure to perform by a third person whom he has engaged to perform that obligation, the party is exempt pursuant to paragraph (1), above, only if:

"(a) with respect to the party, the criteria set forth in paragraph (1) are satisfied; and

"(b) the third person would be exempt if the provisions of paragraph (1) were applied to him."

Chapter XXII. Hardship clauses

SUMMARY

Hardship is a term that is used in the *Guide* to describe a change in economic, financial, legal, or technological factors which causes serious adverse economic consequences to a contracting party, thereby rendering more difficult the performance of his contractual obligations. A hardship clause usually defines hardship, and provides for renegotiation to adapt the contract to the new situation created by the hardship (paragraph 1). Hardship clauses are to be distinguished from exemption clauses (paragraph 2).

A hardship clause may be considered to have the advantage that renegotiation under it might avert a disruptive failure of performance by the party affected by the changed circumstances. The clause may also facilitate renegotiation by providing a framework within which it may be conducted (paragraph 3).

A hardship clause has, however, several disadvantages which may outweigh the advantages described above. The possibility of renegotiation makes the contract to some degree unstable, the definition of hardship tends to be imprecise and vague, and the inclusion of the clause may induce the advancement of spurious claims that hardship exists to avoid the performance of obligations (paragraph 4). Furthermore, the purchaser may in particular be disadvantaged because the contractor will potentially have more opportunities to invoke the clause than the purchaser (paragraph 5). The *Guide* deals with other clauses which may be included in the contract and which may apply when a change of circumstances causes serious adverse economic consequences to a party. The purchaser may wish to consider whether the inclusion of those clauses renders a hardship clause unnecessary (paragraph 6).

If, despite its disadvantages, the parties wish to include a hardship clause in the contract, it is advisable to draft it so as to reduce the uncertainty it might create as to the obligations of the parties. It may be acceptable for the clause to define hardship, and in addition to include a list of events on one or more of which alone a party can rely to invoke the clause (paragraphs 7 and 12). A restrictive definition of hardship may be adopted under which all required elements must be satisfied before hardship is deemed to occur (paragraphs 8 to 11). The parties may wish to consider the inclusion of other limitations to invoking a hardship clause, since those limitations may reduce the instability introduced into the contract by the clause (paragraph 13).

The parties may wish to decide whether, in the event of hardship occurring, they are to be obligated only to participate in renegotiations with a view to adapting the contract, or are to be obligated to adapt the contract after renegotiations (paragraph 14).

The parties may wish to provide procedures for facilitating renegotiation (paragraphs 15 to 17). The contract may also determine the point of time at which a failure to agree on adaptation after renegotiations may be deemed to occur (paragraph 18).

The parties may wish to facilitate the implementation of a hardship clause by providing guidelines to assist them in reaching a fair adaptation of the contract (paragraph 19). Since the circumstances which had changed and created the hardship may change once more and approximate to their previous condition, thus alleviating the hardship, the contract may provide how the contract is to be re-adapted if circumstances return to their previous condition (paragraph 20).

The parties may wish to determine the status of the contractual obligations of the parties during renegotiations. Where the parties are obligated only to participate in renegotiations, they may provide that the performance of the obligations of the parties which are alleged to be affected by the hardship is to continue in accordance with the original terms of the contract during the renegotiations (paragraph 21). Where the parties are obligated to adapt the contract after renegotiations, they may provide that the performance of the obligations is to continue both during renegotiations and, if the parties fail to agree on adaptation, during the ensuing dispute settlement proceedings. Alternatively, they may provide that the party invoking the hardship clause is entitled to interrupt the performance of the obligations (paragraph 22).

Where the contract obligates the parties to adapt the contract after renegotiations, it is advisable for the contract to provide for the consequences of a failure to agree on adaptation (paragraph 23).

A. General remarks

1. The term “hardship” as used in the *Guide* means a change in economic, financial, legal or technological factors that causes serious adverse economic consequences to a contracting party, thereby rendering more difficult the performance of his contractual obligations. A typical hardship clause has two main aspects. Firstly, it would define hardship and, secondly, it would provide for renegotiation to adapt the contract to the new situation created by the hardship. The legal effect of hardship clauses may vary under different legal systems. While they are recognized under some legal systems, they are unknown in others; in still other legal systems their validity has not been tested in legal proceedings.

2. Hardship clauses are to be distinguished from exemption clauses (see chapter XXI, “Exemption clauses”). A hardship clause as conceived in the *Guide* would apply when a change of circumstances makes the performance of a party’s obligations more onerous, but does not prevent that performance. An exemption clause as conceived in this *Guide* would apply only when a change of circumstances prevents performance. Thus, a hardship clause may apply where, after the contract is entered into, administrative regulations relating to environmental protection applicable to the construction change so as to introduce more stringent requirements which greatly increase the cost of construction. An exemption clause may apply where the regulations change so as to prevent further construction. The legal consequences resulting from the application of each type of clause as conceived in the *Guide* would also differ. A hardship clause would provide that, if hardship occurs, the contract is to be renegotiated (see previous paragraph). An exemption clause would provide that, if a failure to perform an obligation occurs as a result of exempting impediments, certain remedies, in particular the recovery of damages, are not available to the aggrieved party against the party who failed to perform.

3. The inclusion of a hardship clause may be considered to have the advantage that if a change of circumstances results in serious adverse economic consequences to a party, renegotiation of the contract under the clause might avert a disruptive failure of performance by the party affected by the changed circumstances. Although there is nothing to prevent parties from renegotiating even in the absence of a hardship clause, the clause may facilitate renegotiation by providing a framework within which the renegotiations may be conducted. Thus, the clause may include provisions which help to achieve an equitable outcome from the renegotiations (see paragraph 19, below) and may regulate the rights and obligations of the parties during renegotiations (see paragraphs 15 to 17 and 21 and 22, below).

4. A hardship clause has, however, considerable disadvantages which may outweigh the advantages mentioned above. The possibility of renegotiating the contract under a hardship clause makes the contract to some degree unstable. Furthermore, because of the nature of hardship, its definition tends to be imprecise and vague. Further disadvantages of a hardship clause are that the renegotiation may result in interruptions in the performance of obligations under the contract, and that the clause may induce the advancement of spurious claims that hardship exists as an excuse for avoiding the performance of obligations. In addition, where a hardship clause obligates the parties to adapt the contract after renegotiations (see paragraph 14, below), and the parties fail to reach agreement on the adaptation, there may be difficulties in securing an adaptation through dispute settlement proceedings (see paragraph 23, below).

5. A hardship clause may have particular disadvantages for a purchaser. While the purchaser has usually to perform only a single principal obligation (i.e., to pay the price), the contractor has to perform a number of obligations in the course of constructing the works. The contractor, therefore, will potentially have more opportunities to invoke the hardship clause than the purchaser. Accordingly, before agreeing to the inclusion of a hardship clause in the contract, the purchaser should carefully consider the possible adverse effects to him of that clause.

6. The *Guide* discusses other clauses which may be included in the contract and which may apply when circumstances change after the contract is entered into causing serious adverse economic consequences to a party. Of these other clauses, those having an objective closest to that of a hardship clause are index clauses and currency clauses. An index clause provides for the revision of the price when the cost of goods or services to be supplied by the contractor changes, and a currency clause provides for a revision of the price when there is a change in the exchange rate of the currency in which the price is to be paid in relation to a reference currency (see chapter VII, "Price and payment conditions", paragraphs 49 to 55, 58 and 59). These clauses deal with changes which are predictable and can be clearly identified in advance. Hence, the clauses can specify the modifications which are to be made to contract terms as a result of those changes, and the contract need not, as under a hardship clause, provide for renegotiation, with its attendant uncertainty of outcome. Where, as a result of changed circumstances, the purchaser wishes to alter the scope of the construction, he may do so within certain limits under a variation clause (see chapter XXIII, "Variation clauses", paragraphs 5 to 18). Where the changed circumstances make it advisable for the purchaser to suspend construction, he

may do so under a clause providing for suspension (see chapter XXIV, "Suspension of construction", paragraphs 3 and 4). Where the change is so drastic that the project ceases to be viable, the purchaser may, under a termination clause, terminate for convenience (see chapter XXV, "Termination of contract", paragraphs 17 and 18). The purchaser may therefore wish to consider whether the inclusion of the clauses mentioned above renders a hardship clause unnecessary. The discussion of hardship clauses in the *Guide* is not to be regarded as an indication that their inclusion in contracts is desirable.

B. Approach to drafting hardship clause

7. If, despite its disadvantages, the parties wish to include a hardship clause in the contract, it is advisable to draft it so as to reduce the uncertainty it might create as to the obligations of the parties. The use of open-ended and vague criteria (e.g., "changed circumstances", "upsetting the initial equilibrium of the contract", and "causing serious economic consequences") to determine the application of the clause is to be avoided. Providing a list of hardship events which is not exhaustive will also lead to uncertainty. An acceptable approach might be to set forth in the clause a definition of when hardship may be said to occur (see sub-section 1, below), together with an exhaustive list of the events on one or more of which a party can rely to invoke the clause (see sub-section 2, below). Under this approach, the clause can be invoked only if an event specified in the list occurs which results in the hardship defined in the clause.

1. Definition of hardship

8. The parties may find it advisable to adopt a restrictive definition of hardship under which all the following elements must be satisfied before hardship can be deemed to occur: (a) a change of the circumstances which existed at the time the contract was entered into; (b) the change being unavoidable and one which the party invoking the clause could not reasonably be expected to have taken into account; and (c) the change resulting in serious adverse economic consequences to that party.

(a) Changed circumstances

9. The scope of the hardship clause may be made more clear if, instead of merely requiring a "change of circumstances", the parties were to require that the changes occur in particular areas. For example, the parties may provide that the change must relate to specific economic, financial, legal, or technological circumstances.

(b) Nature of change

10. The parties may wish to provide that the change of circumstances must have been beyond the control of the party invoking the hardship clause and that he could not reasonably be expected to have taken the change of circumstances into account at the time the contract was entered into or to have avoided or overcome the change of circumstances or its consequences.

(c) *Serious adverse economic consequences*

11. The parties may wish to define what adverse economic consequences to the party invoking the hardship clause are to be regarded as serious. The purpose of that definition would be to seek to prevent a party from invoking a hardship clause upon the occurrence of adverse economic consequences the risk of which he must fairly be regarded as having assumed at the time he entered into the contract. One approach may be to use a general term to quantify the required degree of seriousness, e.g., that the change of circumstances must have caused "a substantial financial burden" or "undue prejudice" to the party invoking the clause. A preferable approach may be to quantify the seriousness in a more specific manner, e.g., by providing that the change of circumstances must result in cost increases which exceed a specified percentage of the price.

2. *Exhaustive list of events*

12. The parties may wish to provide that a party may invoke the hardship clause only if he establishes that one or more of the events enumerated in an exhaustive list has occurred and has resulted in hardship to him as defined in the clause. Illustrative examples of events which might be included in a list are a severe reduction in the size of the purchaser's anticipated market for the output of the works, or an increase in the cost of raw materials needed to produce the output of the works which results in a severe reduction in its profitability. Similar events may occur causing hardship to the contractor.

3. *Other possible limitations*

13. The parties may wish to consider the inclusion of a provision that the hardship clause cannot be invoked by a party in respect of an obligation imposed on him if, at the time the hardship occurs, he has already failed to perform that obligation. The application of the clause may also be restricted by providing that it cannot be invoked for a certain period of time after the date the parties entered into the contract. Furthermore, the parties may place a limit on the number of times that a party may invoke the clause, or agree that the clause may be invoked only a specified number of times during a specified time period. Such limitations may reduce the instability which a hardship clause introduces into the contract.

C. Renegotiation

14. The hardship clause may provide for the renegotiation of the contract if hardship occurs. The parties may wish to decide whether the contract should obligate them only to participate in renegotiations with a view to adapting the contract, or should obligate them to adapt the contract after renegotiations. The parties may at the time of entering into the contract, or subsequently, agree upon a conciliator who could assist them in an independent and impartial manner in their attempt to adapt the contract (see chapter XXIX, "Settlement of disputes", paragraphs 12 to 15). If the contract obligates the parties to adapt the contract after renegotiations, it may be desirable to provide that, upon a failure by the parties to reach agreement on adaptation, the contract is to be adapted by a court, arbitral tribunal or referee (see paragraph 23, below).

1. *Procedure for renegotiation*

(a) *Notification*

15. The contract may provide that a party may invoke the hardship clause only by notification in writing to the other party. It may be provided that the notification must be made within a specified period of time after the occurrence of the change of circumstances relied upon as constituting hardship, must set forth sufficient detail concerning the change of circumstances and its consequences to enable the other party to evaluate the effects of the change, and must indicate the nature of the adaptation sought by the party invoking the clause.

16. The party notified may be obligated to respond in writing within a specified period of time of the notification. It may be provided that, if he considers that the grounds set out in the notification are not sufficient to justify renegotiations, he must set forth in the response the reasons for that conclusion. If he is willing to participate in renegotiations, he may be obligated to indicate the nature of an adaptation of the contract which he considers to be appropriate.

17. The parties may wish to provide that, if the party entitled to invoke the hardship clause fails to give the required notification within the specified period, he loses his right to invoke the clause. This approach may reduce belated claims of hardship made with a view to avoiding the performance of obligations which have become onerous. Alternatively, the parties may provide that a party who fails to give the required notification in time remains entitled to invoke the clause, but is liable to compensate the other party for losses resulting from the delay in notification.

(b) *Time-limit for renegotiation*

18. It is advisable for the contract to determine the point of time at which a failure to agree on adaptation of the contract after renegotiations may be deemed to occur. The contract may provide that a failure occurs if no agreement is reached within a specified time period after notification of a hardship situation.

(c) *Guidelines for renegotiation*

19. The parties may wish to facilitate the implementation of a hardship clause by providing guidelines to assist them in reaching a fair adaptation of the contract. They may, for example, provide that the original terms of the contract are to be modified only to the extent required to rectify the imbalance in the contract created by the hardship event. Other guidelines which may be provided include the following: that the principle of good faith should apply in determining the required adaptation; that adaptation should seek to ensure full performance of contractual obligations to the extent possible; that there should be no undue prejudice to either party arising from the adaptation; and that the adaptation should seek to maintain the pre-existing balance of interests between the parties.

20. The circumstances which changed and created the hardship may change once more and approximate to their previous condition, thereby alleviating the hardship. The contract may provide that the likely duration of the change of circumstances is to be taken into account when adapting the contract, and that the adaptation should, to the extent possible, indicate how the contract is to be re-adapted if circumstances return to their previous condition.

(d) *Status of obligations during renegotiation*

21. The parties may wish to determine the status of the contractual obligations of the parties during renegotiations. Where the parties are obligated only to participate in renegotiations with a view to adapting the contract, they may wish to provide that the performance of the obligations of the parties which are alleged to be affected by the hardship is to continue in accordance with the original terms of the contract during the renegotiations. If the parties after renegotiations agree on an adaptation, the terms of the adaptation could make allowance for losses caused to the party affected by the hardship by reason of the continued performance of the obligations during renegotiations.

22. Where the parties are obligated to adapt the contract after renegotiations (see paragraph 14, above), one of two approaches may be adopted. The contract may provide that the performance of the obligations of the parties which are alleged to be affected by the hardship is to continue both during the renegotiations and, if the parties fail to agree on adaptation, during the ensuing dispute settlement proceedings, unless the court, arbitral tribunal or referee settling the dispute decides otherwise. The terms of the adaptation could make allowance for losses caused to the party affected by the hardship by reason of the continued performance of the obligations. Providing that performance is to continue may reduce the making of spurious claims of hardship by a party who wishes to avoid the performance of certain obligations. An alternative approach is for the contract to provide that the party invoking the hardship clause is entitled to interrupt the performance of the obligations alleged to be affected by the hardship. The terms of the adaptation could settle in what manner, if at all, those obligations are to be performed subsequent to the adaptation. If it is decided in dispute settlement proceedings that the party invoking the hardship clause had no right to invoke the clause, it may be provided that the other party is entitled to be compensated for losses caused to him by the interruption. Providing for the interruption of the performance of obligations might make it easier to adapt the contract, as continued performance may result in prejudice to the party affected by the hardship, and it may be difficult to remedy the prejudice by adaptation.

2. *Failure to fulfil obligation to adapt*

23. Where the contract obligates the parties to adapt the contract after renegotiations (see paragraph 14, above), it is advisable for the contract to provide for the consequences of a failure to agree on adaptation. The contract may provide that the party invoking the hardship clause is entitled to institute judicial or arbitral proceedings for the adaptation of the contract, or may provide that a referee is to decide whether and in what way the contract is to be adapted. These methods of resolving the dispute between the parties are dealt with in chapter XXIX, "Settlement of disputes". The parties should be aware that some legal systems do not permit adaptation in judicial or arbitral proceedings.

Chapter XXIII. Variation clauses

SUMMARY

As used in the *Guide*, the term "variation" refers to a change in an aspect of the construction of the works from that required under the contract documents. During the course of construction of the works, situations may be encountered which make it necessary or advisable to vary certain aspects of the construction. It is advisable for the contract to contain provisions setting out the circumstances under which a contractor is obligated to implement a variation. In formulating contractual provisions concerning variations, the parties should attempt to strike an appropriate balance among various interests (paragraphs 1 to 4).

The parties may wish to consider three basic approaches to variations sought by the purchaser. Under the first approach, the contract would obligate the contractor to implement a variation ordered by the purchaser, so long as the variation ordered met certain criteria set forth in the contract. Under the second approach, the contract would obligate the contractor to implement a variation ordered by the purchaser unless he objected to it upon reasonable or specified grounds. Under the third approach, a variation would require the written consent of the contractor. The contract could incorporate one or any combination of these approaches. It would be useful for the contract to contain provisions concerning the settlement of disputes between the parties as to whether the purchaser was entitled to order a variation (paragraphs 5 to 7).

The parties may, in some cases, consider it appropriate to provide in the contract for reasonable adjustments to be made in the contract price and in the time for completion by the contractor in the event of a variation. In such a case, the contract may contain a mechanism for the contractor to inform the purchaser of the contractor's contentions concerning the impact of the variation on the contract price and time for completion in order to enable the purchaser to consider whether, in view of the likely impact, he wishes to insist upon the variations. Whether or not such a mechanism is contained in the contract, the contract may obligate the parties to attempt to settle between themselves the amounts of the adjustments to be made in accordance with criteria set forth in the contract, and entitle either party to refer for settlement a dispute as to the amount of an adjustment (paragraphs 8 to 11).

With respect to variations which the contractor is obligated to implement, the parties may wish to consider restricting the scope of such variations (paragraphs 12 and 13). With respect to variations to which the contractor may object, the contract may entitle the contractor to object on reasonable grounds, or may specify particular grounds upon which he may object (paragraph 15). The contract may contain procedures with respect to the ordering and implementation of both of these categories of variations (paragraphs 14 and 16 to 18).

With respect to variations which require the consent of the contractor, the contract may provide that variations requested by the purchaser must be implemented by the contractor only if he consents to them in writing (paragraph 19).

It would be in the interest of the purchaser if variations proposed by the contractor were not to be implemented unless they were agreed to in writing by the purchaser (paragraphs 20 to 22).

The contract may contain particular provisions dealing with changes in construction in cases of unforeseeable natural obstacles and changes in local regulations (paragraph 23).

For cases in which a variation is to result in an adjustment of the contract price, it is desirable for the contract to provide that the adjustment is to be by a reasonable amount. It would be useful for the contract to contain guidelines to assist in the determination of what amount of adjustment is reasonable. These guidelines may vary depending upon the type of contract (paragraphs 24 to 32).

A. General remarks

1. As used in the *Guide*, the term "variation" refers to a change in an aspect of the construction of the works from that required under the original contract documents, such as a change in the scope of construction or technical characteristics of equipment or materials to be incorporated in the works or a change in construction services required under the specifications, drawings and standards of the works (see chapter V, "Description of works and quality guarantee", paragraphs 6 to 9). Adjustment or revision of the price because of cost changes or currency fluctuations, and revision of the payment conditions (see chapter VII, "Price and payment conditions") are not regarded in the *Guide* as variations, although a variation may lead to an adjustment of the price (see paragraph 8, below). Likewise, renegotiation of the contract in cases of hardship (see chapter XXII, "Hardship clauses", paragraph 1) and suspension of construction (see chapter XXIV, "Suspension of construction", paragraph 1) are not regarded in the *Guide* as variations.

2. During the course of construction of a complex industrial works project, it is common for situations to be encountered which make it necessary or advisable to vary certain aspects of the construction. These situations could arise, for example, from difficulties in obtaining raw materials needed for production, making it advisable to adapt the technological process incorporated in the works to the new situation; from unforeseen problems or events during construction, necessitating changes in the equipment, materials, or services used in the construction (see paragraph 23, below); from circumstances affecting the expected profitability of the works, making it advisable to change the scope of the works; or from the occurrence of technological innovations of which the purchaser or contractor wishes to take advantage. In addition, the contractor may seek variations to suit his construction processes.

3. As discussed in the following sections, the parties may wish to obligate the contractor to implement certain variations ordered by the purchaser; however, they may wish to obligate the contractor to implement other variations ordered by the purchaser only if the contractor does not object to a variation on reasonable or specified grounds. In both cases, it is advisable for the contract to

contain provisions setting out the circumstances under which the contractor is obligated to implement a variation ordered by the purchaser since, under most legal systems, the contractor would not be obligated to implement the variation in the absence of such provisions.¹ The parties may wish to note, however, that, in a few legal systems, a party may not be compelled to implement a variation unless he specifically consents to it after it is ordered, regardless of what is provided in the contract.

4. In formulating contractual provisions concerning variations, the parties should attempt to strike an appropriate balance between, on the one hand, the objectives of certainty with respect to the contractual obligations of the parties and the principle that a party to a contract should be bound by the terms to which he has agreed, and, on the other hand, the desirability of permitting necessary or desirable variations in order to meet situations which arise during the life of a complex and long-term contract. In addition, the parties should attempt to achieve an equitable balance between the interests of the purchaser and those of the contractor.

B. Variations sought by purchaser

1. *Basic approaches*

5. The contract may provide that, whenever the purchaser wishes to vary the construction, he must deliver to the contractor a written variation order setting forth the particulars of the intended variation. The parties may wish to consider three basic approaches to the obligations of the contractor in respect of such a variation order. Under the first approach (see paragraphs 12 to 14, below), the contract would obligate the contractor to implement a variation ordered by the purchaser, so long as it met certain criteria set forth in the contract. Under the second approach (see paragraphs 15 to 18, below), the contract would obligate the contractor to implement a variation ordered by the purchaser unless he objected to it upon reasonable or specified grounds. Under the third approach (see paragraph 19, below), a variation would require the written consent of the contractor.

6. The contract could incorporate one or any combination of the approaches mentioned in the preceding paragraph. If the contract were to incorporate two of the approaches, it could, for example, set forth criteria which a variation must meet in order to qualify as one which the contractor was obligated to implement (see, e.g., paragraph 13, below), and provide that variations which did not so qualify might be objected to by the contractor on reasonable or specified grounds, or, alternatively, would not be implemented unless the contractor consented in writing. If the contract were to incorporate all three approaches, it could set forth the criteria which must be met for variations which the contractor was obligated to implement and other criteria for variations to which the contractor might object on reasonable or specified grounds, and provide that variations which did not qualify as one of those two required the consent of the contractor.²

7. It would be useful for the contract to contain provisions concerning the settlement of disputes between the parties as to whether or not a variation ordered by the purchaser satisfied the criteria in the contract. The contract may provide for such disputes to be referable for expeditious resolution by an

independent third person. The independent third person might be the consulting engineer, if he is authorized to exercise independent functions (see chapter X, "Consulting engineer", paragraphs 9 to 19), or a referee (see chapter XXIX, "Settlement of disputes", paragraphs 16 to 21). Alternatively, the parties may prefer the dispute to be referable only to a court or arbitral tribunal. If the dispute is referable to an independent third person, the authority of that person may be restricted to deciding the issue of whether or not the requested variation met the criteria specified in the contract, and not extend to the issue of the impact of the variation upon the contract price and time for completion. Even in the case where a criterion for a variation was whether or not the variation would exceed a specified percentage of the contract price (see paragraph 13, below), the decision of the independent third person need not quantify the impact of the variation on the price, but need only state whether or not the variation would cause the price to exceed the limit. The contract may specify the weight to be given, in the context of proceedings to determine the impact of the variation on the contract price, to findings of fact made by the independent third person in support of his conclusion (see chapter X, "Consulting engineer", paragraphs 9 to 19, and chapter XXIX, "Settlement of disputes", paragraphs 16 to 21).

2. Impact of variation on contract price and time for completion

8. In some cases, a variation sought by the purchaser may entail higher construction costs to the contractor from those anticipated when the contract was entered into. This may be due to the necessity to supply additional or more costly equipment, materials or services as compared to those provided for in the contract. The supply of different or additional equipment, materials or services could also make it unreasonable to expect the contractor to be able to complete the construction within the time originally agreed to by him in the contract. In other cases, a variation may result in lower construction costs or enable the contractor to complete the construction earlier than specified in the contract. Accordingly, the parties may, in some cases, consider it appropriate to provide in the contract for reasonable adjustments to be made in the contract price and in the time for completion by the contractor in the event of a variation (see section E, below; cf. paragraph 23, below).

9. The purchaser will wish to know the likely impact of a variation sought by him upon the contract price and the time for completion before the contractor becomes obligated to implement it. If the impact is likely to be excessive, the purchaser may decide not to insist upon the variation. In some cases, the purchaser's own engineering staff or his consulting engineer might be able to estimate for the purchaser the likely impact of the variation. In other cases, this might not be feasible. Therefore, the parties may wish to consider whether to include in the works contract a mechanism for the contractor to inform the purchaser of the contractor's contentions concerning the impact of the variation on the contract price and time for completion. The contract may, for example, obligate the contractor, after delivery to him of a variation order, to deliver to the purchaser a written statement setting forth the contractor's contentions as to the impact, if any, of the variation upon those terms (see, also, section E, below). The parties may wish to consider whether the contract should specify the period of time after delivery to the contractor of the

variation order within which the contractor must deliver his statement to the purchaser, or whether the contract should merely obligate the contractor to do so within a reasonable period of time. On the one hand, the amount of time which the contractor will need to evaluate the impact of the variation will vary depending upon the nature and extent of the variation. On the other hand, if the contract were to require the statement to be delivered only within a reasonable period of time, in cases where the obligation to implement the variation arose upon the expiry of that period of time (see, e.g., paragraphs 14 and 17, below), uncertainty would exist as to the time when that obligation arose. One approach may be to specify in the contract a period of time sufficiently long to enable the contractor to evaluate the impact of the variation. Another approach may be to provide in the contract for the purchaser to specify in the variation order a period of time within which the contractor must deliver his statement to the purchaser, and to provide that the period of time must be reasonable. A mechanism such as the one just described may not be necessary in the case of variations which require the written consent of the contractor (see paragraph 19, below).

10. The parties may wish to consider the consequences of a failure of the contractor to deliver the statement to the purchaser within the time specified in the contract. Under one approach, the contract may provide that the contractor is not entitled to claim an increase in the price or a prolongation of the time for completion; however, the purchaser may still be allowed to claim a reduction of the price or of the time for completion, if warranted by the variation. Under another approach, the contractor might be permitted to claim adjustments of the contract price and the time for completion notwithstanding his failure, but entitle the purchaser to be compensated by way of damages for any loss suffered as a result of the failure.

11. Whether or not the contract contains a mechanism such as the one described in paragraph 9, above, if the contract provides for an adjustment of the contract price and time for completion in the event of a variation, it may obligate the parties to attempt to settle between themselves the amount of the adjustment in accordance with criteria set forth in the contract (see section E, below). It may entitle either party to refer a dispute as to the amount of the adjustment for resolution in accordance with the dispute settlement provisions of the contract. However, it would be desirable for the absence of agreement by or the existence of a dispute between the parties not to postpone an obligation of the contractor to implement the variation.

3. Contractual provisions relating to each basic approach

(a) Variations ordered by purchaser which contractor is obligated to implement

12. An obligation of the contractor to implement any variation, whatever its nature or scope, ordered by the purchaser, could unduly interfere with the interests of the contractor. For example, a contractor may suffer prejudice if he is compelled to implement a variation which involves such a substantial departure from the obligations which he undertook in the contract that he does not have the capability to implement the variation; if the scope of the construction is varied to such a degree that other contractual provisions (e.g., those relating to passing of risk, payment conditions or performance

guarantees) become inappropriate; or if a variation involving additional work results in a prolongation of the time for completion of construction such that it interferes with the performance of construction obligations in other projects which the contractor has undertaken. A contractor who has supplied the design for the works and guaranteed the output of the works could be prejudiced by being compelled to implement a variation which is inconsistent with the design. A variation which substantially reduces the scope of the works could cause the project to become financially unattractive to the contractor.

13. Accordingly, if the parties contemplate adopting the first approach referred to in paragraph 5, above, they may consider it desirable to include in the contract certain provisions to take into account the legitimate interests of the contractor (see, also, paragraph 8, above). For example, the parties may wish to consider restricting the scope of the variations which could be ordered by the purchaser and which the contractor would be obligated to implement. There are various ways in which they may do this. For example, the contract might entitle the purchaser to order such variations only if the impact of the variations on the contract price would be less than a certain percentage of the price set forth in the contract, or it might entitle the purchaser to order such variations only as to specific aspects of the construction. It might also provide quantitative limits to certain types of variations in this category, e.g., by permitting the purchaser to order variations in this category which lead to changes in the production capacity of the works from that envisaged in the contract only if the change would not exceed a certain percentage of that capacity.

14. If the contract incorporates a mechanism such as that described in paragraphs 9 to 11, above, the contract may provide that, unless, within a specified period of time after delivery to the purchaser of the contractor's statement as to the impact of the variation, the purchaser notifies the contractor in writing not to implement the variation, the contractor is obligated to implement the variation as ordered by the purchaser. If the contractor does not deliver a statement to the purchaser, the contract may obligate the contractor to implement the variation upon the expiration of the period of time for the delivery of the statement. If the contract does not incorporate such a mechanism, it may obligate the contractor to implement the variation upon delivery to him of the purchaser's variation order.³

*(b) Variations subject to objection by contractor on reasonable
or specified grounds*

15. Under the second approach mentioned in paragraph 5, above, the contract may permit the contractor to object on certain grounds to a variation ordered by the purchaser. The contract may refer only to "reasonable" grounds (other possible formulations of such a standard may refer to "substantial prejudice" or "undue inconvenience" to the contractor if he were compelled to implement the variation), or it may specify particular grounds which would entitle the contractor to object. If the parties decide to specify particular grounds, in formulating those grounds they may wish to take into consideration that, to the extent that the concern of the contractor relates to the price or time for completion, he may be protected by providing in the contract for an adjustment of those elements of the contract (see paragraph 8, above). It is advisable for the contract to indicate whether the enumeration of grounds entitling the contractor to object to a variation is illustrative or exhaustive. The following are possible examples of such circumstances:

- (a) If the variation is beyond the capability of the contractor to implement;
- (b) If implementation of the variation would prevent the contractor from performing any of his other obligations under the contract or unduly interfere with his performance of those obligations;
- (c) If the variation would prevent the achievement of output targets guaranteed by the contractor.

16. The contract may specify a period of time within which the contractor must deliver any objection he may have against the variation to the purchaser, and may require the objection to be in writing. If the contract provides a mechanism such as that described in paragraphs 9 to 11, above, and, whether or not the contractor objects to the variation, the contract may obligate the contractor to deliver to the purchaser a written statement as to the impact of the variation. It is advisable for the period of time after delivery to the contractor of the variation order within which the contractor must deliver his statement of impact to be not less than the period of time within which the contractor must deliver his objection to the variation.

17. In cases where the contractor does not deliver to the purchaser a timely objection to the variation, but delivers a statement as to its impact, the contract may provide that the contractor is obligated to implement the variation unless, within a specified period of time after delivery of the contractor's statement to the purchaser, the purchaser notifies the contractor in writing not to implement the variation. If, being obligated to do so, the contractor does not deliver a statement to the purchaser, the contract may obligate the contractor to implement the variation upon the expiration of the period of time for delivery of the statement. If the contract does not require the contractor to deliver a statement as to the impact of the variation, it may obligate the contractor to implement the variation no later than the expiration of the period of time for delivery of his objection to the purchaser.⁴

18. A dispute between the parties concerning the validity of the grounds asserted by the contractor for objecting to the variation might be referable to the independent person, court or arbitral tribunal referred to in paragraph 7, above. As to whether or not the contractor should be obligated to implement the variation pending the decision on whether the grounds for the contractor's objection were valid, it might unduly prejudice the contractor if he were compelled to implement the variation and it were later determined that the grounds for his objection were valid. Therefore, the parties may consider it desirable to provide that the contractor is not obligated to implement the variation until it is decided that the grounds asserted by him were not valid.

(c) Variations which require consent of contractor

19. With respect to the third approach mentioned in paragraph 5, above, the contract may provide that variations requested by the purchaser must be implemented by the contractor only if he consents to them in writing. The contract may also provide that the variations are not to result in a change in the contract price or the time for completion unless otherwise agreed in writing by the parties.

C. Variations sought by contractor

20. It would be in the interest of the purchaser if variations proposed by the contractor were not to be implemented unless they were agreed to in writing by the purchaser.⁵ In this case, too, the contract may provide that the variations are not to result in a change in the contract price or the time for completion unless otherwise agreed in writing by the parties.

21. It is possible that a potential contractor might submit an offer to construct the works at a low price by omitting certain necessary equipment, materials or services from his offer or by basing his price on inadequate or substandard equipment, materials and services, expecting to seek variations during construction, and commensurate increases in the price. Requiring all variations sought by the contractor to be subject to the approval of the purchaser may help to avoid this situation, but only to a limited extent. A purchaser in such a case would be faced with the choice either of agreeing to a variation which may be necessary or advisable in order for the construction and the works to meet his expectations, or to refuse to agree to the variation and rely on his right, if any, to claim against the contractor for any resulting defects in the works or for the contractor's bad faith.

22. The best way for a purchaser to guard against such a situation is by employing appropriate procedures for concluding the contract (i.e., tender procedures or procedures for negotiation with prospective contractors; see chapter III, "Selection of contractor and conclusion of contract"). It would help, for example, if the provisions in the tender documents concerning the scope of the construction and the technical characteristics of equipment, materials and construction services were complete and sufficiently precise so as to preclude a potential contractor from submitting an offer based upon inadequate or substandard elements (see, also, chapter V, "Description of works and quality guarantee" and chapter VIII, "Supply of equipment and materials", paragraphs 6 and 7). It would also help if the tender procedures were designed so as to enable the purchaser to identify and exclude disreputable or otherwise unacceptable firms. It would also be advisable for the criteria and practices for the evaluation of tenders to be such as to enable the purchaser to identify unrealistic offers, and for the offers to be evaluated for the purchaser by personnel of the purchaser, or by a consulting engineer engaged by him (see chapter X, "Consulting engineer"), who has the necessary expertise.

D. Changes in construction in cases of unforeseeable natural obstacles and changes in local regulations

23. During construction, natural obstacles such as hydrological or subsurface conditions may be encountered which could not reasonably have been discovered by the contractor prior to entering into the contract. In addition, during the course of construction, legal rules of an administrative or other public nature concerning the scope or technical aspects of the works may come into force or be changed. The contract may allocate the risk of those circumstances either to the contractor or to the purchaser (see chapter VII, "Price and payment conditions", paragraphs 44 to 46). In some cases, the construction may need to be changed in order for it to progress. In cases where the risk of such circumstances is borne by the contractor, the contract may

obligate him to notify the purchaser in writing of the necessary change and to implement the change unless, within a specified period of time after delivery of the notice of the change, the purchaser notifies the contractor in writing not to do so. In cases where the risk is borne by the purchaser, the contract might obligate him to order the necessary variation. However, in the case of a change in the construction necessitated by changes in mandatory rules of an administrative or other public nature, or by new rules, a refusal by the purchaser to order the change in construction might be considered as an impediment to the continuation of the construction. The contract might further provide that, if the contractor rightfully objects (see paragraph 15, above) or fails to consent (see paragraph 19, above) to a variation, the purchaser may terminate the contract (see chapter XXV, "Termination of contract"). Whether or not the variation should result in a commensurate increase in the contract price or a prolongation of the time for completion might depend upon whether or not the contractor bears the risk of the circumstances necessitating the variation.

E. Determination of impact of variations on contract price and time for completion

24. As noted in paragraph 8, above, the parties may wish to provide in the contract for reasonable adjustments to be made in the contract price and the time for completion in the event of a variation. An adjustment of the price may be desirable, in particular, in the case of a lump-sum contract, in which the contract price would remain unchanged unless the contract expressly provided for adjustments of the price (see chapter VII, "Price and payment conditions", paragraph 2). Similarly, unit prices in a unit-price contract may need to be changed in the event of a variation (see paragraph 30, below), and this would usually not be possible without an express provision in the contract. The parties may also consider it desirable to include such a provision in some cost-reimbursable contracts which contain a price ceiling since, under such contracts, when a variation results in higher construction costs, those costs would be reimbursable to the contractor only to the extent that they did not cause the contract price to exceed the ceiling (see paragraph 32, below).

1. Contract price

25. For cases in which a variation is to result in an adjustment of the contract price, it is desirable for the contract to provide that the adjustment is to be by a reasonable amount. It would be useful for the contract to contain guidelines to assist in the determination of what amount of adjustment is reasonable. These guidelines could assist the parties in settling this issue (see paragraph 11, above), and could provide criteria to be applied by a court or arbitral tribunal when the parties cannot agree. Such guidelines may be practicable in respect of variations of the nature and quantity of equipment, materials and construction services, but may not be practicable in respect of variations of the design.

(a) Lump-sum contract

26. If the contract contains a schedule of prices for particular types of equipment, materials or construction services, it may provide that any variation in the quantity required of those items occasioned by the variation in

construction is to be valued in accordance with the prices set forth in the schedule. However, it might not always be appropriate to use those prices. For example, prices specified for particular types of construction services may be based upon the work being performed in a particular sequence, and a variation in that sequence may make the prices inappropriate. Therefore, if variations in the quantity required of items whose prices are specified in a contract schedule are to be valued in accordance with those prices, it may be desirable to permit departures from them in cases where, for reasons similar to those just discussed, the prices would be inappropriate.

27. If the contract contains a schedule of prices for equipment, materials and construction services and variations in the quantity required occur in respect of items which are not specified in the schedule, the prices designated in the schedule may be usable as a basis for the valuation of the variation when the items which are the subject of the variation are analogous to items specified in the schedule.

28. When the contract does not contain a schedule, or when the schedule is not employed to determine the adjustment in the contract price, the contract may provide for the adjustment to be based upon changes in costs of the items involved, and on the following additional factors:

(a) Increments for overhead and profit in respect of varied work may be added or deducted, as appropriate.

(b) A variation of one aspect of the construction may affect the prices of other aspects. For example, a variation in a piece of equipment to be installed in the works may require different and more costly construction services to install the equipment from those originally anticipated in the contract. Such effects may also be taken into consideration.

(c) Other losses and expenses incurred by the contractor, such as losses resulting from an interruption of construction, and expenses incurred for terminating subcontractors if work is omitted, may be taken into consideration.⁶

29. Where construction costs are relevant to determining the impact of a variation on the contract price, it may be desirable for the contract to obligate the contractor to keep accurate records relating to costs incurred by him in connection with the implementation of a variation, and to produce them at the request of the purchaser.

(b) Unit-price contract

30. Unit prices in a unit-price contract may be predicated upon the supply of particular quantities of the items which are priced according to that method. Therefore, the contract may provide for reasonable adjustments to be made in the unit prices of such items if the quantities of those items to be supplied are substantially changed. In some cases, it may be possible for the parties to quantify in the contract the extent of the change in the items which would result in an adjustment in the unit price, and, perhaps, the amount of the adjustment.

31. In contracts that include civil engineering, the purchaser frequently has the right to require the contractor to perform additional civil engineering up to a certain proportion of the original civil engineering without an adjustment in the unit prices.

(c) *Cost-reimbursable contract*

32. As mentioned above (paragraph 24), a cost-reimbursable contract might also provide for adjustment in certain aspects of the price in the event of a variation. Thus, the contract might provide that, in the event of increases or decreases of a specified magnitude in equipment, materials or services to be supplied, the target cost and cost ceiling, if any, and the fee are to be adjusted in accordance with a specified formula (cf. chapter VII, "Price and payment conditions", paragraphs 15 and 22).

2. *Time for completion*

33. The impact of a variation on the time for completion is discussed in chapter IX, "Construction on site", paragraphs 24 and 25.

Footnotes to chapter XXIII

¹*Illustrative provisions*

"(1) The term 'variation' as used in this contract means any change in the scope of construction or technical characteristics of the equipment, materials or construction services to be supplied by the contractor.

"(2) Any variations ordered by the purchaser must be implemented by the contractor in accordance with the provisions of this article.

"(3) The contractor shall not implement any variation unless it has been ordered by the purchaser in accordance with this article, or agreed to by the purchaser in writing."

²*Illustrative provisions*

"(1) The purchaser may deliver to the contractor a written order for a variation setting forth all relevant particulars of the variation.

"(2) If, in accordance with paragraph [] of this article [see note 4, below], the impact upon the contract price of the variation as set forth in the written variation order does not exceed [] per cent of the price set forth in article [], the contractor must implement the variation upon delivery to him of the variation order.

"(3) (a) If, in accordance with paragraph [] of this article, the impact upon the contract price of the variation as set forth in the written variation order exceeds [] per cent of the price set forth in article [] but is less than [] per cent of that price, the contractor may, within [] days after delivery to him of the variation order, deliver to the purchaser a written objection to the variation specifying [reasonable grounds] [one or more of the following grounds: . . .].

(b) If the contractor does not deliver to the purchaser an objection in accordance with the preceding sub-paragraph, he shall commence to implement the variation no later than the expiration of the period of time set forth in that sub-paragraph.

(c) Any dispute between the parties as to the validity of the grounds set forth by the contractor in an objection to the variation may be referred by either party to [indicate dispute settlement mechanism]. The contractor must implement the variation if and when it is determined in such proceedings that the grounds set forth by the contractor were not valid.

"(4) (a) The contractor shall not be obligated to implement any variation ordered by the purchaser which does not meet the criteria set forth in paragraphs (2) or (3) of this article unless the contractor consents to the variation in writing.

(b) Any dispute between the parties as to whether a variation ordered by the purchaser meets the criteria set forth in paragraphs (2) or (3) of this article may be referred by either party [indicate dispute settlement mechanism]."

³See footnote 2.

⁴See footnote 2.

⁵See footnotes 1 and 2.

⁶*Illustrative provisions*

[For lump-sum contract]

"(1) Except as otherwise provided in this contract, in the event of a variation the price set forth in article [] shall be adjusted by a reasonable amount, taking into account the criteria set forth in paragraph (2) of this article. However, the price shall not be adjusted if, taking account of those criteria, no adjustment is reasonable.

"(2) The criteria referred to in the previous paragraph are the following:

(a) If the equipment, materials or services to be supplied as a result of a variation are identical in character to, and supplied under the same conditions as, equipment, materials or services specified in [the contract schedule], then the prices therein for such equipment, materials or services shall be applied, unless it is unreasonable to apply those prices, in which case the effect of the variation on the contract price shall be based upon such of the factors in sub-paragraph (c), below, as may be appropriate.

(b) If the equipment, materials or services to be supplied as a result of a variation are not of such identical character or supplied under such same conditions, the prices in [the contract schedule] shall be applied whenever reasonable. If it is not reasonable to apply such prices, then the effect of the variation upon the contract price shall be based upon such of the factors in sub-paragraph (c), below, as may be appropriate.

(c) The factors referred to in sub-paragraphs (a) and (b), above, are the following:

(i) The actual cost of equipment, materials or services to be supplied as a result of a variation (or, in the case of omitted equipment or materials, the market cost thereof);

(ii) Reasonable profit;

(iii) Any financial effects of a variation upon other aspects of the work to be performed by the contractor;

(iv) Any costs and expenses accruing to the contractor from an interruption of work resulting from a variation;

(v) Any other costs and expenses accruing to the contractor as a result of the variation;

(vi) Any other factors which it would be equitable to take into consideration with respect to the variation."

Chapter XXIV. Suspension of construction

SUMMARY

This chapter deals only with the suspension of construction and not with the suspension of any other obligations under the contract. As no developed doctrine of suspension exists in most legal systems, the parties may wish to consider the inclusion of a clause in the contract permitting suspension of construction, defining the circumstances in which suspension may be invoked and describing its legal effects (paragraphs 1 and 2).

The parties may agree to permit the purchaser to order the suspension of construction only upon grounds specified in the contract (paragraph 3). Alternatively, the parties may consider including a provision enabling the purchaser to order suspension of the construction of works for his convenience (paragraph 4).

The contract may give the contractor the right to suspend construction in two specific circumstances. The contractor may be entitled to suspend construction firstly as an alternative to the more drastic remedy of termination in cases where the failure to perform an obligation by the purchaser is serious enough to justify such termination, and secondly when a failure of performance on the part of the purchaser makes it unreasonably difficult for the contractor to proceed with the construction (paragraphs 5 to 7).

The contract may settle the procedure to be adopted for suspension. Thus, the suspending party may be required to deliver a written notice of suspension to the other party. The purchaser may be required to deliver a written notice of suspension to the contractor specifying the effective date of the suspension and the construction activities to be suspended (paragraph 8). Furthermore, the parties may wish to consider whether the exercise of the right to suspend by the contractor for failure of performance by the purchaser should be conditioned upon a written notice being given to the purchaser requiring him to perform within a specified time and what exceptions there are to be to this (paragraph 9). The contract may also provide a method of determining what the duration of the suspension is to be (paragraphs 10 and 11).

The contract may provide that when suspension of construction has been ordered, all the construction activities to which the order relates are to cease, but that the construction of other parts of the works is to continue (paragraph 12). The contractor may be entitled by the contract to an extension of time to complete the construction in order to make up for the period of suspension and the time required to remobilize personnel and equipment (paragraph 13).

The contract may provide for the application of its terms to the resumed construction following the period of suspension. However, other contract terms, in addition to those directly affected by the suspension, may need to be harmonized with the suspension clause (paragraph 14).

Suspension may have a considerably disruptive effect on the construction of the works by the contractor and may put into question the financial viability of the contract to the contractor. Accordingly, the contract may make the purchaser accountable to the contractor for any losses suffered by him. It may be difficult after suspension has occurred to determine the losses to be compensated by the purchaser. It may therefore be desirable for the contract to list the losses to be compensated (paragraphs 15 and 16).

In certain circumstances the contract might permit the contractor to terminate the contract rather than to continue the suspension (paragraph 17). The contract may obligate the contractor to resume work only after a reasonable period of time has elapsed since the ending of the suspension (paragraph 18).

A. General remarks

1. This chapter deals only with the suspension of construction of the works, and not with the interruption of other obligations under a works contract, such as the obligation of the purchaser to pay the contractor. As conceived in the *Guide*, suspension is an interruption of the construction by the purchaser for his convenience or on grounds specified in the contract, and by the contractor in the event of a failure of performance by the purchaser. The concept of suspension does not cover interruptions of construction under a hardship clause, in order to enable the parties to re-negotiate particular terms of the contract (see chapter XXII, "Hardship clauses", paragraphs 14 and 22), or where an event occurs that makes it impossible to proceed with the construction (see chapter XXI, "Exemption clauses"). In addition, the concept of suspension does not cover the situation in which the purchaser is entitled to order the contractor to stop construction that is defective (see chapter XVIII, "Delay, defects and other failures to perform", paragraphs 28 to 31).

2. Most legal systems contain no developed doctrine of suspension. Where the parties wish to provide for the possibility of suspension, it is therefore advisable to include a provision in the contract describing the circumstances in which construction may be suspended and the legal effects which are to result from the suspension.

B. Suspension by purchaser

3. The parties may wish to enable the purchaser to suspend construction of the works in order to permit him to deal with problems he may have but which do not arise from a failure by the contractor to perform. The parties may wish to provide that the purchaser is entitled to order suspension only upon certain grounds specified in the contract.¹ For example, the contract may permit the purchaser to suspend construction in the case of an anticipated change in economic policy in order to give the purchaser time to assess the situation. The specified grounds should not include those that would be regarded under the exemption clause as exempting impediments. To avoid any uncertainties in interpretation and to reduce the possibility of disputes, it is desirable that the grounds on which the purchaser may suspend construction be clearly set out in the contract.

4. The parties may wish to consider the possibility of providing that the purchaser may suspend the construction for his convenience, i.e., without giving any reason. Although the scope of the right to suspend for convenience is wide, it is unlikely that the purchaser would invoke the right capriciously, both because he may suffer high costs if he orders suspension (see paragraphs 15 and 16, below) and because the date for completion of the works may thereby be postponed (see paragraph 13, below). If the right to order suspension were not available, the purchaser might have to resort to the more drastic remedy of termination in situations in which he would have desired only to suspend the construction had he been permitted to do so (see the discussion of termination for convenience in chapter XXV, "Termination of contract", paragraphs 17 and 18).

C. Suspension by contractor

5. The right of the contractor to suspend construction may differ in scope from the corresponding right of the purchaser, reflecting the obligations which the contractor has assumed, i.e., to continue construction without interruption and to complete it within the agreed time-schedule despite the difficulties he may face, financial or otherwise. Nevertheless, there are two situations in which the parties may find it desirable to entitle the contractor to suspend construction.²

6. Firstly, in cases where a failure to perform an obligation by the purchaser is serious enough to justify unilateral termination by the contractor (see chapter XXV, "Termination of contract"), the parties might wish to enable the contractor to suspend construction as an alternative to the remedy of termination. An example of such a failure may be the case of the non-payment of a substantial percentage of the price due from the purchaser.

7. Secondly, the parties may consider it desirable to permit the contractor to suspend construction when a failure of performance on the part of the purchaser affects the construction of the works so as to make it unreasonable for the contractor to proceed with the construction. For example, where the purchaser supplies a defective design, and the construction based on it endangers the safety of the works or the construction personnel, it may be desirable to permit the contractor to suspend the construction until the design defect is rectified.

D. Procedure for suspension

8. With respect to the procedure for the suspension of construction by the purchaser, the contract might require him to deliver a written notice of suspension to the contractor, specifying the effective date of the suspension and the construction activities to be suspended. If the contract permits suspension by the purchaser only on specified grounds, it may also require the notice of suspension by the purchaser to state the grounds for the suspension.

9. The parties may wish to provide that the right of the contractor to suspend is conditional upon his giving written notice to the purchaser requiring him to perform the obligation in question within a period to be specified in the notice. The period specified should be reasonable in the circumstances, and may

commence to run from the delivery of the notice. If the purchaser fails to perform within the specified period, the contractor may suspend construction after the delivery of a notice to the purchaser stating that he is suspending construction. If this approach is adopted, it may be desirable for the contract also to provide that, in cases where a failure of performance on the part of the purchaser makes it necessary to suspend the construction immediately (e.g., where to continue construction on the basis of a defective design supplied by the purchaser would endanger the contractor's personnel), the contractor may do so by giving written notice of immediate suspension to the purchaser.

10. The parties may wish to consider various possibilities with respect to the duration of the suspension. If the suspension is based upon a ground specified in the contract, the contract may provide for the suspension to be effective until that ground ceases to exist. For example, if the contract permits the contractor to suspend construction due to non-payment by the purchaser, it may provide for the suspension to terminate when the payment in question is made.

11. In the case of suspension by the purchaser for his convenience, the contract might obligate the purchaser to specify in his notice of suspension a date when the suspension is to terminate. In such a case, it may be desirable to enable the purchaser to extend the period of suspension by delivering a further written notice of suspension to the contractor. In all cases, it may be desirable to enable the purchaser to terminate the suspension earlier than the time provided for in the contract or that provided for in the notice of suspension by delivering written notice to the contractor that the suspension is terminated, provided that the contractor is appropriately compensated by the purchaser for any damage or cost incurred by reason of such earlier termination. (For resumption of work after the termination of suspension, see paragraph 18, below).

E. Effects of suspension

12. With regard to the obligations of the parties when construction has been suspended, the contract may provide that all construction activities to which an order of suspension relates are to cease for the period of the suspension, but that construction of other parts of the works not affected by the suspension order is to continue. In the case of suspension ordered by the purchaser, the contract might obligate the contractor to cease the affected construction activities by the date specified in the notice ordering suspension (see paragraph 8, above). The contract may also provide that the resort of either party to suspension of construction will not deprive him of other remedies he may have under the contract.

13. As a consequence of the approach described above, the contract may provide that the performance of obligations which have been suspended does not fall due during the period of the suspension and, accordingly, failure to perform those obligations does not constitute delay in performance (cf. chapter XVIII, "Delay, defects and other failures to perform", paragraph 4). The contract may also provide for the time-schedule for the completion of construction to be extended by a period of time at least equal to the duration of the suspension, or perhaps for that period together with an additional, reasonable amount of time to enable the contractor to remobilize his personnel and

construction equipment in order to resume construction. It may be desirable to require the contractor to notify the purchaser in writing of the additional period of time he considers necessary to complete the construction, giving details which justify the length of the period he considers necessary.

14. The contract might provide that when construction resumes, unless otherwise stipulated, its terms are to apply as they did before the suspension. Some contract provisions, however, may need to be adapted so as to conform to circumstances brought about by the suspension. For example, the contract may require the parties to extend their respective securities for performance when suspension is ordered so as to cover the additional time required for construction (see chapter XVII, "Security for performance", paragraph 36). The contract should also provide which party is to bear the costs of the extension of security.

15. While the mechanism of suspension can be valuable, it may also have a disruptive effect on the construction of the works by the contractor. For example, if the contractor employs several subcontractors in the construction, a suspension may prevent him from co-ordinating their various tasks. The financial viability of the contract to the contractor may also be jeopardized due to the cost of stopping and re-starting the construction. The contract may therefore obligate the purchaser to compensate the contractor for losses suffered as a result of suspension in the circumstances envisaged in sections B and C above.

16. It may be difficult after suspension has occurred to determine the losses to be compensated by the purchaser. It may be desirable, therefore, for the contract to include a list, either exhaustive or illustrative, of the types of losses to be compensated or, alternatively, the types of losses to be excluded from compensation. Such an itemization could also assist the purchaser in estimating beforehand the financial implications should he wish to order suspension. The types of losses to be compensated might include some or all of the following: losses to the contractor arising by reason of delays in performing other contracts entered into by him; costs incurred in the maintenance and protection of the works and the equipment and materials required for construction; costs of the demobilization of personnel, including expenses incurred by the contractor's personnel (e.g., advance rent paid by such personnel for accommodation not required due to the suspension and the cost of transportation); any increase in the costs of equipment and materials between the date of the contract and the resumption of construction after the suspension period; costs of rented construction equipment which is maintained at the site; costs incurred in the resumption of work and the remobilization of personnel, including costs in transportation; additional overhead costs; compensation payable to subcontractors due to delays caused to their performance or to termination of their contracts due to the suspension; and costs incurred as a consequence of the postponement of the completion of the works (for example, the contractor may have to employ another subcontractor at a higher cost to replace one whose contract was terminated due to the suspension). The contract may also require the contractor to take all reasonable steps to mitigate the losses and expenses resulting from the suspension, and obligate the parties to consult each other on how to do so.

17. The contract might permit the contractor to terminate the contract (see chapter XXV, "Termination of contract") if the suspension or an accumulation of suspensions extends beyond a period to be specified in the contract.³

18. The contract may obligate the contractor to resume work within a reasonable period of time after the suspension terminates, since the immediate resumption of the construction may be difficult. For example, the contractor may have cancelled an order for materials because of the suspension and may have to re-order them.

Footnotes to chapter XXIV

¹Illustrative provision

"The purchaser may at any time upon any of the grounds hereinafter specified order suspension of the construction of the works or any portion thereof by delivering a written notice to the contractor specifying the construction or portion thereof to be suspended, the grounds for the suspension, and the effective date of suspension. The suspension does not affect the validity of the contract. The grounds upon which the purchaser may order suspension are as follows: . . ."

²Illustrative provisions

"(1) Subject to paragraphs (2) and (3) of this article, the contractor may suspend the construction of the works or any portion thereof when the purchaser fails to perform any of the following obligations: . . .

"(2) The suspension does not affect the validity of the contract. The contractor must give the purchaser a notice in writing informing him of the failure of performance justifying any proposed suspension, requiring him to perform within a specified period, and specifying the construction or portion thereof to be suspended. If the purchaser fails to perform within the specified period, the contractor may suspend the construction after the delivery of a notice to the purchaser stating that he is suspending construction in accordance with his previous notice.

"(3) If, however, a failure of performance on the part of the purchaser makes it necessary to suspend the construction of the works or any portion thereof immediately, the contractor may do so after delivery of a written notice of the suspension to the purchaser. The written notice must inform the purchaser of the failure of performance justifying the suspension."

³Illustrative provision

"If the suspension or an accumulation of suspensions extends for a period exceeding ____ days, the contractor is entitled to terminate the contract and is entitled to be compensated for loss caused by the termination to the same extent as in the case of termination of the contract for convenience by the purchaser. By an accumulation of suspensions is understood the totality of the periods of suspension occurring at different times, whether such periods are in respect of the same portion of the construction or different portions of the construction."

Chapter XXV. Termination of contract

SUMMARY

It is desirable for the contract to include a termination clause in order to provide for an orderly and equitable procedure in the event of circumstances which make it prudent or necessary to terminate the contract. Before the contract is terminated, it would be in the interests of both parties to resort to other measures or remedies provided by the contract in order to deal with the circumstances. In addition, it may, in many cases, be desirable for the contract to require that a party wishing to terminate the contract notify the other party that there exists a situation which justifies termination and to allow the other party a period of time to overcome or cure the situation before entitling the first party to terminate (the two-notice system). In drafting a termination clause, the parties should take account of any mandatory legal rules on the subject of the law applicable to the contract, and should be aware of any non-mandatory rules (paragraphs 1 to 6).

The parties may wish to provide for termination of the contract in respect of obligations which have not yet been performed, as well as in respect of obligations which have been performed defectively (paragraph 7).

The contract might entitle the purchaser to terminate in certain situations involving a failure of the contractor to perform, a violation by the contractor of restrictions on the transfer of the contract and, possibly, a violation of restrictions on subcontracting (paragraphs 8 to 10).

It may be advisable for the contract to entitle the purchaser to terminate the contract in the event that the contractor is adjudicated bankrupt. The parties may wish to consider whether the institution of bankruptcy proceedings in respect of the contractor should entitle the purchaser to terminate the contract (paragraphs 11 to 14). The parties may also wish to consider whether the purchaser should be entitled to terminate the contract in the event of proceedings similar or related to bankruptcy proceedings in respect of the contractor, or in the event of bankruptcy or similar or related proceedings in respect of a guarantor (paragraphs 15 and 16).

The parties may wish to consider whether the purchaser should be entitled to terminate the contract for his convenience (paragraphs 17 and 18).

The contract might entitle the contractor to terminate in certain situations involving a failure of the purchaser to perform, the purchaser's interference with or obstruction of the contractor's work, and bankruptcy or similar or related proceedings in respect of the purchaser (paragraphs 19 to 21).

If the performance of obligations under the contract is prevented by an exempting impediment, the parties may wish to entitle either party to terminate if the impediment persists for a specified amount of time, or if the cumulative duration of two or more impediments exceeds a specified amount of time (paragraph 22).

The contract may specify the rights and obligations of the parties upon termination. It would be desirable for the contract to provide that, upon termination by either party, the contractor must cease construction and vacate the site. The contract might give the purchaser the option to use the contractor's construction equipment and tools, perhaps upon payment of a reasonable rental, and to purchase from the contractor equipment and materials to be incorporated in the works (paragraphs 23 to 25).

In the event of termination, the contract may obligate the purchaser to take over the portions of the works which have already been constructed and which are not subject to the termination. However, an exception may be made in some cases where the contractor terminates due to failure by the purchaser to perform (paragraph 26).

The parties may wish to consider obligating the contractor to transfer to the purchaser his contracts with subcontractors and suppliers, in cases where the contract is terminated for grounds attributable to the contractor. It may be desirable for the contract expressly to authorize the purchaser to make payment of sums owed by the contractor directly to subcontractors and suppliers, and entitle the purchaser to recover those payments from the contractor (paragraphs 27 and 28).

In some cases, where the contract is terminated by the purchaser for reasons other than those attributable to the purchaser, the contract may obligate the contractor to deliver to the purchaser such drawings, descriptive documents and similar items relating to the works as are in his possession, and provide for the production of items which have not yet been produced and delivery of them to the purchaser (paragraph 29).

The contract may specify the payments which are to be made by one party to the other in the event of termination. Whether payments are to be made, and the extent of the payments, may depend on the cause for the termination (paragraphs 30 to 35).

The contract may specify those provisions which are to survive the termination and continue to bind the parties (paragraph 36).

A. General remarks

1. Circumstances may arise which make it prudent or necessary to terminate a works contract before it has been completely performed. It is desirable for the contract to include a termination clause in order to provide for an orderly and equitable termination in the event that such circumstances arise. This chapter deals with possible provisions of a termination clause in the contract. In addition to the situations dealt with in the present chapter, other situations where the contract may be terminated are discussed elsewhere in the *Guide*.

2. Termination of a works contract may be regarded as a remedy of last resort. Even when a situation occurs which may justify termination, it would be in the interest of both parties to attempt to deal with the situation by resorting to other measures or remedies provided by the contract (such as requiring performance in accordance with the contract, suspending performance of the contract, requiring defects to be cured, re-negotiating and varying contractual provisions or claiming damages). In addition, it may, in many cases, be desirable for the contract to require that a party wishing to terminate the

contract notify the other party that there exists a situation asserted as justifying termination, and to allow the other party a period of time to overcome or cure the situation before entitling the first party to terminate (see, e.g., paragraphs 9, 19 and 20, below; cf. paragraphs 12 and 17, below). It is advisable for the contract to require that a termination of the contract for any reason be in writing.

3. In drafting a termination clause, the parties should take account of any mandatory rules on the subject in the law applicable to the contract. The parties should also be aware of any non-mandatory rules of the law applicable to the contract relative to termination, and should consider whether those rules are sufficient and appropriate to regulate termination of their contract.

4. General legal rules on termination of contracts have often developed in connection with sales and other types of contracts which are substantially less complex and of shorter duration than works contracts, and those rules may be ill-suited to the termination of works contracts. As discussed in various chapters of the *Guide*, there may be situations where it would be appropriate to permit a party to a works contract to terminate the contract in circumstances additional to the ones recognized by those legal systems. On the other hand, there may be situations where it would be appropriate to limit the possibility of termination permitted by general legal rules. Furthermore, general legal rules often do not provide appropriate procedures for an orderly termination of a works contract, nor deal with other issues, such as the rights and obligations of the parties upon termination, in a manner which satisfactorily meets the needs of parties to a works contract.

5. If the parties include in the contract provisions dealing with termination of the contract, it would be desirable for the contract to specify whether the grounds for termination set forth in those provisions are in addition to, or are a substitute for, the grounds for termination provided in the law applicable to the contract.

6. In some legal systems, a contract can be terminated only with judicial consent unless the contract expressly authorizes a party to terminate without that consent. In those legal systems, if it is desired that a party be able to terminate the contract without judicial consent, the contract should so specify.

B. Extent of termination

7. The parties may wish to provide for termination of the contract in respect of obligations which have not yet been performed, as well as in respect of obligations which have been performed defectively. In cases where the contractor is in delay in completing a portion of the construction by an obligatory milestone date (see chapter IX, "Construction on site", paragraph 21), the contract may entitle the purchaser to terminate in respect of the portion of the construction delayed. Alternatively, in cases where, due to the nature of the construction, it would not be advisable to separate the delayed portion of the construction from the rest of the construction to be completed, the contract may entitle the purchaser to terminate the contract in respect of the entire construction remaining to be completed.

C. Grounds for termination

1. *Termination by purchaser*

(a) *Failure of contractor to perform*

8. The circumstances under which the contract may permit the purchaser to terminate the contract in the event of a failure by the contractor to perform are discussed in other chapters, in particular in chapter IX, "Construction on site", paragraph 22, and chapter XVIII, "Delay, defects and other failures to perform".

9. In some cases of a failure of the contractor to perform, the contract may give the contractor a period of time to remedy this failure before the purchaser is entitled to terminate. In such cases, the contract might adopt a two-notice system. Under this system, the contract may require the purchaser to deliver a notice to the contractor specifying the contractor's failure to perform, and informing him that the purchaser will terminate the contract if the contractor does not remedy the failure within a reasonable period of time or a period of time specified in the contract. If the contractor has not remedied the failure upon the expiration of that period, the purchaser may be entitled to terminate the contract by delivering a written notice of termination to the contractor. However, it is desirable that the granting of such a period of time not be regarded as an extension of the time specified in the contract for the performance of the obligation in question, nor prejudice the purchaser's rights and remedies for delay by the contractor in performing that obligation.¹ In other cases of termination for failure of the contractor to perform (e.g., where the contractor does not commence construction on the date fixed for commencement, and states that he will not do so), nothing would be gained by requiring the purchaser to wait before terminating; he might be permitted to terminate immediately upon the contractor's failure to perform by delivering to the contractor a written notice of termination. The cases in which the two-notice system might be required and those when the purchaser might be permitted to terminate immediately are also indicated in chapter XVIII, "Delay, defects and other failures to perform".

(b) *Violation by contractor of restrictions on transfer of contract and on subcontracting*

10. Termination for violation by the contractor of contractual provisions on the transfer of the contract or of specific contractual rights and obligations is discussed in chapter XXVII, "Transfer of contractual rights and obligations", paragraph 12. With respect to contractual restrictions on subcontracting by the contractor (see chapter XI, "Subcontracting", paragraphs 7 to 9), the parties may wish to consider whether the purchaser should be able to terminate the contract if the contractor subcontracts in violation of those restrictions. The contract may preclude the purchaser from terminating if, notwithstanding that the contractor has entered into a subcontract in violation of provisions of the contract, the purchaser has agreed to the subcontract.

(c) *Bankruptcy or insolvency of contractor*

11. The contract and its performance will be subject to mandatory legal rules in the event of the bankruptcy of a party. It is important for the parties to take account of those legal rules in drafting contract provisions on termination. For

example, some legal systems may prevent one party from terminating the contract solely on the ground that the other party is bankrupt.

12. Under most legal systems, the assets of a person or firm that has been adjudicated bankrupt, including, in the case of a contractor, his rights under the works contract, will pass from his control to that of an officer designated under the rules of the relevant legal system. That officer will usually cease carrying on the business of the bankrupt in the ordinary course, except to the extent necessary to protect the assets of the bankrupt and the rights of creditors. Therefore, it may be advisable for the contract to entitle the purchaser to terminate the contract in the event that the contractor is adjudicated bankrupt, if such termination is not inconsistent with mandatory rules of the applicable law. The contract might permit the purchaser to terminate the contract immediately upon the adjudication of bankruptcy by delivering a written notice of termination to the contractor.

13. Even before an adjudication of bankruptcy, the mere institution of bankruptcy proceedings may, under some legal systems, restrict the ability of the contractor to subcontract or to purchase from third parties materials or supplies needed to effect the construction, to make payments which fall due, or otherwise to carry on his business. The parties may, therefore, wish to consider whether the institution of bankruptcy proceedings in respect of the contractor should entitle the purchaser to terminate the contract. On the one hand, when bankruptcy proceedings are instituted involuntarily against the contractor by another firm or person, the contractor might successfully defend against an adjudication of bankruptcy; the parties may, therefore, consider it appropriate to require the purchaser to wait for the adjudication of bankruptcy before being able to terminate the contract. In the case of voluntary proceedings instituted by the contractor himself, it may be possible for an adjudication of bankruptcy to be issued within a short period of time, and the purchaser might suffer no prejudice if he were required to wait for the adjudication. On the other hand, if the institution of bankruptcy proceedings seriously restricts the ability of the contractor to perform the contract, the parties might consider it appropriate even for the institution of such proceedings to entitle the purchaser to terminate the contract.

14. If the parties decide to permit the purchaser to terminate the contract when bankruptcy proceedings are instituted by or against the contractor, they may wish to consider whether the purchaser should have the right to terminate immediately upon the institution of the proceedings, or whether termination in those cases should be subject to the two-notice system (see paragraph 9, above). In the case of bankruptcy proceedings instituted involuntarily against the contractor, the contractor would have an opportunity to have the proceedings dismissed if the purchaser were entitled to terminate only after a specified period of time following notice to the contractor. It may be noted, however, that such an approach could result in loss to the purchaser in some cases, e.g., due to his inability to engage another contractor until the lapse of the period of time. In the case of voluntary bankruptcy proceedings instituted by the contractor himself, the contract might permit the purchaser to terminate immediately upon the institution of the proceedings.

15. In addition to bankruptcy, there is a variety of similar or related proceedings under many national laws (e.g., receivership, liquidation, insolvency, assignment of assets, reorganization) which could interfere with the contractor's

performance of the works contract. The parties may wish to consider whether the purchaser should be entitled to terminate the contract in the event of such proceedings. In that connection, many of the issues considered in paragraphs 11 to 14, above, in relation to bankruptcy, will also be relevant in respect of those other proceedings.

16. When the contract requires the contractor to furnish a performance guarantee (see chapter XVII, "Security for performance", paragraphs 10 to 12), the parties may wish to consider entitling the purchaser to terminate the works contract when the guarantor is engaged in bankruptcy or similar or related proceedings and the contractor fails to arrange for a substitute performance guarantee by another guarantor acceptable to the purchaser within a reasonable or specified period of time.

(d) Termination for convenience

17. A purchaser which is a Government or Government enterprise may wish to be entitled by the contract to terminate the contract for its convenience, that is, without having to establish any grounds otherwise specified in the contract. Under some legal systems, such a purchaser may terminate the contract for reasons other than those specifically provided in the contract even without a provision in the contract permitting him to do so, as long as he fully compensates the other party for losses due to the termination. Under other legal systems, however, such a purchaser may not be permitted to do so unless the contract provides for such a termination. Also, even when the contract is governed by a legal system of the type first mentioned, the parties may wish to exclude some types of compensation (e.g., lost profits; see paragraph 34, below) from the compensation otherwise payable to the contractor by a purchaser who terminates the contract for convenience. For reasons such as these, the parties may wish to consider including in their contract provisions dealing with termination for convenience by such a purchaser. If the purchaser is to be permitted to terminate at his convenience, the contract may permit the termination to be effective immediately upon notice of termination to the contractor.²

18. The consequences of the exercise by the purchaser of a right to terminate the contract for his convenience may differ from the consequences of his termination on other specified grounds (see paragraph 34, below). In particular, the cost to the purchaser of the exercise of this right may be such as to discourage him from doing so except in exceptional circumstances.

2. Termination by contractor

(a) Failure of purchaser to perform

19. The purchaser's principal obligation under the contract is to pay the agreed price. However, he may also have obligations which are related to the contractor's right to receive payment, such as arranging for a letter of credit, or taking over or accepting completed construction. The purchaser may have additional obligations under the contract, such as supplying the design or equipment and materials. The circumstances under which the contract might permit the contractor to terminate the contract in the event of a failure by the

purchaser to perform those obligations are discussed in chapter XVIII, "Delay, defects and other failures to perform". The contract might require the two-notice system (see paragraph 9, above) with respect to termination by the contractor for a failure by the purchaser to perform.

(b) *Interference with or obstruction of contractor's work*

20. The contract may entitle the contractor to terminate the contract if the purchaser seriously interferes with or obstructs the contractor's work. In such cases, the contract might require the two-notice system (see paragraph 9, above).

(c) *Bankruptcy or insolvency of purchaser*

21. The parties may wish to consider whether the contractor should be able to terminate the contract if the purchaser becomes subject to bankruptcy, insolvency or similar proceedings. Many of the considerations discussed in paragraphs 11 to 15, above, concerning termination by the purchaser due to the bankruptcy or insolvency of the contractor, are also relevant in this context.

3. *Prevention of performance due to exempting impediment*

22. During the course of construction, events may occur which prevent a party from performing his obligations under the contract. The contract might provide that, if the events constitute exempting impediments (see chapter XXI, "Exemption clauses", paragraphs 9 to 26), the party is exempt from the payment of damages for his failure to perform. It might also obligate the party to notify the other party of the occurrence of an exempting impediment, and provide for the parties to deliberate on what measures should be taken to deal with it (see chapter XXI, "Exemption clauses", paragraphs 27 and 28). The parties may wish to provide in the contract that, if the exempting impediment persists for a specified amount of time, or if the cumulative duration of two or more exempting impediments exceeds a specified amount of time, the contract may be terminated immediately by either party by delivering a written notice of termination to the other party. The contract may quantify the period of time which would entitle a party to terminate. In that connection, the parties may wish to specify a length of time which is likely to result in a serious delay in completing the works. If only a portion of the construction is affected by the exempting impediment, the contract might permit the party to terminate only the part of the contract dealing with that portion.

D. *Rights and obligations of parties upon termination*

1. *Cessation of construction by contractor and vacation of site*

23. It would be desirable for the contract to provide that, upon termination by either party, the contractor must cease construction. In many instances, however, it will not be feasible or advisable for the contractor simply to cease construction and leave the site at the moment the termination takes effect.

Certain operations in progress may have to be completed, and measures may have to be taken to protect or secure various elements of the partially completed works. If the parties agree that the contractor should be obligated to take such measures, it is advisable for the contract to contain an express provision to that effect. With respect to the question of which party is to bear the cost of such measures, see sub-section 5, below. The contract may also expressly obligate the contractor to vacate the site without delay once all construction has finally stopped, or, alternatively, when ordered to do so by the purchaser, and to require him to ensure that persons or firms engaged by him also vacate the site in those circumstances.

24. The contractual provision obligating the contractor to vacate the site, or the order to vacate given by the purchaser, might also obligate the contractor to remove his construction equipment and tools, and equipment and materials to be incorporated in the works which are owned by the contractor. If the contractor fails to remove those items, the contract could empower the purchaser to have them removed and stored at the contractor's expense. If the contract is terminated for grounds attributable to the contractor, the contract may also give the purchaser the option to use the contractor's construction equipment and tools in order to continue the construction, perhaps upon payment of a reasonable rental, and to purchase at a reasonable price equipment or materials to be incorporated in the works which are on the site. Parties should be aware, however, that these approaches may be subject to or restricted by mandatory rules of applicable law.

25. In some cases, the parties may consider it desirable to provide that the right of the purchaser or of a new contractor to use the contractor's construction equipment and tools is subject to the rights of third persons (e.g., lessors) in those items. In other cases, however, the parties may consider it preferable not to include such a condition, and, in effect, require a contractor who agrees to give the purchaser or a new contractor the option to use the contractor's construction machinery and tools to satisfy himself that to do so would not interfere with the rights of third persons, and to bear the risk of any such interference.

2. Take-over of works by purchaser

26. With the exception noted below, the contract may, in the event of termination of the contract, obligate the purchaser to take over portions of the works which have already been constructed and which are not subject to the termination. The contract may specify a short period of time after the termination becomes effective within which the contractor must hand over the works to the purchaser and the purchaser must take it over. However, in the case of termination by the contractor due to a failure by the purchaser to perform, the contract may provide that the purchaser is not entitled to take over the works if such take-over would be inconsistent with the rights of the contractor arising from the purchaser's failure (e.g., rights of the contractor under a reservation of ownership clause; see chapter XV, "Transfer of ownership of property", paragraph 8).

3. *Transfer of contracts with subcontractors and suppliers and payment by purchaser of sums due to subcontractors and suppliers*

27. When a works contract is terminated, there may exist outstanding contracts which the contractor has entered into with subcontractors and suppliers. In some cases, the purchaser will have no interest in those contracts as a result of the termination of the works contract. In other cases, however, for example, where the construction is to be completed by the purchaser or by a new contractor engaged by the purchaser, the purchaser or the new contractor may wish to take over some of those contracts. Alternatively, he or the new contractor may wish to enter into new contracts with those subcontractors or suppliers. This may be the case if the original contracts are not transferable, or if the purchaser or new contractor does not wish to assume all of the obligations due from the terminated contractor to the subcontractors or suppliers by taking a transfer of the contracts (see, also, paragraph 28, below). The conclusion of new contracts may be practicable only if the subcontractors or suppliers are released from their contracts with the contractor. Therefore, in cases where the contract is terminated for grounds attributable to the contractor (i.e., due to a failure of the contractor to perform or his bankruptcy or insolvency), the parties may wish to consider obligating the contractor to transfer the contracts to the purchaser or to the new contractor, or to terminate them, if the purchaser requests him to do so in his notice of termination and if transfer or termination is possible. It may be desirable for the works contract to obligate the contractor to include in his contracts with subcontractors or suppliers a provision permitting him to terminate those contracts if the works contract is terminated.

28. When the transfer of a contract or a new contract with a subcontractor or supplier is contemplated, difficulties may arise because of sums owed to those third persons by the contractor. The third person may not wish to continue his participation in the construction unless past sums owed to him by the contractor are paid. Furthermore, the third person might refuse to deliver items which prior to termination he had undertaken to supply but for which payment has not yet been made, or might even take back equipment and materials which have already been delivered. The purchaser may therefore want the authority to pay to the third person sums owed to the latter by the contractor, and to recover those payments from the contractor. If the purchaser accepts a transfer of the contract with the third person, he will, under some legal systems, be obligated to pay the past due sums. It may be desirable for the works contract expressly to authorize such direct payments and to entitle the purchaser to recover them from the contractor.

4. *Drawings, descriptive documents and similar items*

29. If the purchaser intends to complete the work left unfinished by the terminated contractor, the purchaser may wish to obtain the designs, drawings, calculations, descriptions, documentation for know-how and engineering and other such items relating to the construction which has been completed by the contractor, as well as for construction yet to be completed. Obtaining that documentation or information may be important if the construction or technology is known only to the contractor, or if, for other reasons, the items

cannot be produced by an engineer or a new contractor. The parties may wish to provide, therefore, that, if the contract is terminated by the purchaser for reasons attributable to the contractor, or, more generally, for reasons other than those attributable to the purchaser (i.e., his failure to perform or his bankruptcy or insolvency), the contractor is obligated to deliver to the purchaser such of those items as are in the possession of the contractor. In undertaking such an obligation, the contractor may have to obtain the consent of third persons who have industrial property or other intellectual property rights in respect of the items to be delivered to the purchaser. In addition, it might be desirable for the contract to obligate the contractor to arrange for the production of drawings and documents (e.g., operation manuals) which have not yet been produced and for their delivery to the purchaser, particularly when it would be difficult or impossible for another contractor to produce them.

5. *Payments to be made by one party to other*

(a) *Termination for grounds attributable to contractor*

30. The parties may wish to provide that, if the contract is terminated for grounds attributable to the contractor (i.e., a failure by the contractor to perform or his bankruptcy or insolvency), he is not entitled to payment for construction which he has not yet performed. However, the contract might entitle him to receive the portion of the price which is attributable to construction which he satisfactorily performed prior to termination. In a cost-reimbursable or unit-price contract, the determination of this price should present no unusual difficulties. In a lump-sum contract, the determination of the price attributable to construction which has been performed would be facilitated if the contract allocated portions of the price to specific elements of the construction (see chapter VII, "Price and payment conditions", paragraph 7).

31. When the purchaser terminates the contract, he may incur expenses and suffer losses which he would not have incurred or suffered had the contract not been terminated and had the construction been completed by the contractor. If the contract is terminated due to a failure of the contractor to perform, the contract may provide for the purchaser to be compensated for those expenses and losses by way of damages (see chapter XX, "Damages"). In the case of termination due to the bankruptcy or insolvency of the contractor, it would be desirable for the contract to specify the types of expenses and losses for which the contractor must compensate the purchaser. For example, the contract may obligate the contractor to compensate the purchaser for his expenses in connection with securing or protecting the partially completed works until construction could resume with a new contractor, and penalties or expenses incurred due to the termination of contracts with other contractors or suppliers. In addition, the contract may obligate the contractor to compensate the purchaser for the amount by which the cost of completing the construction with a new contractor exceeds the amount which, under the contract, would have been due to the contractor in respect of that construction. The contract might also obligate the contractor to compensate the purchaser for losses suffered from a delay in the completion of the construction due to the termination and the necessity of engaging a new contractor to complete the construction.

(b) Termination for grounds attributable to purchaser

32. If the contract is terminated for grounds attributable to the purchaser (i.e., a failure by the purchaser to perform or his bankruptcy or insolvency), the contract may entitle the contractor to receive the portion of the price which is attributable to the construction which he has satisfactorily performed. In the case of termination due to a failure of the purchaser to perform, the contract may provide for the contractor to be compensated by way of damages for his expenses and losses arising from the termination (see chapter XX, "Damages"). In the case of termination due to the bankruptcy or insolvency of the purchaser, it would be desirable for the contract to specify the types of expenses and losses for which the purchaser must compensate the contractor. These could include, for example, the costs of any measures required to be taken or requested by the purchaser to secure or protect the works, the cost of repatriating the contractor's personnel and construction equipment and tools, to the extent that this is not included in amounts paid or to be paid to the contractor, and penalties or expenses payable by the contractor due to terminating contracts with subcontractors or suppliers.

(c) Termination based on circumstances not attributable to either party

33. The contract might provide that, if the contract is terminated for circumstances not attributable to either party (e.g., an exempting impediment), the contractor is entitled to receive the portion of the price which is attributable to the construction which he has satisfactorily performed. The parties should consider, however, the most equitable way to deal with their respective expenses and losses occasioned by the termination. One possibility is to share these expenses and losses equally or in accordance with an agreed formula. Another possibility is for each party to bear his own expenses and losses.

(d) Termination for convenience

34. If the contract permits the purchaser to terminate at his convenience, it might, in the event of such a termination, require the purchaser to pay to the contractor the portion of the price which is attributable to the construction satisfactorily performed, as well as for expenses and losses incurred by the contractor arising from the termination (see paragraph 33, above). The parties may wish to consider whether the contractor should be entitled to compensation for his lost profit on the portion of the contract which has been terminated for convenience. On the one hand, the contractor might have foregone other contracting opportunities in anticipation of completing the contract in its entirety. On the other hand, an obligation of the purchaser to compensate the contractor for his lost profit might make it financially prohibitive for the purchaser to exercise his right of termination for convenience. One approach may be for the contract to establish a scale of payments to be made by the purchaser to the contractor as compensation for lost profits, the amount of the payments depending upon the stage of construction which has been completed when the contract is terminated for convenience. Such amounts would be payable without the necessity of the contractor proving the amount of his lost profits. Issues arising in relation to the recovery of compensation for lost profits are discussed in chapter XX, "Damages", paragraph 8.

35. At the time when the contract is terminated for convenience, the purchaser might have received the design for the works from the contractor, but the value of the design might not yet be adequately reflected in the price which the purchaser has already paid or which would be due to the contractor on the basis of the construction which the contractor has satisfactorily performed. To deal with these cases, the contract may specify that the purchaser must compensate the contractor for the design to the extent that such compensation is not otherwise reflected in the price already paid or due to the contractor.

E. Survival of certain contractual provisions

36. In some legal systems, termination of the contract might be interpreted as bringing to an end all contractual provisions, including those which the parties might wish to survive, such as those regulating the rights and obligations of the parties upon termination, quality guarantees for construction performed, remedies for defective performance, and provisions such as those concerning settlement of disputes and the preservation of confidentiality. It is advisable for the parties to take care to ensure that rights, obligations and remedies which they wish to survive do not lapse upon termination. To do so, the parties may specify in the contract those provisions which are to survive and continue to bind the parties even after termination of the contract.

Footnotes to chapter XXV

¹Illustrative provisions

“(1) The purchaser may, without the authorization of a court or any other authorization, terminate this contract in respect of obligations which have not yet been performed, in accordance with the following provisions:

“(a) If the contractor fails to commence construction at the time set forth in article .. of this contract, the purchaser may deliver to the contractor written notice requiring him to commence and specifying that, if the contractor fails to do so within [a reasonable time] [... days] after delivery of the notice, the purchaser will terminate this contract. If the contractor fails to commence construction by the expiry of that period of time, the purchaser may terminate this contract by delivering to the contractor a written notice of termination. However, the purchaser is entitled to immediate termination of the contract if the contractor states to the purchaser that he will not commence construction.

“(b) If the contractor fails to complete a portion of the construction by an obligatory milestone date set forth in article [] of this contract, the purchaser may deliver to the contractor written notice requiring him to complete that portion of the construction and specifying that, if the contractor fails to do so within [a reasonable time] [... days] after delivery of the notice, the purchaser will terminate this contract. If the contractor fails to complete that portion of the construction by the expiry of that period of time, the purchaser may terminate this contract [in respect of the portion of construction delayed] [in respect of the entire construction remaining to be completed] by delivering to the contractor a written notice of termination.

“(2) The granting to the contractor of the additional periods of time to perform set forth in paragraph (1)(a) and (b), above, is not to be regarded as an extension of the times specified in article [] for the performance of the obligations in question, nor to prejudice the purchaser's rights and remedies for delay by the contractor in performing those obligations.

"(3) The grounds for termination enumerated in this article [are in addition to] [substitute] any grounds for termination which may be available to the purchaser under the law applicable to this contract."

²Illustrative provisions

"The purchaser may, at any time, and without the authorization of a court or any other authorization, terminate this contract or any part thereof for any reason other than those set forth in article [] by delivering a written notice of termination to the contractor."

Chapter XXVI. Supplies of spare parts and services after construction

SUMMARY

After construction is completed and the works has been taken over by the purchaser, the purchaser will have to obtain spare parts to replace those which are worn out or damaged, and to maintain, repair, and operate the works. He may wish to obtain from the contractor the spare parts and the repair, maintenance and operation services which he may need. The degree of assistance from the contractor needed by the purchaser in regard to the supply of spare parts and services after construction will depend on the technology and skilled personnel possessed by or available to the purchaser (paragraphs 1 to 3).

It is advantageous for a purchaser from a developing country to acquire or to have available locally the spare parts and the technology and skills necessary to maintain, repair and operate the works. To this end, he may seek in his contract with the contractor to obtain a transfer of the technology and skills required for the manufacture of spare parts and the carrying out of the services. The transfer of technology and skills to the personnel of the purchaser may be effected under training obligations undertaken by the contractor. Such a transfer may be of value to the developing country itself as it may promote its industrialization process (paragraphs 4 and 5).

The planning of the parties with regard to the supply of spare parts and services after construction would be greatly facilitated if the parties were to anticipate and provide in the works contract for the needs of the purchaser in that regard. Other approaches will have to be adopted if this is not possible (paragraphs 7 to 9). The continued availability of spare parts for the operational lifetime of the works is of considerable importance to the purchaser (paragraphs 10 and 11).

A person offering to construct the works may be required to indicate the spare parts which will be needed over a specified period of operation, and the prices at which and the period of time during which he can supply them (paragraphs 12 and 13). The continued availability of spare parts is of crucial importance to a purchaser from a developing country and, accordingly, it may be necessary for him to take steps, through appropriate contractual provisions, to secure a supply of these either from the contractor or from the suppliers of them (paragraph 14). If spare parts are manufactured not by the contractor but for the contractor by suppliers, the purchaser may prefer to enter into contracts with those suppliers rather than obtain them from the contractor or, alternatively, he may wish to have the contractor procure them as his agent (paragraphs 15 and 16).

The parties in their contract may address issues connected with the ordering and delivery of spare parts. The contract may describe the specifications of the spare parts to be supplied, and provide for a quality guarantee in respect of them (paragraphs 18 to 20).

A prospective contractor may be required to indicate the maintenance services he is prepared to supply and the duration for which he is prepared to supply them. The contractor may be required to submit a maintenance programme designed to ensure the proper operation of the works over its lifetime, and the maintenance obligations of the contractor may be defined on the basis of that programme (paragraphs 22 to 24).

The standards to be observed by the contractor when performing maintenance work may be specified in the contract. The contractor may be required to furnish a report on each maintenance operation. The contract may describe how the price for the provision of the maintenance services is to be determined and the payment conditions applicable (paragraphs 25 to 28).

The contract should clearly define the extent of the contractor's repair obligations. It is in the purchaser's interest to enter into contractual arrangements that will ensure that the works will be repaired expeditiously in the event of a breakdown (paragraphs 29 and 30). To ensure that repairs may be undertaken speedily, the procedure for notifying the contractor of the need for repairs and for the contractor to advise the purchaser of any further necessary repairs should be agreed upon in the contract. The contractor may be required to furnish the purchaser with a report of the repairs carried out. The contractor may also be required to give a guarantee under which he assumes responsibility for defects in repairs (paragraphs 31 to 35).

It is advisable for the contract to define carefully the scope of any obligations imposed on the contractor with regard to the technical operation of the works. This may be done on the basis of an organizational chart which shows the functions to be allotted to the personnel of the contractor in carrying out such a technical operation. The division of control between the purchaser and contractor during the operation of the works should be clearly described (paragraphs 37 and 38). The contract may provide how the price for such services is to be determined and the payment conditions applicable (paragraph 39).

The contract may require the purchaser to facilitate the maintenance, repair and operation of the works by the contractor. The purchaser may wish to consider supplying locally available equipment and materials needed for maintenance and repairs (paragraph 40).

The contract should specify when the contractor's obligations regarding the supply of spare parts, maintenance, repair and operation are to commence and may also determine the duration for which they are undertaken by the contractor or establish some mechanism for determining the duration at some later time. Where the contract imposes obligations on the contractor over a long duration, it may be desirable to include mechanisms for the modification of the obligations imposed on the contractor, in particular, as to the scope of those obligations and the price payable by the purchaser. Where the duration of the obligations is short, the agreement may be made to renew automatically (paragraphs 41 and 44).

The parties may wish to deal in the contract with the termination of the obligations as to the supply of spare parts, maintenance, repair and operation. The contract may entitle the purchaser to terminate upon giving notice of a specified period (paragraph 45). The parties may also wish to provide for a system of remedies other than termination for the failure by a party to perform his contractual obligations with respect to the supply of spare parts, maintenance, repair and operation (paragraph 46).

A. General remarks

1. After construction is completed and the works has been taken over by the purchaser (see chapter XIII, "Completion, take-over and acceptance", paragraph 1), he will have to obtain spare parts to replace those which are worn out or damaged, and to maintain, repair and operate the works. In some cases, the purchaser may wish to obligate the contractor to provide some or all of the spare parts and the maintenance, repair and operation services which may be needed. In respect of the supply of spare parts and the repair of the works, the purchaser may need the assistance of the contractor for the operational lifetime of the works, while in respect of the maintenance and operation of the works, such assistance may be required for only a limited period after the works commences to operate.

2. Although the supply of spare parts and the maintenance, repair and operation of works are each dealt with in separate sections in this chapter, the subjects are, in certain respects, interrelated. For example, periodic maintenance has primarily a preventative function. It helps prevent costly breakdowns which require the repair of portions of the works or items of equipment. Accordingly, the purchaser has a vital interest in seeing that maintenance is performed regularly, so that fewer repairs need to be carried out. In addition, spare parts are needed both for the maintenance and the repair of the works and of items of equipment.

3. The degree of assistance from the contractor needed by the purchaser in regard to the supply of spare parts and services will depend on the technology and skilled personnel possessed by or available to the purchaser. For example, when the works is taken over by the purchaser he may not have personnel sufficiently skilled for the technical operation of the works. In that event, the purchaser may wish to obtain the contractor's assistance in operating the works, at least for an initial period. The purchaser may, in some cases, wish the contractor to provide the personnel to man many of the technical posts in the works, while in other cases he may wish the contractor only to provide technical experts to collaborate in an advisory capacity with the purchaser's personnel in the performance of a few highly specialized operations. With regard to the supply of spare parts and repair and maintenance services, these may not be available locally or from any other source, and the purchaser may have to depend on the contractor to supply them.

4. It is advantageous for a purchaser in a developing country to acquire, or have available from local sources, the technology and skills necessary to manufacture spare parts which may be needed to maintain and repair the works. This will, in the long term, reduce the purchaser's expenditure of foreign exchange and his dependence on the contractor. Accordingly, the purchaser may find it advisable to enter into contractual arrangements under which the necessary technology and skills are transferred either to his own personnel, or to enterprises located in his country specializing in the manufacture of spare parts. Such a transfer will also be of more general assistance to the developing country itself, for it will increase its self-reliance through the mastery of technology and the diffusion of industrial skills, and may so promote its industrialization policy.

5. The transfer of technology and skills to the personnel of the purchaser may be effected under training obligations undertaken by the contractor. In some contracts, the contractor may be obligated to train the purchaser's personnel in

maintaining and operating specified portions of the works or specified items of equipment (see chapter VI, "Transfer of technology", paragraphs 26 to 32). In other contracts, the contractor's obligations may go even further. For example, under a product-in-hand contract, the contractor may be obligated not only to train the purchaser's personnel but also to show that the works can be operated and agreed production targets achieved by the purchaser's personnel, using the raw materials and other inputs specified in the contract (see chapter II, "Choice of contracting approach", paragraph 7).

6. The parties should be aware that in the country where the works is situated legal regulations of a mandatory character may exist governing certain issues connected with the supply of spare parts and the maintenance, repair and operation of the works (e.g., for the purpose of ensuring that the works operate safely). The parties should take such regulations into account when formulating contractual provisions on these issues.

B. Contractual arrangements

7. The planning of the parties with respect to the supply of spare parts and services after construction would be greatly facilitated if the parties were to anticipate and provide in the works contract for the needs of the purchaser in that regard. The purchaser may find that he can secure the agreement of the contractor on the extent of the spare parts and services to be supplied by the latter, the duration of the obligation to supply them and the prices to be paid for them, more easily during the negotiations which precede the entering into of the contract than at a later time.

8. In many cases, however, the spare parts and services that will be needed by the purchaser will be uncertain at the time of the negotiations (e.g., the skilled personnel which will be locally available at the time of the completion of construction, or the exact quantity of the spare parts which will be required, may not be predictable). In such cases, a possible approach is for the contract to identify the types of assistance which might be needed and to provide that, if assistance of those types is requested by the purchaser before the completion of the construction, the contractor is obligated to supply it to the extent that he has the capacity to do so. The contract may specify the means by which the price payable by the purchaser for those services is to be determined. It is desirable for the contract to include provisions on those issues on which agreement can be reached at the time the contract is entered into (e.g., the quality of spare parts or services, and conditions of payment). If contractual terms on certain matters are to be agreed upon in the future, the contract may determine the procedure to be followed if the parties fail to reach agreement (see chapter XXIX, "Settlement of disputes", paragraph 3).

9. An alternative approach to dealing with the uncertainty concerning the purchaser's needs as regards spare parts and services at the time the works contract is entered into is for the parties to enter into a separate contract regulating these matters. Such a contract may be entered into closer in time to the completion of construction, when the purchaser may have a clearer view of his requirements.¹ Separate contracts will be necessary when the contractual arrangements for the supply of spare parts or of maintenance or repair services are not with the contractor, but are with the suppliers of the spare parts or services (see sections C and D, below).

C. Spare parts

10. The continued availability of spare parts for the operational lifetime of the works is of great importance to the purchaser. This availability is particularly important to purchasers from developing countries where works are often expected to have a longer operational lifetime than in developed countries. Accordingly, the purchaser may require an enterprise submitting a tender, or with which he is negotiating, to include in its tender or in its offer a proposal concerning the kinds and the quantities of spare parts which will be needed over a specified period of time (e.g., over the course of two years' operation of the works), the period of time after the commencement of operation of the works during which the enterprise is prepared to supply the spare parts, the prices at which it is prepared to supply them and the time for which it is prepared to maintain those prices. The purchaser may also require the enterprise to identify the spare parts which it will manufacture itself and those which it will obtain from suppliers, and to name those suppliers. In certain circumstances it may, however, not be possible for the contractor to predict with certainty the kinds or quantities of spare parts which a purchaser may need. These requirements may vary depending upon the manner in which the works is operated. In addition, while fairly accurate estimates might be made of the quantities of spare parts required in respect of parts which are routinely subject to wear and tear and which, therefore, will have to be replaced periodically, it will be difficult to predict which and how many spare parts will have to be replaced for exceptional reasons (e.g., breakages due to accidents or faulty use of equipment).

11. The contract may contain provisions seeking to protect the purchaser from the consequences of an inaccurate estimate given by the contractor of spare parts required for routine replacement. For example, the contract may require the contractor to accept the return at cost of excess spare parts acquired on the basis of the contractor's estimate. Conversely, the contract may also provide that the purchaser is entitled to buy additional spare parts at the prices at which they were originally supplied, or at a discount, to make up any shortfall between the quantities estimated by the contractor and those actually required.

12. Spare parts usually fall into two categories. The first category consists of standard parts which are obtainable both from the contractor and from several other sources. The second category consists of non-standard parts manufactured by the contractor, or by another enterprise to the contractor's specifications, and which are suitable only for the equipment installed in the particular works being constructed for the purchaser. Standard spare parts may, in many cases, be obtained more cheaply and more conveniently from sources other than the contractor. However, the purchaser may find it desirable to obligate the contractor to supply, at the time of the completion of construction, a limited stock of those parts to cover the period of time between the commencement of operation of the works and the establishment by the purchaser of his own sources of supply. The contract may require the contractor to inform the purchaser of the names of suppliers who can supply the various standard parts and of the advantages of purchasing from those suppliers. The contract may further obligate the contractor to provide the specifications of the parts and other information which might enable the purchaser to obtain the best possible prices and service from the suppliers.

13. As regards non-standard spare parts, the purchaser may find it advisable to require the contractor to supply an adequate stock of such parts (e.g., sufficient for two years' operation of the works) by the time the construction is completed. Those spare parts could then be produced at the same time that the equipment to be incorporated in the works is produced, and they could be transported to the site together with the equipment, usually resulting in savings in production and transport costs. The purchaser may wish to obtain a larger stock of such spare parts if the contractor's prices are likely to increase substantially after the contract is entered into. In deciding on the quantity of spare parts to be supplied, the purchaser may wish to take into account their shelf life.

14. Because the continued availability of spare parts is of crucial importance to a purchaser from a developing country, it may be necessary for him to take steps to secure a supply of these parts at the time the contract is entered into. In particular it is advisable for the purchaser to secure the continued availability of non-standard spare parts (see paragraphs 12 and 13, above). The purchaser may need to guard against the possibility of the contractor ceasing production of those parts. One means of assuring such availability may be for the contract to obligate the contractor to supply the parts for a period of relatively long duration, perhaps even for a period covering the operational lifetime of the works. Alternatively, the purchaser may seek to obligate the contractor to supply him with the drawings, specifications, technical information and licences necessary to enable the purchaser to manufacture or have manufactured for him the non-standard parts. This latter approach may, however, be inappropriate where the purchaser is from a developing country whose enterprises do not have the capacity to manufacture such parts (see paragraph 17, below). As regards non-standard spare parts manufactured by suppliers to the contractor's specifications, the purchaser may seek to obligate the supplier to supply the parts for a period of relatively long duration or, alternatively, seek to obtain the drawings, specifications, technical information and licences necessary for their manufacture.

15. With respect to non-standard spare parts manufactured by suppliers to the contractor's specifications (see paragraph 12, above), the works contract may still obligate the contractor to supply the spare parts. The contractor will perform that obligation by obtaining the spare parts from suppliers. In such a case, it is advisable for the contract to provide that the contractor is liable in respect of such spare parts to the same extent as he is liable in respect of equipment manufactured and supplied by him (see chapter VIII, "Supply of equipment and materials"). The advantage of this approach is that the contractor, whose financial worth is known to the purchaser and with whom the purchaser has had a long-standing contractual relationship by the time the spare parts are supplied, will be liable if the parts prove defective. Alternatively, the purchaser may wish to enter into his own contracts with those suppliers (as to some of the obligations which may be included in such contracts, see paragraph 14, above). Where the contractor has provided the suppliers with the specifications for non-standard parts, his consent may be required to enable the purchaser to deal direct with those suppliers. In such a case, the contractor may be obligated by the contract not to withhold his consent unreasonably.

16. Where the purchaser wishes to contract with suppliers, he may wish to have the contractor act as his agent in procuring the spare parts from them. The works contract may set out the services to be supplied by the contractor in

respect of the procurement. These services could include, for example, contacting possible suppliers, determining the quantities of spare parts which may be required, obtaining competitive offers, evaluating the offers, making recommendations as to purchase, arranging for delivery, and training the purchaser's personnel in stock management. The contractor may also be authorized to enter into contracts with suppliers on behalf of the purchaser.

17. In exceptional cases, the purchaser or other enterprises in his country may have the technical expertise required to manufacture spare parts for the works. In such cases, the contract may require the contractor to furnish to the purchaser the specifications, drawings and technical data necessary for such manufacture. This approach may not be feasible with respect to an item which has been manufactured for the contractor by a supplier, in particular if the supplier has industrial property rights in regard to that item which are enforceable in the country of the contractor or in the country of the purchaser. In such cases, it is advisable for the purchaser to obtain a licence to manufacture the spare parts, or the consent of the supplier to such manufacture, prior to the entry into force of the contract. It may be noted that the contractor's quality or other guarantees may be invalidated by the purchaser's use of spare parts other than those whose use has been authorized by the contractor.

18. The works contract may address issues connected with the ordering and delivery of spare parts. For example, it may determine when delivery is to take place (e.g., it may require some spare parts to be delivered automatically at specified intervals, and others to be delivered upon order by the purchaser). The contract may also specify the manner in which orders are to be communicated and the period of time following the order when delivery is to be made (e.g., within one month of the receipt of the order). The purchaser may wish to provide that an agreed sum is to be payable for any delay in delivery (see chapter XIX, "Liquidated damages and penalty clauses"). The contract might provide for issues such as the passing of risk, packaging, payment of customs duties and taxes, and other incidents of the delivery of the spare parts, to be settled in accordance with a well-recognized trade term (e.g., f.o.b., C.I.F.).² The prices for the spare parts may be agreed upon on the basis of the prices quoted by the contractor (see paragraph 11, above). The parties may also agree upon the payment conditions applicable (e.g., the currency, time and place of payment; see chapter VII, "Price and payment conditions").

19. The contract may describe the technical specifications of the spare parts to be supplied, or it may provide that the parts are to have the same specifications as the parts originally incorporated in the works. In addition, the contract may include a guarantee in respect of the spare parts under which the contractor assumes liability for defects discovered and notified to him before the expiry of a guarantee period (see chapter XVIII, "Delay, defects and other failures to perform"). Since spare parts supplied on a particular date may not be put to use until some time later, the determination of the length of the guarantee period and the time when the period commences to run may present difficulties. A possible approach may be to provide for a relatively short guarantee period commencing on the date the parts are put to use, and to provide further that, whether or not the spare parts are put to use, the guarantee expires at the end of a longer period commencing to run from the date of delivery of the spare parts. Different periods may be specified in respect of different kinds of spare parts, depending on the nature of the parts and the use to which they will be put. A simpler approach may be to provide for a single

guarantee period commencing to run from the date of delivery of the spare parts, although, again, a different period might be specified in respect of different kinds of spare parts.

20. After the works is constructed, the contractor may improve or re-design some of the items which he manufactures and which he has undertaken to supply as spare parts. Each party may have an interest in substituting the improved or re-designed items for the ones originally supplied. It may be advisable for the contract to require the contractor to inform the purchaser whenever improvements or re-designings are made, so that, if the purchaser so wishes, negotiations may take place for the supply of the improved or re-designed spare parts instead of the parts originally agreed to be supplied.

21. It is desirable for the purchaser's personnel to develop the technical capacity to install the spare parts. For this purpose, the contract may obligate the contractor to supply the necessary instruction manuals, tools and equipment. The instruction manuals should be in a format and language readily understood by the purchaser's personnel. The contract may also obligate the contractor to furnish "as built" drawings indicating how the various pieces of equipment interconnect and how access can be obtained to the different pieces of the equipment to enable the spare parts to be installed, and also to enable maintenance and repairs to be carried out. In certain cases, it may be appropriate for the contractor to be obligated to train the purchaser's personnel in the installation of spare parts.

D. Maintenance

22. In order to assist the purchaser in maintaining the works, the contract may obligate the contractor to submit, prior to the completion of the construction, a maintenance programme designed to keep the works operating over its lifetime at the level of efficiency required under the contract. A maintenance programme would include matters such as periodic inspection of the works; lubrication, cleaning and adjustment; and replacement of defective or worn-out parts. Maintenance may also include operations of an organizational character, such as establishing a maintenance schedule or maintenance records. The contractor may also be required by the contract to supply maintenance manuals setting out appropriate maintenance procedures. These manuals should be in a format and language readily understood by the purchaser's personnel.

23. The purchaser may require a tenderer or an enterprise with which a contract is being negotiated to indicate whether it is prepared to supply the maintenance services necessary for the proper functioning of the works, the period of time for which it is prepared to supply them, and the price at which it is prepared to do so.

24. The purchaser may wish a consulting engineer to review the maintenance programme and procedures submitted by the contractor (see chapter X, "Consulting engineer"). The consulting engineer's report may enable the purchaser to determine, on the one hand, what part of the maintenance the purchaser will be able to undertake himself, taking into account the skilled personnel he has available, the training obligations assumed by the contractor (see chapter VI, "Transfer of technology", paragraph 26 to 32), and the maintenance equipment he possesses, and, on the other hand, the maintenance work which will require the contractor's assistance. It is desirable for the contractual provisions dealing with maintenance to specify the items to be maintained by the contractor

(e.g., the entire works, or only specified items of equipment) and to describe the maintenance obligations which the contractor is undertaking. If major items of equipment have been manufactured for the contractor by suppliers, the purchaser may find it preferable to enter into independent maintenance contracts with the suppliers, as they may be better qualified to maintain the items. To enable the purchaser to enter into such contracts, the works contract may obligate the contractor to disclose to the purchaser, prior to the completion of construction, the identities of the suppliers of equipment which needs maintenance.

25. It is desirable for the works contract to specify the standards to be observed by the contractor when performing maintenance work. If maintenance norms or standards established by professional bodies are available, the contractor's obligations may be described by reference to those norms or standards. Where such norms or standards are not available, the contract may specify that the maintenance is to be effected in accordance with the standards which would be observed by a professional engineer when carrying out such maintenance in the country of the contractor. Another approach may be to specify the results which are to be achieved as a result of the maintenance. For example, the contract may require the contractor to carry out maintenance of the works (or a portion of the works) to such a standard as will ensure that the works (or that portion) operates in accordance with the contract for a specified percentage of its anticipated operating time over a fixed period. Failure of the works to operate due to causes for which the contractor is not responsible (e.g., faulty operation by the purchaser's personnel) may be excluded from the scope of such an undertaking.

26. The contractor may undertake to furnish a report on each maintenance operation immediately following the operation. The contract may require the report to describe the maintenance activities undertaken and to be supported by records evidencing the time expended by various categories of personnel and the processes used. The contract may also require the report to contain a description of any defects discovered in the works and any repair or maintenance work needed which is outside the scope of the contractor's obligations, together with an estimate of the costs of carrying out the repair or maintenance work if it can be carried out by the contractor.

27. Proof of proper maintenance of the works may be facilitated by providing in the contract that the personnel of the purchaser are to be associated with the personnel of the contractor in carrying out the maintenance. This may also serve as an effective means of training the purchaser's personnel in maintenance procedures. The price payable by the purchaser for the maintenance may be a lump sum payable for all the obligations undertaken and costs incurred by the contractor in respect of the maintenance operations. This approach may be appropriate when the maintenance operations are of a routine character. Another approach may be for the parties to agree on unit rates for units of time expended on the various work processes involved in the maintenance. Yet another approach may be for the contract to provide that the contractor is to be paid a fee to cover his overhead and profit, and that he is to be compensated for his expenses on a cost-reimbursable basis. In such a case, it is desirable for the contract to specify clearly the expenses in respect of which the contractor is to be reimbursed (see chapter VII, "Price and payment conditions", paragraphs 16 to 20).

28. The contract may set out payment conditions in respect of the price payable for maintenance. Such issues as the currency, time and place of payment may be settled in the contract (see chapter VII, "Price and payment conditions"). With

regard to the time of payment, the contract may require payment to be made within a specified period of time after the submission by the contractor of an invoice following the completion of each maintenance operation, accompanied by the report mentioned in paragraph 26, above.

E. Repairs

29. It is in the purchaser's interest to enter into contractual arrangements that will ensure that the works will be repaired expeditiously in the event of a breakdown. In many cases, the contractor is better qualified than a third person to effect repairs. In addition, if the contract prevents the purchaser from disclosing the technology supplied by the contractor to third persons, this may limit the selection of third persons to effect repairs to those who provide assurances regarding non-disclosure of the contractor's technology which are acceptable to the contractor. On the other hand, if major items of equipment have been manufactured for the contractor by suppliers, the purchaser may find it preferable to enter into independent contracts for repair with the suppliers, as they may be better qualified to repair the items. In defining the repair obligations imposed on the contractor, it is advisable to do so clearly, and to distinguish them from obligations assumed by the contractor under quality guarantees to cure defects in the works (see chapter V, "Description of works and quality guarantee", paragraphs 26 to 31).

30. The extent of the repair obligations to be imposed on the contractor may depend on whether the purchaser wishes to undertake certain repair operations himself (e.g., replacement of minor items of defective equipment). Furthermore, repair obligations to be imposed on the contractor during the period of the quality guarantee may be less extensive than those to be imposed after the expiry of this period since many malfunctions will be covered by the obligation to cure defects (see previous paragraph). The obligations of the contractor cannot be described in terms of specific repair operations, since the repair operations needed will depend on the nature of a particular breakdown. Even where the purchaser himself carries out repairs, he may still need the assistance of the contractor in starting up the works after the repairs have been carried out. Accordingly, the purchaser may wish to consider including a provision requiring the contractor to render such assistance after a repair undertaken by the purchaser is completed.

31. Because some repairs may need to be undertaken speedily, it is advisable for the contract to settle clearly the procedures by which the purchaser may call upon the contractor to effect them. The contract may specify the means by which the contractor is to be notified of a breakdown (e.g., telex, telephone), and the periods of time after notification within which the contractor must inspect the breakdown and commence repairs. The parties may agree that the repairs are to be effected on a cost-reimbursable basis, i.e., that the contractor is to be paid reasonable costs incurred by him in effecting the repairs, plus a fixed amount as a fee. The contract may also provide that, pending the carrying out of the repairs, the purchaser is entitled to use the works or portions of the works to the extent that they remain capable of operation and to the extent that the operation does not unreasonably interfere with the repair work.

32. Certain repairs may not have to be carried out immediately if the works remains operative despite the existence of defects. In such cases, the contract may require the contractor to furnish a report describing the repairs which are needed,

estimating the costs and setting out a time-schedule for the repair (see paragraph 26, above). On the basis of that report, the parties will be able to agree on the terms under which the repairs are to be effected. The parties may find it desirable to provide in the contract that, where disagreement on technical issues prevents the parties from agreeing on the time-schedule for the repairs, the time-schedule is to be determined by a referee (see chapter XXIX, "Settlement of disputes", paragraphs 16 to 21). If the parties fail to reach agreement on the price payable to the contractor for effecting the repairs, the contract may provide for payment to be made on a cost-reimbursable basis. It is advisable that any agreement between the parties in relation to repairs be reduced to writing.

33. The works contract may set out payment conditions in respect of the price payable for repairs. Such issues as the currency, time and place of payment may be settled in the contract (see chapter VII, "Price and payment conditions"). With regard to the time of payment, the contract may provide that payment is to be made within a specified period of time after the submission by the contractor, subsequent to the completion of repairs, of an invoice accompanied by a repair report (see paragraph 34, below). If the contractor is to be obligated to inspect a breakdown within a short period after notification of a breakdown, the parties may wish to agree on which party is to bear the contractor's costs of having personnel in constant readiness for such an inspection. The parties may wish to specify the standards to be observed by the contractor when effecting repairs (see, also, paragraph 25, above).

34. It would be desirable for the purchaser to receive proof that the repairs have been duly carried out, and the parties may agree on how such proof is to be furnished. The contract may obligate the contractor to furnish a report after the completion of repairs describing the causes of the breakdown, the work done, and the materials employed in the repairs. It may require the report to be supported by records evidencing the time expended by various categories of personnel and the processes used. In some cases, proper repair may be proved through a joint inspection of the repairs by the parties, while in others, the contractor may furnish such proof through the successful operation of the works. In other cases, the association of the purchaser's personnel with the contractor's personnel during the repair operations, as described in respect of maintenance in paragraph 27, above, may serve to prove proper repair. The contract may provide that, if the parties fail to agree on whether a repair has been properly carried out, the issue is to be referred for settlement by a referee (see chapter XXIX, "Settlement of disputes", paragraphs 16 to 21).

35. The contract may also obligate the contractor to provide the purchaser with a guarantee under which he assumes responsibility for defects in repairs he has carried out, which are discovered and notified to him before the expiry of a specified guarantee period for the repairs. Furthermore, where, as part of a repair, new equipment is installed or new parts are installed in existing equipment, a quality guarantee may be provided by the contractor in respect of that new equipment or part (see paragraph 19, above). It may be desirable to provide that, if, while carrying out repairs, the contractor discovers that further repairs are needed, he must furnish a report to that effect to the purchaser.

36. While repairs are normally carried out at the site, or elsewhere in the country where the works is situated, it may be necessary in some cases to send an item to the contractor's country for repair. The contract may obligate the purchaser to arrange for the transport of the item to the contractor's country,

and for any necessary insurance of the item until the time of its delivery to the contractor. The contract may obligate the contractor to assist the purchaser in making such arrangements (e.g., by advising on proper packing, or obtaining import permits which may be necessary in his country). The contractor may be obligated to arrange for the transport of the repaired item to the purchaser's country, and for any necessary insurance. It is desirable for the contract to determine which party is to bear the risks and expenses involved in the transport, and the expenses incurred in insuring against those risks. The contract may also require the parties to co-operate with one another in the various matters ancillary to transportation (e.g., customs clearance).

F. Operation

37. It is advisable for the contract to define carefully the scope of any obligations imposed on the contractor with regard to the technical operation of the works. To assist in this purpose, the purchaser and contractor may find it useful to prepare, in consultation with each other, an organizational chart showing the key personnel required for the technical operation of the works, and the functions to be discharged by each person. The positions to be occupied by the personnel employed by the contractor can then be identified, and the qualifications and experience of such personnel specified. The functions allotted to posts to be filled by employees of the contractor need to be defined with particular care. In determining what personnel is to be supplied by the contractor, the parties should take account of any mandatory regulations which may exist in the country of the purchaser regulating the employment of foreign personnel.

38. In order to avoid friction and inefficiency, it is desirable that the authority to be exercised by the personnel of each party over the personnel of the other be clearly described. It may, for example, be necessary for a general manager at the works employed by the purchaser to give certain policy directives to engineers who are employees of the contractor. Conversely, an engineer employed by the contractor may have to issue directions to subordinate engineers who are employees of the purchaser. The parties may wish to agree upon a procedure whereby a party may contest, on specified grounds, instructions given to its personnel by personnel of the other party. Furthermore, the parties may wish to agree on a procedure for dealing with complaints by one party against the other (e.g., incompetence, inefficiency, failure to follow directions). The procedure may, for example, consist of an investigation by a panel composed of a senior executive officer of each party. The contract may provide that, if specified serious complaints against employees are proved, those employees must be replaced at the expense of the party who engaged them, within a specified period of time. In addition, the contract may entitle the purchaser to require the contractor to replace any of his employees, even in the absence of a proven complaint against that employee. The parties may wish to determine how the expenses of such a replacement are to be allocated between the parties.

39. If, prior to entering into the contract, a reasonable estimate can be made of the costs to be incurred by the contractor in providing the operation services required of him, the price for such services may be specified in the contract as a lump sum payable for all the obligations undertaken by him over a specified period of time. Another approach to determining the price may be to combine the payment of fixed amounts with the cost-reimbursable method (see

chapter VII, "Price and payment conditions", paragraph 2). Fixed amounts may be payable in respect of items for which reasonable cost estimates can be made (e.g., the salaries of the personnel who are to operate the works, the cost of their accommodation and travel) and the cost-reimbursable method provided for the remaining items of expenditure. In cases where the operational functions performed by the contractor are closely linked to the productivity and profitability of the works, the purchaser may wish to consider payment to the contractor of an incentive fee (e.g., a specified percentage of the value of the yearly turnover), provided that incentive fees are also payable by the purchaser to his own employees. It is advisable that applicable payment conditions (e.g., with regard to issues such as the currency, time and place of payment) be settled in the contract (see chapter VII, "Price and payment conditions").

G. Facilitation by purchaser of provision of services by contractor

40. The purchaser may undertake to facilitate in specific ways the maintenance, repair and operation of the works by the contractor. For example, he may agree to assist the contractor in obtaining visas or work permits for the contractor's personnel, provide safe access to the works, inform the contractor of alterations to the original construction of the works which may influence its maintenance, repair, and operation, and inform the contractor of the mandatory and other safety regulations which the parties must observe during maintenance, repair and operation, and inform the contractor of the supplying locally available equipment and materials needed for maintenance and repairs, as this may reduce the costs involved. If so, the contract may identify the equipment and materials which the purchaser undertakes to supply. In addition, the purchaser may consider providing other facilities to the contractor's personnel, such as accommodation and transport. If he wishes to provide such facilities, it is desirable for the contract to determine how the costs of the facilities are to be allocated between the parties.

H. Commencement and duration of obligations of parties

41. It is advisable for the contract to specify when the obligations undertaken by the contractor as to the supply of spare parts, maintenance, repair and operation are to commence. With respect to the supply of spare parts, see paragraphs 13 and 14, above. The date of commencement of the maintenance obligations may depend on other obligations undertaken by the contractor. For example, if the contractor has undertaken complete responsibility for the operation of the works for a specified period of time after acceptance of the works by the purchaser, and such responsibility includes maintenance, additional maintenance obligations may commence upon the expiry of that period. Repair obligations may commence on the date of take-over of the works by the purchaser. The date of commencement of the obligations of the contractor in regard to operation of the works may be fixed having regard to the other conditions which have to be satisfied before the works can commence to operate (e.g., availability of the staff to be employed by the purchaser).

42. The parties may sometimes find it difficult to determine the duration of the obligations to supply spare parts and of maintenance, repair and operation. One approach may be to provide that these obligations are to continue for a fixed

period of a relatively long duration, perhaps even for a period covering the operational lifetime of the works. This approach might be adopted when the purchaser does not expect that he or other enterprises in his country will develop the capacity to manufacture spare parts or provide services within a short period after the take-over of the works. A second approach is to provide that the obligations are to continue for a fixed period of a relatively short duration and that they are to be renewed automatically for further periods of the same duration, unless the renewal is prevented (see paragraph 44, below). If the contractor's obligations extend over a short period and the purchaser wishes the obligations to continue after the expiry of that period, he would have to negotiate for their extension for a further period. That approach may, however, result in hardship for the purchaser if the contractor does not agree to an extension of the obligations.

43. It may be desirable for the contract to include mechanisms for a modification of the obligations imposed on the contractor with respect to spare parts, maintenance, repair and operation, in particular as to the scope of those obligations and the price payable by the purchaser. The purchaser may increase his own capabilities, and may wish to assume responsibility for the supply of certain spare parts or services originally provided by the contractor. Conversely, it may transpire during the operation of the works that the purchaser cannot provide certain spare parts or services which he had earlier assumed he could provide, and he may wish the contractor to provide those spare parts or services. Any change in the scope of obligations undertaken by the contractor will usually require an adjustment of the price. Accordingly, the contract may provide that the scope of obligations and the price are to be reviewed periodically and agreed upon by the parties (e.g., every two years for the duration of the obligations, or at each renewal of the obligations) and that the purchaser is entitled at the review to request a reduction or increase in the scope of the obligations. The contract may provide that the contractor is not obligated to comply with a request for increased services if he does not have the capacity to provide them.

44. Even in cases where the scope of the contractor's obligations is not changed at a periodic review, a revision of the price payable may be required due to a change in the cost of the goods and services necessary to discharge those obligations. The parties may wish to provide that, at each periodic review, changes in costs are to be taken into account, and a new price agreed upon, if necessary. Alternatively, the parties may link the price payable to an appropriate price index, if one is available. The price would then be revised automatically in accordance with changes in the index (see chapter VII, "Price and payment conditions", paragraphs 49 to 55). The index should be structured in accordance with the particular circumstances of the obligation in question. It is usually not suitable to adopt in respect of the obligations of the contractor dealt with in this chapter the same index as is used for revision of the price for the construction of the works.

I. Termination

45. The parties may also wish to deal with the termination of the obligations as to the supply of spare parts, maintenance, repair and operation. Where the duration of the obligations is a fixed period of a relatively long duration (see paragraph 42, above), the contract may permit the purchaser to terminate the obligations prior to the end of that period upon giving the contractor notice in writing. The contract may provide for the obligations in question to terminate

upon the expiry of a specified period of time after delivery of the notice by the purchaser. The period of time should be sufficiently long for the contractor to be able to phase out the arrangements he has made to fulfil his obligations without suffering loss. As a further protection to the contractor, it may be provided that the obligations may be terminated only after the contractor has supplied the service for a specified length of time. Where the duration of the obligations is a fixed period which is subject to automatic renewal (see paragraph 42, above), the contract may provide that the purchaser can prevent that renewal by giving written notice of non-renewal not later than a specified period of time prior to the end of the initial or of a renewed period of the contractor's obligations, as the case may be. Whether the duration of the obligations consists of a single specified period of time of relatively long duration or of shorter periods of time which are successively renewed, the purchaser may, in addition, be given the right to terminate the obligations for convenience at times other than those mentioned above, subject to the payment of compensation for any loss suffered by the contractor as a result of the termination (see chapter XXV, "Termination of contract", paragraphs 17 and 18). The purchaser may wish to have such a right to deal with a situation where he is unexpectedly able to obtain the spare parts and services at lesser cost from other sources; however, he should not be entitled to cancel orders that have already been placed at the date of termination (see paragraph 18, above). The contract may also provide for termination by either party for specified failures of performance by the other party, such as delay in performance for a specified period of time or the non-attainment of designated performance standards. In addition, the contract may provide for termination by either party for the bankruptcy or insolvency of the other party, or where performance by the other party is prevented for a specified period of time by exempting impediments (see chapter XXV, "Termination of contract", paragraph 22).

J. Remedies other than termination

46. The parties may also wish to provide in their contract for a system of remedies other than termination for the failure by a party to perform obligations as to the supply of spare parts, maintenance, repair and operation. They may wish to select such remedies as are appropriate to the obligations in question out of those which are described in the *Guide* in connection with a failure to perform construction obligations (see chapter XVIII, "Delay, defects and other failures to perform", chapter XIX, "Liquidated damages and penalty clauses" and chapter XX, "Damages"). Alternatively, they may leave the remedies to be determined by the law applicable to the contract.

Footnotes to chapter XXVI

¹The Economic Commission for Europe (ECE) has prepared a *Guide on Drawing Up International Contracts for Services Relating to Maintenance, Repair and Operation of Industrial and Other Works* which will assist parties in drafting a separate contract or contracts dealing with maintenance, repair and operation (ECE/TRADE/154).

²The trade term may be identified by reference to the *International Rules for the Interpretation of Trade Terms (INCOTERMS)* prepared by the International Chamber of Commerce (ICC) (ICC publication No. 350, 1980).

Chapter XXVII. Transfer of contractual rights and obligations

SUMMARY

The transfer of contractual rights and obligations as considered in this chapter includes, firstly, the transfer of the contract in its entirety, whereby a new party is substituted for one of the original parties to the contract, as well as the transfer of certain specific rights and obligations under the contract (paragraphs 1 to 4).

The parties may find it advisable for the contract to permit a party to transfer the entire contract or specific contractual obligations only with the written consent of the non-transferring party (paragraphs 5 and 6). The parties may also wish to make the transfer of contractual rights subject to the consent of or, alternatively, the absence of an objection by, the other party. An exception may be made for the transfer of certain contractual rights, for example, a transfer by the contractor of his right to receive payments from the purchaser (paragraph 7).

The contract may contain provisions which seek to safeguard the interests of the non-transferring party in the event of a transfer, such as a provision that a transfer by the contractor of his right to receive payments from the purchaser is subject to the same rights of set-off that the purchaser had under the works contract in respect of payments to be made to the contractor. Also, when a transfer may be made only with the consent of the non-transferring party, the parties may wish to provide that, in making the transfer, the transferring party must conform to any conditions subject to which the consent is given. The contract may require the transferring party to give written notification to the non-transferring party of the transfer (paragraphs 8 to 11).

It may be desirable for the contract to specify the consequences of a transfer in violation of the provisions of the contract (paragraph 12).

A. General remarks

1. The transfer of contractual rights and obligations as considered in this chapter includes, firstly, the transfer of the contract in its entirety, whereby a new party is substituted for one of the original parties to the contract, as well as the transfer of certain specific obligations and rights under the contract. In the *Guide*, a distinction is drawn between the transfer of the entire contract or specific obligations under it, on the one hand, and the transfer of contractual rights, on the other.

2. Most legal systems contain rules governing the right of a party to make such transfers, as well as defining the legal effects of the transfers. It is usually possible for the parties to set forth in their contract the terms and conditions under which a transfer may be made; nevertheless, in doing so, the parties ought to bear in mind any mandatory provisions of the applicable law (e.g., a

requirement that any transfer be subject to the approval of a State authority) which may circumscribe the right to make a transfer or regulate its legal consequences.

3. This chapter deals with the voluntary transfer by a party of the contract or of rights and obligations arising under it, and not with transfers effected by operation of law. Issues such as the succession, merger and re-organization of parties, which involve transfers of contractual rights and obligations, are usually settled under the applicable law, and therefore are not dealt with in this chapter. Furthermore, where a State is a party to a contract, it will decide which State enterprise is to implement the contract, and no transfer will occur on the appointment or change of the implementing State enterprise. The subject of subcontracting, as conceived in the *Guide*, is not a transfer of obligations, and is discussed separately (see chapter XI, "Subcontracting", paragraph 1).

4. In considering the terms and conditions governing the transfer of the contract or rights and obligations arising under it, the parties should bear in mind the effect of such a transfer on contractual rights and obligations which either party may have in relation to third persons. For example, if a guarantee has been given by a third person as security for performance by the contractor, a transfer of the contractor's obligations which are the subject matter of the guarantee, without the consent of the guarantor, may invalidate the guarantee. It is therefore advisable to obtain the consent of the guarantor before the contractor's obligations are transferred.

B. Transfer of entire contract or of obligations under contract

5. The contractual relationship between parties to a works contract is usually based upon mutual confidence between them. In particular, the purchaser normally selects a contractor because of the contractor's skill and experience, his reputation, his financial strength, and similar factors personal to the contractor. Significant problems could arise for the purchaser if, for example, the contractor were able to transfer the contract or certain of his obligations to a third person who did not possess the same degree of skill and expertise as the contractor. Similarly, the purchaser could suffer if the contractor made such a transfer to a subsidiary which had no assets or financial resources of its own from which damages could be paid to the purchaser in the event of a failure to perform. For the contractor's part, he could be put at a disadvantage if the contract, or the purchaser's contractual obligation in respect of the payment of the price, were to be transferred by the purchaser to a transferee who was not able to continue making the required payments.

6. For the foregoing reasons, the parties may find it advisable for the contract to permit a party to transfer the contract, or specific contractual obligations, only with the written consent of the non-transferring party. In such a case, the contract may obligate the transferring party to deliver to the non-transferring party a written notice of his intention to make the transfer, specifying either that the entire contract is to be transferred or the specific obligations to be transferred, the name and address of the proposed transferee and the date when the proposed transfer would become effective. The contract may prohibit the transferring party from making the transfer unless the non-transferring party consents in writing to the transfer.

C. Transfer of rights under contract

7. The parties may also wish to provide that the written consent of the non-transferring party is required for the transfer of specific contractual rights (cf. paragraph 6, above). Alternatively, the contract may permit the transferring party to make the transfer unless the non-transferring party, within a specified period of time of the delivery to him of a written notice of the intention of the transferring party to make the transfer, delivers to the transferring party a written objection to the proposed transfer, specifying reasonable grounds for the objection. Reasonable grounds for objecting to the transfer of rights under the contract might arise because the non-transferring party may be impeded by the transfer in the performance of his corresponding obligation or because the right transferred may be so closely linked to an obligation that the transfer of the right places the performance of the obligation in jeopardy. A dispute between the parties as to whether the grounds are reasonable might be resolved under the dispute settlement provisions of the contract (see chapter XXIX, "Settlement of disputes"). The parties may, however, wish to specify exceptions to the requirement of consent or the absence of a reasonable objection for the transfer of certain contractual rights. In some instances, the contract might provide that the purchaser's consent is not necessary for the contractor to transfer his right to receive payments from the purchaser.¹ Contractors often find it necessary to make such transfers in order to borrow funds or obtain the financing needed to purchase equipment and supplies, to pay labour or cover other costs of performing the contract, or to benefit from an export credit guarantee scheme.

D. Other provisions to safeguard interests of parties

8. There are various other provisions which might be incorporated in the contract in order to safeguard the interests of the parties in the event of a transfer of the entire contract or specific rights or obligations under it. Examples of such provisions are discussed in the following paragraphs.

9. When the contract or certain specific contractual rights and obligations are transferred, there may be cases in which under the applicable law the non-transferring party does not have the same rights against the transferee which he had against the transferring party under the works contract. Therefore, the contract may include provisions which seek to ensure that, in respect of the contract or of the rights or obligations transferred, the position of the non-transferring party is not prejudiced by the transfer. For example, the works contract may provide that a transfer by the contractor of his right to receive payment from the purchaser is subject to the same rights of set-off that the purchaser had under the works contract in respect of payments to be made to the contractor. It may be desirable to include such provisions in the works contract whether or not a transfer is subject to the consent of, or, in the case of the transfer of rights, the failure to object by, the non-transferring party.

10. Secondly, when the contract does not permit a transfer without the prior consent of the non-transferring party, the non-transferring party may wish to make his consent subject to certain conditions. For example, where, under the applicable law, a transfer of the contract relieves the transferring party from the performance of his contractual obligations, the non-transferring party may

wish to grant his consent only upon the condition that the transferring party guarantee the performance of those obligations by the transferee. The parties may wish to provide in their contract that any transfer to which consent is granted subject to conditions must conform to those conditions.²

11. It is important for the non-transferring party to know when a transfer has been made. Whether or not a proposed transfer is subject to the consent or failure to object by the non-transferring party, it is advisable that he receive confirmation that the transfer has, in fact, been made. The contract may therefore require the transferring party to notify the non-transferring party in writing of the transfer, of the date on which it has or is to become effective, and of the identity of the transferee. The contract may further provide that, until the non-transferring party receives the notice, he is entitled to treat the transferring party as the only person entitled to the rights or bound to perform the obligations under the contract.³

E. Consequences of transfer in violation of contract

12. It may be desirable for the contract to specify the consequences of a transfer in violation of the provisions of the works contract. The contract may provide that the transfer shall be of no effect as between the transferring and non-transferring parties, and, in respect of the rights or obligations purported to be transferred, that the transferring party remains subject to all the obligations required of him and all the rights of the non-transferring party under the works contract.⁴ Alternatively, the parties may wish to include in their contract a provision entitling the non-transferring party to terminate the contract where the transferring party has violated contract provisions governing transfer. The contract might also permit the non-transferring party to claim damages from the transferring party for any loss suffered as a result of a transfer in violation of the contract (see chapter XX, "Damages").

Footnotes to chapter XXVII

¹Illustrative provisions

"(1) Neither party may transfer any of his rights or obligations under this contract to a third person except as hereinafter provided.

"(2) A party desiring to transfer any of his rights or obligations under the contract shall deliver to the non-transferring party a written notice of his intention to make the transfer, specifying the rights or obligations to be transferred, the name and address of the proposed transferee and the date when the proposed transfer would become effective.

"(3) [Alternative 1] The party desiring to make a transfer of any obligations [or rights] under the contract shall be entitled to do so only if and as of the time when the non-transferring party consents in writing to the proposed transfer.

"[Alternative 2] The party desiring to make a transfer of any of his rights under the contract shall be entitled to do so upon the expiration of [] days after delivery of the notice referred to in paragraph (2) of this article to the non-transferring party, unless, within the said [] day period, the non-transferring party delivers to the party desiring to make the transfer a written objection to the transfer specifying reasonable grounds for the objection. Any dispute between the parties as to the reasonableness of the grounds for the objection may be submitted by either party for settlement in accordance with [the dispute settlement provisions of this contract].

"(4) However, the contractor may transfer his right to receive payments from the purchaser under this contract for the purpose of borrowing funds or obtaining financing from a bank or other financial institution, or to benefit from an export credit guarantee scheme, or for similar purposes, without regard to the provisions of paragraph (2) or (3) of this article."

²*Illustrative provision*

"When, under this contract, a transfer by a party is not permitted without the consent of the non-transferring party, the non-transferring party may specify that the transfer may be made only if the transferring party fulfills certain conditions, and, in making the transfer, the transferring party must conform to those conditions."

³*Illustrative provision*

"Where a party transfers any of his rights or obligations under this contract, he must notify the non-transferring party of the rights or obligations to be transferred, the name and address of the transferee and the date on which the transfer has or is to become effective, and, until the non-transferring party receives the said notice, he is entitled to treat the transferring party as the only person entitled to the rights or bound to perform the obligations under this contract."

⁴*Illustrative provision*

"If a party transfers any of his rights or obligations under this contract in violation of its provisions, the transfer is of no effect as between the transferring and non-transferring parties, and, in respect of the rights purported to be transferred, the transferring party remains subject to all the obligations imposed on him, and to all the rights of the non-transferring party, under this contract."

Chapter XXVIII. Choice of law

SUMMARY

The parties may, within certain limits, choose the legal rules which are to govern their mutual contractual obligations (paragraphs 1 to 3). In the absence of a choice, uncertainty as to those rules may arise from two factors. The courts of several countries may be competent to decide the disputes between the parties. Since each court will apply the rules of private international law of its own country, there may be several possible systems of private international law which could determine the law applicable to the contract. Secondly, even if it is known which system of private international law will determine the law applicable to the contract, the rules of that system are sometimes too general to enable the applicable law to be determined with reasonable certainty (paragraphs 4 to 6).

The parties may therefore wish to provide in the choice-of-law clause that the law of a particular country is to govern their contract. Some difficulties may arise if the parties choose the general principles of law or the principles common to some legal systems as the law applicable to their contract, instead of the law of a particular country (paragraph 9).

In many cases, the parties may wish to choose as the applicable law the law of the country where the works is to be constructed. In some cases, they may wish to choose the law of the contractor's country, or of a third country (paragraph 11). In the case of countries where there are several legal systems applicable to contracts (e.g., some Federal States), it may be advisable to specify which one of those systems is to be applicable (paragraph 12). Certain factors may be relevant in making a choice of law (paragraph 13).

Even in cases where the rules of private international law permit the parties to provide that the legal rules of different legal systems are to apply to different rights and obligations under the contract, it may be preferable to choose a single legal system to govern all the rights and obligations (paragraph 14). If the parties wish the law applicable to the contract to consist of the rules existing at the time the contract is entered into, unaffected by later changes to those rules, they may expressly so provide. Such provisions will, however, be ineffective if the changes have a retroactive character which is mandatory (paragraph 15).

Different approaches are possible to drafting a choice-of-law clause. One approach may be merely to provide that the contract is to be governed by the chosen law. Another approach may be to provide that the chosen law is to govern the contract, and also to include an illustrative list of the issues which are to be governed by that law. Yet another approach may be to provide that the chosen law is to govern only the issues listed in the chosen law (paragraph 16).

If several contractors are to participate in the construction, it is advisable for the purchaser to choose the same law as the law applicable to the contracts concluded by him with all the contractors. It is also advisable for the contractor to choose that same law as the law applicable to all contracts concluded by him with sub-contractors and suppliers (paragraph 19).

The parties may wish to note the possible application to a works contract of the United Nations Convention on Contracts for the International Sale of Goods, and to make appropriate provision for that possibility (paragraphs 20 and 21).

In addition to legal rules applicable to the contract by virtue of a choice of law by the parties or by virtue of the rules of private international law, certain mandatory rules of an administrative or other public nature in force in the countries of the parties may affect certain aspects of the construction. The parties should take those rules into account in drafting the contract (paragraphs 2 and 22). Certain of those rules concern technical aspects of the works to be constructed, others prohibit or restrict exports, imports, the transfer of technology and the payment of foreign exchange, and yet others impose customs duties and taxes on activities connected with the construction of the works (paragraphs 23 to 25).

A. General remarks

1. The legal rules which govern the mutual contractual obligations of the parties are referred to in the *Guide* as "the law applicable to the contract". The parties may exercise a degree of control over the application of these rules, since they are permitted under many legal systems to choose by agreement the law applicable to the contract. Under some legal systems there are certain restrictions on this choice (see paragraph 7, below).
2. Particular aspects of the construction may be affected by legal rules of an administrative or other public nature in force in the countries of the parties and in the country where the works is being constructed (if that country is different from the country of the purchaser), whatever be the law applicable to the contract. Those legal rules may regulate certain matters in the public interest, for example, safety standards to be observed in construction, protection of the environment, import, export and foreign exchange restrictions, and customs duties and taxes (see paragraphs 22 to 25, below).
3. In addition, the extent to which the parties may designate particular issues to be governed by the chosen law may be limited. For example, regardless of the choice by the parties of the law applicable to the contract, the law of the country where equipment or materials are situated may govern the transfer of ownership of that property, and the law of the country where the site is situated may govern the transfer of ownership of the works (see chapter XV, "Transfer of ownership of property", paragraph 3). The question of which legal system's procedural rules are to govern arbitral or judicial proceedings for the settlement of disputes arising in connection with the contract is discussed in chapter XXIX, "Settlement of disputes", paragraphs 8, 33 and 52.

B. Choice of law applicable to contract

4. It is advisable for the parties to choose the law applicable to the contract. If they do not do so, there may be uncertainty as to what law applies, making it difficult for the parties to comply with the appropriate legal rules during the performance of their contractual obligations. The uncertainty in the absence of a choice of law arises from two factors.

5. First, the law applicable to the contract is determined by the application of rules of private international law of a national legal system. When a dispute arises concerning the contract or its performance which is to be settled in judicial proceedings, the rules of private international law applied by the court settling the dispute will determine the law applicable to the contract. A court will apply the rules of private international law of its own country. If there is no exclusive jurisdiction clause agreed upon in the contract (see chapter XXIX, "Settlement of disputes", paragraph 52), the courts of several countries may be competent to decide disputes arising between the parties, and there may therefore be several possible systems of private international law which could determine the law applicable to the contract. When disputes are to be settled in arbitral proceedings, the arbitral tribunal will determine what law is applicable. Unless the parties have chosen the law applicable to the contract, it may sometimes be difficult to predict what law will be determined to be the law applicable to the contract on the basis of a system of private international law which the arbitral tribunal will consider to be appropriate.

6. The second factor producing uncertainty as to the law applicable to the contract is that, even if it is known which system of private international law will determine the law applicable to the contract, the rules of that system may be too general or vague to enable the law applicable to a works contract to be determined with reasonable certainty.

7. The extent to which the parties are allowed to choose the law applicable to the contract will be determined by the rules of the relevant system of private international law. Under some systems of private international law, the autonomy of the parties is limited and they are only permitted to choose a legal system which has some connection with the contract, such as the legal system of the country of one of the parties or of the place of performance. Since a court which is to settle a dispute will apply the rules of private international law in force in its country, the parties should agree upon a choice of law which would be upheld by the rules of private international law in the countries whose courts might be competent to settle their disputes. If the parties agree upon an exclusive jurisdiction clause, they should be particularly sure that a court in the chosen jurisdiction will uphold their choice of law.

8. Under other systems of private international law, the parties are permitted to choose the law applicable to the contract without those restrictions. If a dispute is settled in arbitral proceedings, the law chosen by the parties will normally be applied by the arbitrators.

9. In general, it is advisable for the parties to choose the law of a particular country to govern their contract. The rules of private international law of a country where legal proceedings may be instituted in the future may not recognize the validity of a choice of general principles of law or of principles common to several legal systems (e.g., of the countries of both parties). Even if such a choice would be valid, it may be difficult to identify principles of law which could resolve disputes of the type arising in connection with a works contract. Nevertheless, such a choice may be practical and feasible in certain circumstances.

10. In many legal systems, a choice-of-law clause is interpreted as not to include the application of the rules of private international law of the chosen legal system even if the clause does not expressly so provide. However, if that interpretation is not certain, the parties may wish to indicate in the clause that

the substantive legal rules of the legal system they have chosen are to apply to the contract. Otherwise, the choice of the legal system may be interpreted as including the private international law rules of that legal system and those rules might provide that the substantive rules of another legal system are to apply to the contract.

11. In many cases, the parties may wish to choose as the law applicable to the contract the law of the country where the works is to be constructed, or the law of the purchaser's country, if that country is different from the country where the works is to be constructed. In some works contracts, the parties may wish to choose the law of the contractor's country. In other contracts, the parties may prefer to choose the law of a third country which is known to both parties and which deals in an appropriate manner with the legal issues arising from works contracts. If the contract provides for the exclusive jurisdiction of the courts of a particular country to settle disputes arising under the contract, the parties may wish to choose the law of that country as the law applicable to the contract. This could expedite judicial proceedings and make them less expensive, since a court will normally have less difficulty in ascertaining and applying its own law than the law of a different country.

12. In the case of countries where there are several legal systems applicable to contracts (as in some federal States), it may be advisable to specify which one of those legal systems is to be applicable in order to avoid uncertainty.

13. The parties may also wish to take the following factors into consideration in choosing the law applicable to the contract:

- (a) The parties' knowledge of, or possibility of gaining knowledge of, the law;
- (b) The capability of the law to settle in an appropriate manner the legal issues arising from a works contract;
- (c) The extent to which the law contains mandatory rules which would prevent the parties from settling in the contract, and in accordance with their needs, issues arising from the contract.

14. Under the rules of private international law of some legal systems, the parties are permitted to provide that the legal rules of different legal systems are to apply to different legal issues or different rights and obligations under the contract. Parties sometimes do so because they believe that certain issues are handled in a better way under one legal system than under another or because substantial portions of the contract are to be performed in different countries. If the parties do so, however, difficulties may arise, since the legal rules of the different legal systems may not be in harmony, producing gaps or inconsistencies in the application of the rules to the contract. Therefore, the parties may wish to choose a single legal system to constitute the law applicable to the contract and govern all their contractual rights and obligations, unless the countervailing factors are particularly important.

15. Changes in the legal rules which govern the rights and duties of parties to a contract may or may not be retroactive; if they are not retroactive, contracts entered into before the changes come into force are not affected by the changes. If the parties wish that only the legal rules existing at the time the contract is entered into are to apply to the contract, they may expressly so provide in the contract. However, parties should be aware that such a restriction will not be effective if the retroactive character of the changes is mandatory.

16. Different approaches are possible with respect to the drafting of a choice-of-law clause. One approach may be merely to provide that the contract is to be governed by the chosen law.¹ This approach may be sufficient if it is clear that the body chosen to settle disputes between the parties will apply the chosen law to all the issues which the parties desire to be regulated by it. A second approach may be to provide that the chosen law is to govern the contract, and also to include an illustrative list of the issues which are to be governed by that law.² This approach may be useful if the parties consider it desirable to ensure that the issues contained in the illustrative list in particular will be governed by the chosen law. A third approach may be to provide that the chosen law is to govern only the issues listed in the clause.³ This approach may be used if the parties wish to delimit clearly the issues to be governed by the chosen law. Under this approach, the issues not set forth in the clause will be governed by a law determined by the applicable rules of private international law (see paragraph 5, above).

17. Under the systems of private international law of some countries, a choice-of-law clause may be considered as an agreement separate from the rest of the contract between the parties. Under those systems, the choice-of-law clause will remain valid even if the rest of the contract is invalid, unless the grounds for invalidity also extend to the choice-of-law clause. Where the contract is invalid but the choice-of-law clause remains valid, the formation, the lack of validity, and the consequences of the invalidity of the contract will be governed by the chosen law.

18. Under some systems of private international law, the chosen law may govern the prescription of rights, while under other systems rules relating to prescription (limitation of actions) are of a procedural character and cannot be chosen by the parties in their contract; in those cases, the procedural rules of the place where the legal proceedings are brought will apply.

19. The choice by the parties of the law applicable to the contract relates only to the legal rules governing their mutual contractual rights and obligations; that choice will usually not directly affect the law applicable to rights and duties of persons who are not parties to the works contract (e.g., subcontractors, personnel employed by the contractor or the purchaser, or the creditors of a party). If several contractors are to participate in the construction (see chapter II, "Choice of contracting approach", paragraphs 17 to 25) it may be desirable for the purchaser to choose the same law as the law applicable to each of the contracts concluded with all the contractors in order to harmonize and co-ordinate the performances by the contractors under those contracts, and to harmonize the legal results of a failure to perform. For similar reasons, it is advisable for the contractor to choose that same law as the law applicable to all contracts relating to the construction of the works concluded by him with subcontractors and with suppliers.

20. The parties may wish to note that the United Nations Convention on Contracts for the International Sale of Goods⁴ applies to contracts of sale of goods when the parties have their places of business in different States and those States are parties to the Convention, or when the rules of private international law lead to the application of the law of a Contracting State, e.g., when the parties choose the law of a Contracting State (article 1). Article 3 of the Convention provides that contracts for the supply of goods to be manufactured or produced are to be considered as sales contracts, subject to

two exceptions. Firstly, the Convention does not apply to contracts in which the preponderant part of the obligations of the contractor consists in the supply of labour or other services. Secondly, the Convention does not apply to contracts for the supply of goods to be manufactured or produced if the party who orders the goods undertakes to supply a substantial part of the materials necessary for such manufacture or production. By virtue of these articles, it may be considered that the Convention can apply to some works contracts. If the application of article 3 to the circumstances of a particular works contract leaves it uncertain whether the Convention will apply to the contract, the parties may wish expressly to resolve that uncertainty.

21. While the Convention does not settle special issues connected with a works contract, it gives a framework for solving many of the general issues arising under such contracts. Furthermore, under the Convention the parties are permitted to exclude the application of the Convention and, except to a very limited extent, to derogate from or to vary the effect of any of its provisions (article 6). Accordingly, the parties are free to adapt the provisions of the Convention to the needs of their contract.

C. Mandatory legal rules of public nature

22. In addition to legal rules applicable by virtue of a choice of law by the parties, or by virtue of the rules of private international law, certain rules of an administrative or other public nature in force in the countries of the parties and in other countries (e.g., the country of a subcontractor) may affect certain aspects of the construction. These rules, which are often mandatory, are usually addressed to all persons resident in or who are citizens of the State which issued the rules, and sometimes to foreigners transacting certain business activities in the territory of the State. They may be enforced primarily by administrative officials. Their purpose is to ensure compliance with the economic, social, financial or foreign policy of the State. The parties should therefore take them into account in drafting the contract.

23. Certain of these legal rules concern technical aspects of the works to be constructed. They often relate to safety requirements for the operation of the works, environmental protection and health and labour conditions. The rules should be taken into consideration in designing the works. If the rules are changed, or new rules are issued after the contract is entered into, a variation of the construction may be needed (see chapter XXIII, "Variation clauses"). In addition, there may exist legal rules which concern only the construction process, e.g., safety standards for machinery, tools and facilities to be used for effecting construction. These issues are dealt with in chapter IX, "Construction on site", paragraph 3.

24. Other legal rules prohibit or restrict exports, imports, the transfer of technology and the payment of foreign exchange. As a result of the operation of those rules, a contract may be invalid, terminated, or legally impossible to perform (see chapter XXI, "Exemption clauses", paragraph 1, and chapter XXV, "Termination of contract", paragraph 22). Issues concerning the obtaining of licences needed for the supply of equipment and materials are discussed in chapter VIII, "Supply of equipment and materials", paragraphs 17 and 18, issues concerning foreign exchange restrictions in chapter VII, "Price and

payment conditions", paragraph 4, and issues concerning transfer of technology in chapter VI, "Transfer of technology", paragraph 8. The obligation to obtain an official approval needed for using the site for construction is discussed in chapter IX, "Construction on site", paragraph 8.

25. Legal rules also exist imposing customs duties and taxes on activities connected with the construction of the works. These rules could have important financial implications for the construction. Customs duties are dealt with in chapter VIII, "Supply of equipment and materials", paragraphs 15 and 16, and taxes in chapter VII, "Price and payment conditions", paragraph 5.

Footnotes to chapter XXVIII

¹*Illustrative provision*

"The law of . . . (specify a country, or, when a country has more than one territorial unit each with its own laws, a particular territorial unit) [as in force on . . . (specify date the contract is entered into)] is to govern this contract. [The rules of private international law of . . . (specify same country or territorial unit as specified above) do not apply.]"

²*Illustrative provision*

"The law of . . . (specify country or territorial unit) [as in force on . . . (specify date the contract is entered into)] is to govern this contract, and in particular the formation of the contract, the validity of the contract and the consequences of its invalidity."

³*Illustrative provision*

"The law of . . . (specify country or territorial unit) [as in force on . . . (specify date the contract is entered into)] is to govern [the formation of the contract] [the validity of the contract and the consequences of its invalidity] [the interpretation of the contract] [the rights and obligations of the parties arising from the contract] [the passing of risk of loss or damage] [the failure to perform the contract and the consequences of a failure] [the prescription of rights] [the variation of contractual rights and obligations] [the suspension of contractual rights and obligations] [the transfer and extinction of contractual rights and obligations] [the termination of the contract]."

⁴See United Nations Convention on Contracts for the International Sale of Goods, *Official Records of the United Nations Conference on Contracts for the International Sale of Goods* (United Nations publication, Sales No.E.81.IV.3).

Chapter XXIX. Settlement of disputes

SUMMARY

Disputes that arise under works contracts frequently present problems that do not often exist in disputes arising under other types of contracts (paragraphs 1 to 3). The mechanisms provided in the contract for the settlement of disputes might include negotiation (section B), conciliation (section C), arbitration (section E) or judicial proceedings (section F). A referee may also be authorized to settle disputes (section D).

It may be desirable for the contract to provide some means to facilitate the settlement of two or more related claims in the same proceedings (paragraph 4).

The most satisfactory method of settling disputes is usually by negotiation between the parties (paragraphs 10 and 11). If the parties fail to settle their dispute through negotiation, they may wish to attempt to do so through conciliation before resorting to arbitral or judicial proceedings. The parties may wish to provide for conciliation under the UNCITRAL Conciliation Rules (paragraphs 12 to 15).

The parties may wish to provide for disputes that cannot legally or conveniently be settled in arbitral or judicial proceedings to be referred to a referee. The procedure followed by the referee may be quite informal and expeditious. However, there may exist only limited legal safeguards to ensure that the proceedings are conducted impartially and with due care. In addition, in contrast to an arbitral award or judicial decisions, it may not be possible to enforce a decision by a referee (paragraphs 16 to 21).

Disputes arising from works contracts are frequently settled through arbitration. Arbitration may be conducted only on the basis of an agreement by the parties to arbitrate. Such an agreement may take the form of an arbitration clause included in the contract (paragraph 24). The parties may wish to compare the advantages and disadvantages of arbitral proceedings with those of judicial proceedings (paragraphs 22 and 23).

It would be advisable for the contract to indicate what disputes are to be settled by arbitration. It might also authorize the arbitral tribunal to order interim measures. It is desirable for the arbitration agreement to obligate the parties to implement arbitral decisions (paragraphs 25 to 27).

The parties may select the type of arbitration that best suits their needs. They may establish by agreement the procedural rules to govern their arbitral proceedings, such as the UNCITRAL Arbitration Rules (paragraphs 30 to 36). In addition, they may wish to settle various practical matters relating to the arbitral proceedings, including the number and appointment of arbitrators, the place of arbitration and the language of the proceedings (paragraphs 37 to 49).

Where the parties wish their disputes to be settled in judicial proceedings, it may be advisable for the contract to contain an exclusive jurisdiction

clause to reduce the uncertainties connected with judicial settlement. The validity and effect of the exclusive jurisdiction clause should be considered in the light of the law of the country of the selected court, as well as the law of the countries of the two parties (paragraphs 50 to 53).

A. General remarks

1. Disputes that arise under works contracts frequently present problems that do not often exist in disputes arising under other types of contracts. This is due to the complexity of works contracts, the fact that they are to be performed over a long period of time and the fact that a number of enterprises may participate in the construction. In addition, disputes under works contracts may concern highly technical matters connected with the construction processes and with the technology incorporated in the works. Disputes that arise during the construction must be settled speedily in order not to disrupt the construction. These considerations ought to be taken into account by the parties in determining the dispute settlement mechanisms to be provided in the contract.

2. The issue that most frequently gives rise to disputes under a works contract is whether a party has failed to perform his contractual obligations and, if so, the legal consequences of his failure. However, other questions often arise for which it is advisable to provide an appropriate settlement mechanism in the contract. For example, the contract may provide for its terms to be changed or supplemented in certain circumstances. Questions may arise as to whether those circumstances have occurred and, if so, how the contractual terms should be changed or supplemented (see chapter XXII, "Hardship clauses" and chapter XXIII, "Variation clauses"). The contract may also provide for a party to give his consent to certain actions by the other party. If the party improperly withholds his consent, the question may arise whether an arbitral tribunal or court can substitute its own consent for that of the withholding party. Questions may also arise whether interim measures should be taken pending the final settlement of certain disputes (see paragraphs 21 and 26, below).

3. Under some legal systems, courts and arbitrators are not competent to change or supplement contractual terms or to substitute their own consent for a consent improperly withheld by a party. Under other legal systems, courts and arbitrators may do so only if they are expressly so authorized by the parties. Under yet other legal systems, arbitrators may do so but courts may not. Where the law applicable to the contract or to the proceedings does not permit courts or arbitrators to change contractual terms, the parties may wish to provide other means of changing certain terms, when it is feasible to do so. For example, they may provide for the contract price to change automatically by means of an index clause when the price levels of equipment, materials or labour change (see chapter VII, "Price and payment conditions", paragraphs 49 to 55). They may provide for other contractual terms to be changed or supplemented by means of procedures before a referee (see section D, below). Where courts or arbitrators do not have the power to substitute their consent for a consent improperly withheld by a party, the contract may provide that a party may withhold his consent only upon specified grounds, and that, in the absence of those grounds, the consent is deemed to be given. Courts or arbitrators would then have to decide only whether the specified grounds existed.

4. Disputes involving several enterprises may arise in connection with the construction. For example, where the purchaser alleges that the construction is defective, it may be uncertain which of several contractors engaged by him is liable. If the purchaser pursues individual claims against each contractor and those claims are settled in separate proceedings by different courts or arbitrators, those proceedings may result in inconsistent decisions. This could occur even if the same law governs all of the contracts and could result, for example, from the application of different procedural rules or from different evaluations of the relevant evidence. Settlement of all related claims in the same proceedings could prevent inconsistent decisions, facilitate the taking of evidence, and reduce costs. However, multi-party proceedings tend to be more complicated and less manageable, and a party may find it more difficult to plan and present his case in such proceedings. Many legal systems provide a means for disputes involving several parties to be settled in the same multi-party judicial proceedings. In order to enable disputes involving several enterprises to be settled in multi-party judicial proceedings, it may be desirable for all contracts entered into by the purchaser for the construction of the works to contain a clause conferring exclusive jurisdiction on a court which has the power to conduct multi-party proceedings (see paragraphs 51 to 53, below). It is more difficult to structure multi-party proceedings when arbitration is to be used for the settlement of disputes. However, some of the benefits of multi-party proceedings might be achieved if the same arbitrators were appointed to settle disputes arising under all contracts concerning the construction of the works.

5. In general, it is desirable for the parties initially to attempt to settle their disputes through negotiation (see section B, below). The parties could, if they so desired, continue to negotiate even after other means of dispute settlement had been initiated. In some cases in which the parties have referred a dispute to conciliation (see section C, below) and arbitral or judicial proceedings are thereafter initiated, they might still find it useful to continue with the conciliation.

6. It is often desirable for disputes arising under a works contract to be settled by arbitration: a process by which parties refer disputes that might arise between them or that have already arisen for binding decision by one or more impartial persons (arbitrators) selected by them (see section E, below). In general, arbitral proceedings may be initiated only on the basis of an arbitration agreement. Generally, the parties are obligated to accept the arbitrator's decision (arbitral award) as final and binding. The arbitral award is usually enforceable in a manner similar to a court decision. In the absence of an arbitration agreement, disputes between the parties will have to be settled in judicial proceedings (see section F, below).

7. Disputes may arise under a works contract that are not within the legal competence of courts or arbitral tribunals (see paragraph 3, above) or that cannot conveniently be settled in arbitral or judicial proceedings (for example, disputes of a technical nature that need to be resolved more speedily than is possible in arbitral or judicial proceedings). The parties may wish to provide for such disputes to be settled by a third party (referred to in the *Guide* as "a referee"; see section D, below; see also paragraph 3, above).

8. In considering which method or methods of dispute settlement to provide in the contract, the parties should carefully consider the law that would govern the methods being considered. In particular, they should ascertain the scope of the authority that may be exercised by judges, arbitrators or a referee under the

law applicable to the procedures. They should also consider the extent to which a decision of a referee, arbitral award or judicial decision is enforceable in the countries of the parties. The fact that one party to the works contract is a State or State enterprise may also be a factor influencing the method of dispute settlement to be provided.

9. The implementation of a works contract usually includes on-going discussions between the parties that may permit many problems and misunderstandings to be resolved without recourse to dispute settlement proceedings. The parties may wish to require that, if a party intends to have recourse to dispute settlement proceedings other than negotiation, he must notify the other party in writing of that intention.

B. Negotiation

10. The most satisfactory method of settling disputes is usually by negotiation between the parties. An amicable settlement reached through negotiation may avoid disruption of the business relationship between them. In addition, it may save the parties the considerable cost and the generally greater amount of time that are normally required for the settlement of disputes by other means.

11. Even though the parties may wish to attempt to settle their disputes through negotiation before invoking other means of dispute settlement, it may not be desirable for the contract to prevent a party from initiating other means of settlement until a period of time allotted for negotiation has expired. Furthermore, if the contract provides that other dispute settlement proceedings may not be initiated during the negotiation period, it is advisable to permit a party to initiate other proceedings even before the expiry of that period in certain cases, e.g., where a party states in the course of negotiations that he is not prepared to negotiate any longer, or where the initiation of arbitral or judicial proceedings before the expiry of the negotiation period is needed in order to prevent the loss or prescription of a right. It is advisable for the contract to require a settlement reached through negotiation to be reduced to writing.

C. Conciliation

12. If the parties fail to settle a dispute through negotiation, they may wish to attempt to do so through conciliation before resorting to arbitral or judicial proceedings. The object of conciliation is to achieve an amicable settlement of the dispute with the assistance of a neutral conciliator respected by both parties. In contrast to an arbitrator or judge, the conciliator does not decide a dispute; rather, he assists the parties in reaching an agreed settlement, often by proposing solutions for their consideration.

13. Conciliation is non-adversarial. Consequently, the parties are more likely to preserve the good business relationship that exists between them than in arbitral or judicial proceedings. Conciliation may even improve the relationship between the parties, since the scope of the conciliation and the ultimate agreement of the parties may go beyond the strict confines of the dispute that gave rise to the conciliation. On the other hand, a potential disadvantage of

conciliation is that, if the conciliation were to fail, the money and time spent on it might have been wasted. That disadvantage might be reduced to some extent if the contract did not require the parties to attempt conciliation prior to initiating arbitral or judicial proceedings, but merely permitted a party to initiate conciliation proceedings. Conciliation would take place only in cases where there existed a real likelihood of reaching an amicable settlement.

14. If the parties provide for conciliation in the contract, they will have to settle a number of issues for the conciliation to be effective. It is not feasible to settle all of those issues in the body of the contract; rather, the parties may incorporate into their contract, by reference, a set of conciliation rules prepared by an international organization, such as the UNCITRAL Conciliation Rules.¹

15. In a variation of conciliation, the parties may wish to consider appointing before the commencement of construction one or more persons with expertise and experience in resolving questions normally encountered in the construction of a works. These persons may be furnished with periodic reports on the progress of construction and informed immediately of differences arising between the parties on matters connected with the construction. They may meet with the parties on the site, either at regular intervals or when the need arises, to consider differences that have arisen and to suggest possible ways of resolving those differences. In such a conciliation process, the parties may be free to accept or reject the suggestions of the body and to initiate judicial or arbitral proceedings at any time, especially if such initiation is needed in order to prevent the loss or prescription of a right. The establishment of such a body may prevent misunderstandings or differences between the parties from developing into formal disputes requiring settlement in arbitral or judicial proceedings.

D. Proceedings before a referee

16. The parties may wish to consider providing for certain types of disputes to be settled by a referee. Proceedings before a referee can be quite informal and expeditious, and tailored to suit the characteristics of the dispute that he is called upon to settle. Many legal systems do not regulate proceedings before a referee; others regulate them only to a very limited extent. In particular, the law applicable to the proceedings may provide only limited legal safeguards to ensure that the proceedings are conducted impartially and with due care. In addition, under many legal systems, the referee's decision cannot be enforced, since it does not have the status of an arbitral award or a judicial decision. A few international organizations and trade associations have developed rules concerning the use of a referee in the settlement of disputes, but those rules generally deal with only some aspects of the matter. Therefore, if the parties contemplate providing for proceedings before a referee, it will be necessary for them to settle various aspects of those proceedings in their contract.

17. It is advisable for the contract either to name the referee, or to set forth the procedure by which he is to be appointed. That procedure may be similar to the procedure for the appointment of arbitrators (see paragraph 40, below). In some cases, the consulting engineer may be named or appointed as referee (see chapter X, "Consulting engineer").

18. It would be desirable for the contract to delimit as precisely as possible the authority conferred upon the referee. It may specify the functions to be performed by him, and the type of issues with which he may deal. It is desirable to restrict the referee's authority to issues of a predominantly technical character. A possible way of expressing such a restriction in the contract is to include a list of technical issues with which the referee is authorized to deal.

19. With regard to the nature of the referee's functions, the contract might authorize him to make findings of fact and to order interim measures. The contract might also authorize him to change or supplement terms of the contract when he may be permitted to do so under the law applicable to the contract (see paragraph 3, above). The parties may wish to consider whether the referee should be authorized to decide on the substance of certain types of disputes (e.g., disputes as to whether completion tests or performance tests were successful, or as to grounds asserted by the contractor for objecting to a variation ordered by the purchaser), or whether the settlement of those disputes should be left to arbitrators or courts.

20. To the extent they are permitted to do so by the law applicable to the proceedings, the parties might wish to deal in the contract with the relationship between proceedings before a referee and proceedings before a court or arbitral tribunal. For example, the contract might provide that disputes within the scope of the referee's authority must first be submitted to him for resolution and that arbitral or judicial proceedings cannot be initiated until the expiration of a specified period of time after submission of the dispute to the referee.

21. The law governing arbitral or judicial proceedings may determine the extent to which the parties may authorize arbitrators or a court to review a decision of the referee. Excluding such review has the advantage that the referee's decision would be immediately final and binding. However, permitting such a review gives the parties greater assurance that the decision will be correct. The advantages of both approaches may be combined to some extent by providing that the referee's decision is binding on the parties unless a party initiates arbitral or judicial proceedings within a short specified period of time after the referee's decision is delivered to him. If they are permitted to do so, the parties might specify that findings of fact made by a referee cannot be challenged in arbitral or judicial proceedings. The contract might also obligate the parties to implement a decision by the referee concerning interim measures or a decision on the substance of certain specified issues; if the parties fail to do so, they will be considered as having failed to perform a contractual obligation.

E. Arbitration

1. *Considerations as to whether to conclude arbitration agreement*

22. There are various reasons why arbitration is frequently used for settling disputes arising under international works contracts. Arbitral proceedings may be structured by the parties so as to be less formal than judicial proceedings and better suited to the needs of the parties and to the specific features of the disputes likely to arise under the contract. The parties can choose as arbitrators persons who have expert knowledge of international construction contracts. They may choose the place where the arbitral proceedings are to be conducted.

They can also choose the language or languages to be used in the arbitral proceedings. In addition, the parties can choose the law applicable to the contract, and that choice will almost always be respected by the arbitrators; the same is not always true of judicial proceedings (see chapter XXVIII, "Choice of law", paragraphs 7 and 8). Where parties agree to arbitration, neither party submits to the courts of the State of the other party. Arbitral proceedings may be less disruptive of business relations between the parties than judicial proceedings. The proceedings and arbitral awards can be kept confidential, while judicial proceedings and decisions usually cannot. Arbitral proceedings tend to be more expeditious and, in some cases, less costly than judicial proceedings. It may be noted, however, that some legal systems provide for summary judicial proceedings for certain types of disputes (e.g., those involving a sum of money not exceeding a certain amount), although many disputes arising under a works contract will not qualify for settlement under such proceedings. Finally, as a result of international conventions that assist in the recognition and enforcement of foreign arbitral awards, those awards are frequently recognized and enforced more easily than foreign judicial decisions.²

23. On the other hand, an arbitral award may be set aside in judicial proceedings. The initiation of those proceedings will prolong the final settlement of the dispute. However, under many legal systems, an arbitral award may be set aside only on a limited number of grounds, for example that the arbitrators lacked authority to decide the dispute, that a party could not present his case in the arbitral proceedings, that the rules applicable to the appointment of arbitrators or to the arbitral procedure were not complied with, or that the award was contrary to public policy. It may also be noted that, in some legal systems, it is not possible for parties to preclude courts from settling certain types of disputes.

2. Provisions of arbitration agreement

(a) Scope of arbitration agreement and mandate of arbitral tribunal

24. In general, arbitral proceedings may be conducted only on the basis of an agreement by the parties to arbitrate. The agreement may be reflected either in an arbitration clause included in the contract or in a separate arbitration agreement concluded by the parties before or after a dispute has arisen. Since it may be more difficult to reach an agreement to arbitrate after a dispute has arisen, it is advisable either to include an arbitration clause in the contract or to enter into a separate arbitration agreement at the time of entering into the contract. However, under some legal systems, an agreement to arbitrate is procedurally and substantively effective only if it is concluded after a dispute has arisen.

25. It would be advisable for the contract to indicate what disputes are to be settled by arbitration. For example, the arbitration clause may stipulate that all disputes arising out of or relating to the contract or the breach, termination or invalidity thereof are to be settled by arbitration. In some cases, the parties may wish to exclude from that wide grant of jurisdiction certain disputes that they do not wish to be settled by arbitration.

26. If permitted under the law applicable to the arbitral proceedings, the parties may wish to authorize the arbitral tribunal to order interim measures pending the final settlement of a dispute. However, under some legal systems,

arbitral tribunals are not empowered to order interim measures. Under other legal systems, where interim measures can be ordered by an arbitral tribunal, they cannot be enforced; in those cases, it may be preferable for the parties to rely on a court to order interim measures. Under many legal systems, a court may order interim measures even if the dispute is to be or has been submitted to arbitration.

27. It is desirable for the arbitration agreement to obligate the parties to implement arbitral decisions, including decisions ordering interim measures. The advantage of including such an obligation in the contract is that under some legal systems, where an arbitral award is not enforceable in the country of a party, a failure by the party to implement an award when obligated to do so by the contract might be treated in judicial proceedings as a failure by the party to perform a contractual obligation.

28. If judicial proceedings are instituted in respect of a dispute that is covered by an arbitration agreement that is recognized to be valid, upon a timely request the court will normally refer the dispute to arbitration. However, the court may retain the authority to order interim measures and will normally be entitled to control certain aspects of arbitral proceedings (e.g., to decide on a challenge to arbitrators) and to set aside arbitral awards on certain grounds (see paragraph 23, above).

29. It is advisable for the parties to be cautious about authorizing the arbitral tribunal to decide disputes *ex aequo et bono* or to act as *amiable compositeur*, since arbitrators are not permitted to do so under some legal systems. In addition, such authorizations may be interpreted in different ways and lead to legal insecurity. For example, the terms might be interpreted as authorizing the arbitrators to be guided either only by principles of fairness, justice or equity, or, in addition, by those provisions of the law applicable to the contract regarded in the legal system of that law as fundamental. An additional source of uncertainty may be whether the arbitrators, applying the principles mentioned above, may disregard certain terms of the contract. If the parties wish to authorize the arbitral tribunal to decide disputes without applying all legal rules of a State to the contract, they may wish to specify the standards or rules according to which the arbitral tribunal is to decide the substance of the dispute and to obligate the arbitral tribunal to apply the terms of the contract and the relevant usages of international trade.

(b) *Type of arbitration and appropriate procedural rules*

30. The parties are able to select the type of arbitration that best suits their needs. It is desirable that they agree on appropriate rules to govern their arbitral proceedings. There is a wide range of arbitration systems available, with varying degrees of involvement of permanent bodies (e.g., arbitration institutions, courts of arbitration, professional or trade associations and chambers of commerce) or third persons (e.g., presidents of courts of arbitration or of chambers of commerce). At one end of the spectrum is the pure *ad hoc* type of arbitration, which does not involve a permanent body or third person in any way. This means, in practical terms, that no outside help is available (except, perhaps, from a national court) if, for example, difficulties are encountered in the appointment or challenge of an arbitrator. Moreover, any necessary administrative arrangements have to be made by the parties or

the arbitrators themselves. At the other end of the spectrum there are arbitrations fully administered and supervised by a permanent body, which may review terms of reference and the draft award and may revise the form of the award and make recommendations as to its substance.

31. Between these two types of arbitration there is a considerable variety of arbitration systems, all of which involve an appointing authority but differ as to the administrative services that they provide. The essential, although not necessarily exclusive, function of an appointing authority is to compose or assist in composing the arbitral tribunal (e.g., by appointing the arbitrators, deciding on challenges to an arbitrator or replacing an arbitrator). Administrative or logistical services, which may be offered as a package or separately, could include the following: forwarding written communications of a party or the arbitrators; assisting the arbitral tribunal in establishing and notifying the date, time and place of hearings and other meetings; providing, or arranging for, meeting rooms for hearings or deliberations of the arbitral tribunal; arranging for stenographic transcripts of hearings and for interpretation during hearings and possibly translation of documents; assisting in filing or registering the arbitral award, when required; holding deposits and administering accounts relating to fees and expenses; and providing other secretarial or clerical assistance.

32. Unless the parties opt for pure *ad hoc* arbitration, they may wish to agree on the body or person to perform the functions that they require. Among the factors worthwhile considering in selecting an appropriate body or person are the following: willingness to perform the required functions; competence, in particular in respect of international matters; appropriateness of fees measured against the extent of services requested; seat or residence of the body or person and possible restriction of its services to a particular geographic area. The latter point should be viewed in conjunction with the probable or agreed place of arbitration (see paragraphs 41 to 47, below). However, certain functions (e.g., appointment) need not necessarily be performed at the place of arbitration, and certain arbitral institutions are prepared to provide services in countries other than those where they are located.

33. In most cases, the arbitral proceedings will be governed by the law of the State where the proceedings take place. Many States have laws regulating various aspects of arbitral proceedings. Some provisions of these laws are mandatory; others are non-mandatory. In selecting the place of arbitration (see paragraphs 41 to 47, below), the parties may wish to consider the extent to which the law of a place under consideration recognizes the special needs and features of international commercial arbitration and, in particular, whether it is sufficiently liberal to allow the parties to tailor the procedural rules to meet their particular needs and wishes while at the same time ensuring that the proceedings are fair and efficient. A recent trend in this direction, discernible from modern legislation in some States, is being enhanced and fortified by the UNCITRAL Model Law on International Commercial Arbitration.³ The UNCITRAL Model Law is becoming increasingly accepted by States of different regions and different legal and economic systems.

34. Since the procedural rules in the arbitration laws of some States are not necessarily suited to the particular features and needs of international commercial arbitration, and since, in any case, those laws do not contain rules settling all procedural questions that may arise in relation to arbitral

proceedings, the parties may wish to adopt a set of arbitration rules to govern arbitral proceedings under their contract. When the parties choose to have their arbitrations administered by an institution, the institution may require the parties to use the rules of that institution, and may refuse to administer a case if the parties have modified provisions of those rules that the institution regards as fundamental to its arbitration system. Most arbitral institutions, however, offer a choice of two or sometimes more sets of rules and usually allow the parties to modify any of the rules. If the parties are not required by an institution to use a particular set of arbitration rules or to choose among specified sets of rules, or if they choose *ad hoc* arbitration, they are free to choose a set of rules themselves. In selecting a set of procedural rules, the parties may wish to consider its suitability for international cases and the acceptability of the procedures contained in them.

35. Of the many arbitration rules promulgated by international organizations or arbitral institutions, the UNCITRAL Arbitration Rules⁴ deserve particular mention. These Rules have proven to be acceptable in the various legal and economic systems and are widely known and used in all parts of the world. Parties may use them in pure *ad hoc* arbitrations as well as in arbitrations involving an appointing authority with or without the provision of additional administrative services. A considerable number of arbitration institutions in all regions of the world have either adopted these Rules as their own institutional rules for international cases or have offered to act as appointing authority. Most of them will provide administrative services in cases conducted under the UNCITRAL Arbitration Rules.

36. Where a model clause accompanies the arbitration rules to govern arbitrations under the works contract or is suggested by an arbitral institution, adoption of that clause by the parties may help to enhance the certainty and effectiveness of the arbitration agreement. Some model clauses, such as the one accompanying the UNCITRAL Arbitration Rules, allow the parties to settle certain practical matters by agreement. These include the involvement of an appointing authority, as well as the number of arbitrators (see paragraphs 37 to 39, below), the appointment of arbitrators (see paragraph 40, below), the place of arbitration (see paragraphs 41 to 47, below) and the language or languages to be used in the arbitral proceedings (see paragraph 48, below).⁵

(c) *Practical matters to be settled by parties*

(i) *Number of arbitrators*

37. The parties may wish to specify in the arbitration clause the number of arbitrators who are to comprise the arbitral tribunal. If the parties fail to do so, the chosen arbitration rules or, in some cases, the applicable arbitration law, will either specify that number or the manner by which it is to be determined. Agreement by the parties on the number of arbitrators will enable the parties to ensure that the number conforms to their particular needs and wishes, and will provide certainty in respect of that aspect of the appointment process. However, parties should be aware that some national laws restrict their freedom to agree upon the number of arbitrators by, for example, prohibiting an even number of arbitrators.

38. Other than the possible legal restriction just referred to, the considerations that may be relevant to the question of the number of arbitrators are essentially

of a practical nature. In order to ensure the efficient functioning of the arbitral proceedings and the taking of decisions, it is usually desirable to specify an uneven number, i.e., one or three, although in practice parties sometimes specify two-member panels, coupled with a mechanism for calling in a third arbitrator, "umpire" or "referee", to overcome any impasse between the two.

39. As to whether one or three arbitrators should be specified, the parties may wish to consider that arbitral proceedings conducted by a sole arbitrator are generally less costly and tend to be more expeditious than proceedings where the fees of three arbitrators have to be paid and where three time-schedules have to be accommodated. On the other hand, three arbitrators may bring a wider range of expertise and background to the proceedings. Since the desirable expertise and background can be of different types, different methods of appointing the arbitrators may be envisaged.

(ii) Appointment of arbitrators

40. On the one hand, in an international case, each party may want to have one arbitrator of his choice who would be familiar with the economic and legal environment in which that party operates. Therefore, the parties might agree on a method by which each party appoints one arbitrator and the third arbitrator is chosen by the two thus appointed or by an appointing authority. On the other hand, in complex disputes involving legal, technical and economic issues, it may be of considerable advantage to have arbitrators with different qualifications and expertise in the relevant fields. Where parties attach particular importance to this aspect, they may wish to entrust an appointing authority with the appointment of all three arbitrators and, possibly, specify the qualifications or expertise required of the arbitrators.

(iii) Place of arbitration

41. The parties may wish to specify in the arbitration agreement the place where the proceedings are to be held and where the arbitral award is to be issued. The selection of an appropriate place of arbitration may be crucial to the functioning of the arbitral process and to the enforceability of the arbitral award. The following considerations may be relevant to the selection of the place of arbitration.

42. Firstly, the parties may consider it desirable to choose a place of arbitration such that an award issued in that place would be enforceable in the countries where the parties have their places of business or substantial assets. In many States, foreign awards are readily enforceable only by virtue of multilateral or bilateral treaties, and often only on the basis of reciprocity. The parties may thus wish to choose a place of arbitration in a State that is in such a treaty relationship with the States where enforcement might later be sought.

43. Secondly, the parties may consider it desirable to choose a place where the arbitration law provides a suitable legal framework for international cases. Some arbitration laws might be inappropriate because, for example, they restrict the autonomy of the parties or fail to provide a comprehensive procedural framework to ensure efficient and fair proceedings.

44. Considerations of a more practical nature include the following: the convenience of the parties and other persons involved in the proceedings; the

availability of necessary facilities, including meeting rooms, support services and communication facilities; the availability of administrative services of an arbitral institution or chamber of commerce, if so desired by the parties; relevant costs and expenses, including expenses for accommodation, meeting rooms and support services; and the ability of the parties' counsel to represent the parties without the need to retain local lawyers.

45. Another relevant consideration is that it may be advantageous for the arbitral proceedings to be held in a place which is near to the subject-matter in dispute. For example, if the arbitration were to be held in or near the country of the site, the taking of evidence at the site would be facilitated.

46. Yet other considerations often lead parties to agree on a place other than in the States where they have their places of business. For example, the parties may select a third State because each party may have misgivings about arbitrating in the other party's country; a party in whose State the proceedings are conducted might be thought by the other party to benefit from a familiar legal and psychological environment and from other circumstances facilitating the presentation of the case.

47. Instead of specifying one place of arbitration for all disputes arising under the works contract, the parties may, in some cases, wish to provide that the arbitration is to take place in the country of the party against whom a claim is brought. The enforcement of an award against a party in his own country that was rendered in that country would not encounter the problems associated with the enforcement of a foreign award. If institutional arbitration is to be used, the parties may agree upon two arbitration institutions, one located in the country of each party, and provide that the arbitration is to be administered in respect of particular disputes by the institution in the country of the party against whom a claim is brought (the so-called "mixed arbitration clause"). The parties may wish to adopt this approach if they cannot agree upon a single arbitral institution to administer the arbitration. Arrangements involving two places of arbitration could, however, give rise to difficulties in some cases. The legal rules applicable to arbitral proceedings in the respective countries may differ, and they could be more burdensome or otherwise less satisfactory to a party in one country than in the other. In addition, arbitral proceedings conducted in the respective countries will be controlled by different courts, which may exercise differing degrees of control over the proceedings.

(iv) *Language of proceedings*

48. The parties may also wish to specify the language to be used in the arbitral proceedings. The choice of the language may influence the efficiency with which the proceedings are conducted and the cost of the proceedings. Whenever possible, it is desirable to specify a single language, such as the language in which the contract is written. When more than one language is specified, the costs of translation and interpretation from one language to the other are usually considered to be part of the costs of arbitration and apportioned in the same way as the other costs of arbitration.

49. The parties may wish to specify the types of documents or communications that must be submitted in or translated into the specified language. They may, for example, require the written pleadings, oral testimony at a hearing, and any award, decision or other communication of the arbitral tribunal to be

in the specified language. The tribunal may be given the discretion to decide whether and to what extent documentary evidence should be translated. Such discretion may be appropriate in view of the fact that documents submitted by the parties may be voluminous and that only a part of a document may be relevant to a dispute.

F. Judicial proceedings

50. If the parties do not agree to refer their disputes to arbitration, the disputes will have to be settled in judicial proceedings. Courts of two or more countries may be competent to decide a given dispute between the parties, and the legal position of the parties to a dispute may differ depending upon which court decides the dispute. For example, the validity and effect of a choice by the parties of the law applicable to the contract will depend upon the rules of private international law in the country of the court deciding the dispute in which the question arises (see chapter XXVIII, "Choice of law", paragraphs 7 and 8).

51. The uncertainties that arise when more than one court is competent to decide a dispute may be reduced by including in the contract an exclusive jurisdiction clause, obligating the parties to submit disputes that arise between them under the contract to a specified court in a specified place in a specified country. It is advisable for the clause to specify a court in the selected country, rather than to refer simply to a competent court in that country, in order to avoid questions as to which court was to decide a given dispute. The clause may specify the types of disputes that are subject to it in a manner similar to the specification in an arbitration agreement (see paragraph 25, above).

52. Under many legal systems, a clause conferring exclusive jurisdiction on a court is valid only if the selected court has authority to decide the disputes that are submitted to it under the clause. Therefore, in selecting a court, the parties should ascertain that the court is legally competent to decide the types of disputes that are to be submitted to it. The enforceability in the countries of the parties of a decision issued by the selected court will also be relevant to the choice of a court (see paragraph 42, above).

53. While an exclusive jurisdiction clause may reduce uncertainties with respect to matters such as the law applicable to the contract and the enforceability of a decision, and may facilitate the multi-party settlement of disputes (see paragraph 4, above), it may also have certain disadvantages. If a court in the country of one of the parties is given exclusive jurisdiction, and the exclusive jurisdiction clause is invalid under the law of the country of the selected court, but valid under the law of the country of the other party, difficulties may arise in initiating judicial proceedings in either of the countries. Difficulties connected with initiating judicial proceedings may be magnified if the parties confer exclusive jurisdiction on a court in a third country.

Footnotes to chapter XXIX

¹Report of the United Nations Commission on International Trade Law on the work of its thirteenth session, *Official Records of the General Assembly, Thirty-fifth Session, Supplement No. 17* (A/35/17), para. 106 (*Yearbook of the United Nations Commission on International Trade Law*, Vol. XI: 1980, part one, II, A (United Nations publication, Sales No. E.81.V.8)). The UNCITRAL Conciliation Rules have also been reproduced in booklet form (United Nations publication, Sales No. E.81.V.6). Accompanying the Rules is a model conciliation clause, which reads: "Where, in the event of a dispute arising out of or relating to this contract, the parties wish to seek an amicable settlement of that dispute by conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules as at present in force." The use of the UNCITRAL Conciliation Rules has been recommended by the United Nations General Assembly in its resolution 35/52 of 4 December 1980.

²See "Convention on the recognition and enforcement of foreign arbitral awards", *United Nations Treaties Series*, Vol. 330, p. 38, No. 4739 (1959), reproduced in *Register of Texts of Conventions and other Instruments concerning International Trade Law*, Vol. II (United Nations publication, Sales No. E.73.V.3).

³Report of the United Nations Commission on International Trade Law on the work of its eighteenth session, *Official Records of the General Assembly, Fortieth Session, Supplement No. 17* (A/40/17), para. 332 and Annex I. The United Nations General Assembly, in its resolution 40/72 of 11 December 1985, recommended "that all States give due consideration to the Model Law on International Commercial Arbitration, in view of the desirability of uniformity of the law of arbitral procedures and the specific needs of international commercial arbitration practice".

⁴Report of the United Nations Commission on International Trade Law on the work of its ninth session, *Official Records of the General Assembly, Thirty-first Session, Supplement No. 17* (A/31/17), para. 57 (*Yearbook of the United Nations Commission on International Trade Law*, Vol. VII: 1976, part one, II, A (United Nations publication, Sales No. E.77.V.1)). The UNCITRAL Arbitration Rules have also been reproduced in booklet form (United Nations publication, Sales No. E.77.V.6). The use of the UNCITRAL Arbitration Rules has been recommended by the United Nations General Assembly in its resolution 31/98 of 15 December 1976.

⁵*Illustrative provisions (arbitration clause)*

The following clause is recommended in the UNCITRAL Arbitration Rules:

"Any dispute, controversy or claim arising out of or relating to this contract, or the breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force.

Note—Parties may wish to consider adding:

- "(a) The appointing authority shall be ... (name of institution or person).
- (b) The number of arbitrators shall be ... (one or three).
- (c) The place of arbitration shall be ... (town or country).
- (d) The language[s] to be used in the arbitral proceedings shall be . . ."

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