

Guide on drawing up contracts for large industrial works

Topic: Construction, installation of plant, engineering
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I. Introduction

A. Purpose and subject of the Guide

1. (i) The purpose of this Guide is to facilitate the drawing up of international contracts for large industrial works constituting an important element in economic and technical co-operation, and covering the supply and erection of industrial plant, as well as building and civil engineering work. These contracts provide generally for longer and more diversified relations than in usual contracts for the supply of plant and machinery.

(ii) For this purpose, the Guide lists the various contractual procedures which may be adopted for such works, indicating the problems which such procedures may raise and the consequences which they may entail.

(iii) However, the Guide provides no advice on which procedures to adopt or which contractual provisions to apply. Its purpose is essentially descriptive. Nor is the Guide an exhaustive treatise; it is simply a memorandum. With regard to the clauses commonly used for the supply and erection of industrial plant and for the construction of buildings or civil engineering work, it merely refers to the existing standard forms¹.

B. The participants

2. (i) International contracts for the construction of large industrial works involve a set of participants whose number and function may vary from case to case: the client, the supplier or suppliers of machinery and equipment or of industrial plant and the building or civil engineering contractor or contractors. In some countries, a design office or a consulting engineer also takes part in the transaction. There are also cases in which suppliers of technology or of documentation may be involved as contracting parties.

(ii) The functions fulfilled by these participants and the responsibilities which they assume depend on the type of contract adopted; therefore, it may happen that the same participant assumes different functions and responsibilities according to the contractual relations resulting from the kind of contract used.

C. Main categories of contract

3. An important distinction between the various combinations of contracts which are possible in this field resides in the fact that the client may conclude with the other participants:

(i) Separate contracts, for the supply and erection of industrial plant, on the one hand, and for the building and civil engineering work on the other; or

(ii) A comprehensive contract, covering both the building and civil engineering work and the supply and erection of industrial plant, when the client's contracting party (main contracting party) assumes the responsibility for the works or supplies as a whole although the performance of part of the works and supplies may be transferred by him to sub-contractors; or

(iii) A turnkey contract covering all services as defined in paragraph 25 (ii). Paragraph 11 and Chapter V discuss whether this is a distinct type of comprehensive contract.

D. Separate contracts

4. (i) Responsibility of the parties. Where the client concludes separate contracts with a supplier or suppliers of industrial plant, and with building or civil engineering contractors, each of those parties is

directly responsible to the client for the supplies or for the performance of the work entrusted to him under the terms of the contract which binds him to the latter.

(ii) Co-ordination. Since the client is the only one of the parties contractually bound to all the others, it will naturally be his responsibility to co-ordinate work and supplies so as to ensure that the various participants do not hamper each other and that their work is performed in the correct sequence. In those cases where a consulting engineer has been appointed by the client, he may be entrusted on his behalf with the co-ordination of work and supplies.

(iii) Consequences of a failure of co-ordination. If there is no such co-ordination, the client may be held responsible for the effect which any delay in the performance of work and supplies of one of the participants due to non-observance of time-limits, changes made in course of execution, etc., may have on the obligations of other participants, e.g. times-limits, penalties for delay, beginning of guarantee period, etc.

(iv) Site. If the initial studies which culminate in the planning of a project and in the survey and selection of the site are carried out by the client himself or by a design bureau or by a consulting engineer, the client assumes the responsibility for this preliminary work vis-à-vis the supplier of the industrial plant and vis-à-vis the building or civil engineering contractor; the contract may also specify that the building or civil engineering contractor is obliged to check the project data concerning the site on his own responsibility.

(v) The client may also place on the building or civil engineering contractor the responsibility for solving any problems connected with the site.

E. Comprehensive contracts

5. Types

(i) The client may conclude a main contract with the supplier of industrial plant, the building or civil engineering contractor playing only a subsidiary role and concluding a sub-contract with the supplier.

(ii) The roles of the supplier and contractor may be reversed; this is done in some countries, or when the building work is worth more than the industrial plant, or when such work constitutes the main subject of the transaction, as in the case of construction of a dam, an underground railway, a hospital, etc.

(iii) The supplier and contractor may together set up a joint venture², which concludes a single contract with the client.

6. Responsibility of the parties arising from the connexion between the main contract and the subsidiary contracts

(i) When a supplier of industrial plant is the main contracting party and he sub-contracts the building or civil engineering work, it is necessary that the main contract contains provisions which enable the main contracting party to sub-contract the building or civil engineering work, using appropriate conditions of contract for the performance of such work.

(ii) When the building or civil engineering contractor is the main contracting party and sub-contracts the supply and erection of electrical, mechanical, or other plant, the same principle applies.

(iii) In both cases, if the main contract is based on existing standard forms (see note to paragraph 1 (iii)), the contract must provide, if necessary, that these forms will be applied with modifications and additions, in order to take into consideration the particular conditions of the work for which the main contracting party assumes responsibility.

(iv) If these principles are not observed, the main contracting party or sub-contractor may find that he has assumed a responsibility which is not appropriate for the type of work which he has to perform.

7. Sub-contractor nominated by the client

(i) In cases where the client nominates the sub-contractor or sub-contractors, or any one of them, the main contracting party, after verifying the suitability of the sub-contractor or sub-contractors thus appointed, may assume vis-à-vis the client responsibility for the sub-contracting work performed by him or them.

(ii) The main contracting party may also co-operate with the sub-contractor (for instance, by giving him the appropriate technical assistance) to enable him to perform the sub-contracting work in such a way as to permit the main contracting party to assume responsibility for it vis-à-vis the client.

(iii) On the other hand, there are cases in which the main contracting party does not assume vis-à-vis the client responsibility for a sub-contractor whom he has not chosen. In that case, there is a main

contract covering all the services of the main contracting party (both for the supply and erection of industrial plant and for the building and civil engineering work) and one or more separate contracts for the execution of which the main contracting party is not responsible.

8. Co-ordination. The main contracting party co-ordinates the work for which he is responsible vis-à-vis the client. The client, possibly by means of an appointed consultant engineer, ensures co-ordination between the work covered by the main contract and that covered by a separate contract.

9. Joint venture

(i) Responsibility of the joint venture. When the supplier or suppliers of industrial plant and the building or civil engineering contractor are members of a joint venture, the members may agree to assume joint and several responsibility vis-à-vis the client, in addition to the over-all responsibility assumed by the joint venture itself. In some countries, this solution arises by law from the juridical form chosen by the parties for the joint venture. In others, it can be achieved only under a special agreement.

(ii) Relations between the members of a joint venture. Within the joint venture, it is useful to stipulate - in a special agreement - the functions and responsibilities of each member, such an agreement should, in particular, specify the manner in which the responsibility of the members of the joint venture vis-à-vis the client is to be shared.

(iii) Co-ordination and liaison with the client. When the agreement establishing the joint venture does not stipulate that one of the parties shall represent it vis-à-vis the client, it should at least be specified who is responsible for coordinating the work and for maintaining liaison between the client and the joint venture.

10. Site

(i) The comments under the heading "separate contracts" in paragraph 4 (iv) and (v) relating to the site apply by extension to comprehensive contracts.

(ii) There is no hard and fast rule assigning the responsibility for work connected with the site to one party rather than to another. According to the circumstances, this work may be carried out either by the client or by the main contracting party, although when the client has carried out the planning and prepared a project, the contract sometimes specifies that the main contracting party accepts the project and all its implications on his responsibility.

F. Turnkey contracts

11. The turnkey contract appears as a more developed and complete form of the comprehensive contract. In both types of contract the client seeks a single contracting party who shall be responsible for all or for a large part of the work; the difference between these two types of contract appears to be often ill-defined in practice; this difference is examined in greater detail in chapter V.

G. Variants of the main types of contract

12. The main types of contract for large industrial works, including building and civil engineering work, generally have many variants which can considerably alter the nature of the relationships between the client and his various contracting parties. Consequently, the preceding comments on the main types of contract must be qualified before they can be applied to individual cases. When individual contracts are being drawn up, the general observations applicable to all the various types of contract may be influenced by factors connected with the actual content of the particular transactions involved.

II. Separate contracts

A. Extreme type of separate contracts

13. (i) The method of separate contracts for large industrial works, including building and civil engineering work, is encountered in particular where the client is also the author of the industrial process which will be used in the works to be built.

(ii) In this case, the comments in paragraph 4 are applicable as they stand. The client concludes a separate contract with each of his contracting parties, using normally the standard contract forms for each type of contract concluded. The parties are responsible for the performance of their work or services in accordance with the standard applicable to it. The fact that the different types of work which they perform all form part of a single project does not, in principle, modify the contractual relationships between the client and each of the contracting parties. since the responsibility for the

successful completion of the over-all project rests with the client, subject to recourse against the other parties to the contract to the extent as specified in the individual contracts.

B. Risks incurred by the client

14. (i) The client will thus have to bear the financial consequences of defects of the plant, if it proves impossible to establish the specific responsibility of one or other of his contracting parties. He will then be responsible for everything beyond the limits of his contracting parties' responsibility.

(ii) The same applies as regards the consequences of inadequate co-ordination of the work, particularly the effect on the parties to the contract of a delay in the project as a whole, caused by other parties.

(iii) If the delay is due to the general organization of the work, the client will himself be obliged to accept liability vis-à-vis the other parties. If, however, the delay is attributable to one or more of them, the client can guard against some of its consequences by inserting penalty clauses in the various contracts.

(iv) Nevertheless, if a delay by one or more of the contracting parties has repercussions on the work of the others, the client will have the primary liability for any resulting damage to the participants which have performed their contractual obligations, particularly as regards time-limits, although he may be able to take action against the contracting party responsible for the delay to recover the sums he has been obliged to pay in compensation to the other parties which have not caused any delay.

(v) The client could for this purpose invoke the common law of liability but, in order to avoid any dispute, he would certainly be wise to insert a special clause to that effect in all his contracts. In adopting this course, he will, however, have to take account of the limitations either of the scope of liability or of the amount of compensation which are generally foreseen in the transactions connected with the construction of large industrial works and which may, in the last analysis, result in the client's being liable for a large proportion of the damages to which the delays may give rise.

C. Lessening of the risks incurred by the client

15. (i) The risks incurred by the client, in the case envisaged above, are thus very serious. The client might try to lessen them by inserting in his individual contracts, particularly in respect of the consequences of delay, liability clauses which go beyond those normally included in the supplies and services contracts. It will not always be easy, however, to obtain such an extension of the liability of the various parties to the contract.

(ii) Consequently, it will be in the interest of the client who adopts the "separate contracts" method, in addition to specifying in detail the obligations and responsibilities of his various contracting parties, to take the greatest possible care when planning and scheduling the work and arranging its material organization, co-ordination and supervision, so as to minimize the risks of delays, deficiencies and discrepancies in its execution.

(iii) If the client possesses or himself sets up an adequately staffed design office, he will give it responsibility for drawing up the project, and for organizing, coordinating and supervising the work. If he has no such office, he may engage the services of a consulting engineer, of an outside design office, or of another industrial undertaking specializing in the same branch of production.

D. Incorporation of contracts with a consulting engineer or a design office

16. (i) Whatever formula is adopted for the organization and supervision of the work, it will not, in principle, alter the legal nature of the relationships between the client and the other contracting parties. If the client decides to employ a consulting engineer or a design office, these will play the role of an accredited representative of the client vis-à-vis the other parties. The situation will be the same if the client deals with an industrial undertaking. Complex problems of responsibility may, however, arise in the relations between the client and the consulting engineer, the design office or the industrial undertaking. If the client is negotiating with a consulting engineer, a design office or an industrial undertaking for all or part of the said services, the other parties concerned would certainly be well advised clearly to specify in their contract the consequences of any mistakes made by the consulting engineer, the design office or the industrial undertaking.

(ii) The FIDIC International General Rules for Agreement between Client and Consulting Engineer (IGRA 1963) and the conditions drawn up by the various national associations of consulting engineers or design offices generally provide that the consulting engineer or design office will be responsible only for the consequences of their proven mistakes and only up to the amount of their fee, or an amount reasonably proportionate to it. Industrial undertakings supplying construction projects for setting up

plants using the industrial process supplied by the client will probably seek to limit their responsibility in a similar way. The parties to contracts of this kind might be recommended to specify contractually in the fullest detail or by reference their respective obligations and responsibilities so as to minimize the possibility of disputes, should any difficulty arise in practice.

E. Incorporation of contracts for the supply of industrial processes in a set of separate contracts

17. (i) The situation will be still more complex where the industrial process was not developed by the client himself but is supplied to him by a third party. This particular relationship, too, will not affect the relationships between the client and the other parties. In his relationships with them, the client will be responsible for the industrial process.

(ii) The relationships between the client and the supplier of this process can, in principle, be based on the customary provisions for the cession or concession of manufacturing licences including or not, as the case may be, patents, know-how, or other components of an industrial process.

(iii) Since, however, in the case envisaged here, the industrial process - when it is a component of the work - is supplied for the construction of large industrial works involving very heavy capital investment by the client, the latter will not normally be satisfied with the standard degree of responsibility normally acceptable to the suppliers of manufacturing licences.

(iv) For their part, the suppliers of an industrial process are unlikely to be willing to broaden their responsibility without a corresponding increase of their remuneration; it would seem difficult, therefore, to envisage a transaction in which the supplier of the industrial process for the construction of an industrial plant will be content merely to supply it without also obtaining the contract for other related supplies and services for the project. He will, moreover, be reluctant to accept liability for the results of use of the process supplied, unless he plays some part in the construction of the industrial plant. Admittedly contracts for the cession or concession of manufacturing licences sometimes do not relate to any other supplies or services but the licensor gives certain guarantees of performance on condition that all his instructions are followed to the letter. Since this condition leaves him a very wide loophole for denying responsibility, it reduces the value of the guarantees accordingly. The incorporation of licences in an agreement for other supplies or services is therefore a contractual method which may suit both parties equally. It may, however, take the agreement out of the separate contracts category, as that concept is interpreted in paragraph 4, into a new category characterized by the fact that a contract for the provision of several types of supplies or services is awarded to the same contracting party.

18. Provision is made in the Introduction, under the heading "Comprehensive contracts", for the situation in which building and civil engineering work, on the one hand, and the supply and erection of industrial plants, on the other, are grouped together. In fact, new problems, which differ from those presented by "separate contracts" emerge as soon as there is any question of grouping certain supplies and services relating to industrial plants and such supplies and services do not include building or civil engineering work. This is the specific situation which should be considered first, before the problems of comprehensive contracts are taken up.

III. Grouping of supplies and services not including building or civil engineering work

A. Grouping of homogeneous supplies and services

19. (i) All those transactions - in which the client awards a contract for the provision, not of separate supplies or services, but for a group of supplies or services - may be described (see paragraph 7 (iii)) as the juxtaposition of one or more comprehensive contracts and one or more separate contracts.

(ii) However, although this description may be correct in the abstract, it fails to reflect all the differences in the relationship between the client and the other contracting party, according to the volume and the degree of homogeneity of the work given to each of them.

(iii) If the client obtains the industrial process from a third party and gives the contract for all the supplies to one undertaking, for the erection of the plant to another and for the civil engineering and building work to a third, there will be no fundamental change in the separate contract formula as regards the client's responsibility as defined in paragraph 14 (i), or his duty for the co-ordination and material organization of the work.

(iv) There would, however, be some difference, and sometimes a marked difference, between this case in which supplies and services of one kind are grouped and the contract for their provision is awarded to a single contracting party and the extreme form of the separate contracts formula in which the client

divides the contract for the supply of various items of equipment among several parties. In the contracts involving the grouping of supplies and services by homogeneous lots, the general co-ordination and material organization of the work, a responsibility assumed by the client in both of these cases, would be facilitated if the programme of work and its execution required a lesser number of parties. A further step might even be taken in this direction without any real change in the nature of the transaction if, instead of separating the supply of the equipment and the erection of the entire plant, both were entrusted to one and the same party. It would undoubtedly be a considerable advantage to the client if the coordination and organization of the work could be simplified. It is not impossible, however, that such simplification might increase the cost of the operation in view of the fact, in particular, that the contracting party in charge of a group of supplies and services might be obliged to fix his prices by taking into consideration the increase of his risks and expenses.

(v) The respective advantages and drawbacks of these two ways of contracting for the supply of equipment should thus be carefully weighed in each individual case so that the client may select the solution which seems most appropriate, having regard to the various factors involved. In some cases, it may, perhaps, be preferable to divide the full range of equipment into lots of sufficient size to reduce the number of suppliers and thus reduce the difficulties of co-ordination, without losing sight of the effects of such a solution on its cost.

B. Separate plants or shops

20. (i) Another method answering the same purpose is to divide the industrial works, where this is technically feasible, into a number of separate plants or shops, for each of which a separate contract is concluded. The contracting party awarded the contract for the construction of a plant or shop, including possibly its design, would be entirely responsible for the portion of the project allocated to it, while the client would still have to co-ordinate the work of the suppliers responsible for the various plants or shops. In this case, the contracting party awarded the contract for the design and construction of a plant or shop could be made responsible not only for the conformity of the equipment supplied and the quality of the erection, but also for the performance of the unit which it had to construct - in accordance with the contract - in so far as that performance was not affected by the design or functioning of the works. This responsibility for performance would give the client an additional safeguard for each unit considered separately.

(ii) The performance of the works as a whole would still be the responsibility of the client, since it would depend not only on the component units but also on the general design of the large industrial works and the relationship between its various parts, a matter which would not, under this hypothesis, be entrusted to the other parties responsible for construction of the individual units.

C. Responsibility's extension of the holder of the main (but not sole) contract for the performance of the works

21. (i) If the client wishes to transfer part of the responsibility for the works to one or more of the contracting parties, it is not sufficient for him merely to group homogeneous supplies and services; he must decide to award to one party the contract for supplies or services of different kinds.

(ii) This solution has already been mentioned above (paragraph 17) where it was envisaged that the supplier of the industrial process might also be awarded the contract for other supplies or services needed for the construction of the industrial plant. Consideration might be given, therefore - and this is often the case in practice - to the possibility of awarding to the supplier of the industrial process the contract for supply of some or all of the equipment.

(iii) To this could also be added the drafting of the project and some technical assistance services. Being in charge of the over-all design of the works and for provision of a number of supplies and services required for its construction, the supplier, who thus becomes the holder of the main contract, will be able to find financial set-offs enabling him to guarantee not only the functioning but also the performance of the works. Nevertheless, if the client himself assumes responsibility for some of the supplies and services and the over-all control of the work, or awards them to other contracting parties, he will still share responsibility for the full success of the operation with the holder of the main contract.

(iv) Hence, if the equipment should prove defective, in particular if its parameters should fail to come up to expectations, the question would arise whether the holder of the main contract would be *prima facie* responsible for that situation and be required to show that the failure or non-attainment of

parameters was due to the supplies and services for which the client has assumed responsibility or which he has contracted to other parties. or whether the client would have to prove that the failure or non-attainment of parameters was due to his holder of the main contract.

(v) In view of the vital importance of this problem, it will be in the interest of the parties to have clearly specified in the contract how they intended it to be settled. Admittedly, this will not be easy and will often call for long and troublesome negotiations. However difficult these may be. it is clearly better for the parties to face them than to risk encountering much more serious difficulties if they have to face the problem while the work is going on.

IV. Comprehensive contracts

A. Differences between the provisions for the construction of industrial plants and those applicable in contracts covering building and civil engineering work

22. (i) The situation, which is already difficult enough when the various supplies and services mentioned in the preceding chapter have to be combined, becomes even more complicated when these supplies and services have to be combined with the building and civil engineering work. There are, in fact, some quite significant differences on important points between these two categories not only on the nature of the work to be performed but on the contractual provisions applicable. This is true of contract provisions relating to the following matters:

- Nature of the guarantee: general guarantee of the construction of buildings and civil engineering work, in the one case, and guarantee for the supply of plant and machinery for the industrial work, as a whole, in the other;
- Period of guarantee: different for building and civil engineering work, and for the supply and erection of industrial plants;
- Time at which the guarantee commences: completion of the building and civil engineering work in the first case; acceptance of the industrial plant, delivery of the last necessary pieces of equipment or any other date set by the parties, in the second;
- Transfer of risks: governed differently for building and civil engineering work, and for the supply and erection of industrial plants;
- Liability of the builder: this may sometimes be based on results in the case of the construction of industrial plants but it is usually based on a fault in the case of building and civil engineering work;
- Pecuniary consequences of the defect: the extent and possible limits of compensation will not necessarily be determined in the same way for construction of industrial plants and for building and civil engineering work;
- Conditions of payment: may vary according to cases.

(ii) The differences indicated above, apart from the problems discussed in the preceding chapter, which also arise in comprehensive contracts, raise problems peculiar to these contracts which will be discussed below.

B. Method of drawing up comprehensive contract

23. (i) Consequently, in contract which cover both the supply of industrial plants and building and civil engineering work, it would seem reasonable to include separate chapters for each of these operations and - as previously suggested in paragraphs I (iii) and 6 - to base the wording of such chapters on the provisions commonly used in international business practice for the type of operation involved. In this way, the parties will be better able to respect the general principles set forth in paragraph 6 which are intended to draw their attention to the inadvisability of imposing on the holder of the main contract or on his sub-contractors responsibilities which are not suited to the type of work they have to perform. The parties can specify, in separate chapters, for the different operations making up the project as a whole, the provisions normally applicable to the type of work covered by the chapter.

(ii) This solution can be adopted for all types of comprehensive contracts however the work may be distributed among the client's various contracting parties and whether the client concludes the main contract with the supplier of the industrial plant or with the building and civil engineering contractor. This formula will be equally valid whether one or other of the two types of operations represents the bulk of the transaction or whether the two parts are more or less equal in importance.

(iii) Lastly, if comprehensive contracts are drawn up according to the formula suggested in the preceding sub-paragraphs, this will simplify relations between the holder of the main contract and his subcontractors. If the obligations and responsibilities of the parties are defined, according to the nature

of the operation involved, in the chapter relating to that type of operation, it will be easier for the holder of the main contract to harmonize his own obligations and responsibilities with those he is in a position to have accepted by his subcontractors. The general lines of these various obligations and responsibilities will then in fact have already been laid down in the relations between the holder of the main contract and the client, on the basis of the provisions commonly used in international business practice for the type of operation to which the sub-contracts relate.

24. It remains to be considered whether this method of dividing a comprehensive contract into separate chapters, each covering a homogeneous set of operations forming part of the contract as a whole, is also applicable in the case of a "turnkey contract", the first obvious feature of which is the total responsibility of the holder of the main contract.

V. Turnkey contracts

A. Total responsibility of the holder of a turnkey contract

25. (i) In a full turnkey contract, i. e. a transaction in which the client's contracting party - referred to in this Guide as the "holder of the turnkey contract" - assumes vis-à-vis the client responsibility for construction of the industrial works and takes the client's place vis-à-vis the other participants in the project, the responsibility cannot be divided up in terms of the various operations which this holder of the turnkey contract must perform in order to hand over to the client an industrial plant capable of operating in accordance with the contract terms, specifications and guarantees. The holder of the turnkey contract can avoid this responsibility only by establishing that a failure of the plant is due, as indicated in paragraph 26 (iii) below, to non-performance or faulty performance by the client of his contractual obligations, or to force majeure, which it would be advisable for parties to define in their contracts³.

(ii) The full turnkey contract normally covers the supply to the client by the holder of the turnkey contract of the design for the plant and the technical documentation, and instructions on the operation of the industrial works. A turnkey contract sometimes also includes supplementary arrangements for the provision of technical assistance in the initial stages of operation, staff training or other forms of industrial co-operation. Arrangements of this kind may also be made by separate agreements. The aim of all these supplementary arrangements is to help the client himself to manage, in the proper way, the industrial works.

(iii) It therefore appears essential for the parties to make clear in their contracts which system of contractual relations they intend to adopt. In view of the uncertainty which prevails in practice regarding the very definition of the turnkey contract, they might be well advised to specify in their contracts the division of responsibility between the client and the holder of the turnkey contract.

(iv) The parties should also be informed that it is advisable for the holder of the turnkey contract to see to the organization and co-ordination of the work, since he will have to bear the consequences of any lack of co-ordination.

(v) In a true turnkey contract it is again the holder of the turnkey contract who must accept the consequences of any discrepancy which may - and undoubtedly will - exist between the total responsibility he assumes vis-à-vis the client and the separate responsibilities he can pass on to his subcontractors, according to the normal liability rules applicable to the different types of sub-contract work.

B. The client's responsibility

26. (i) It should be noted that even in the most "complete" interpretation of the turnkey contract, certain matters will still be the responsibility of the client

(ii) Where a complete factory has to be set up in a foreign country, turnkey contracts frequently make the client responsible for providing the additional labour required for the construction work, the labour employed in operating the factory, and the raw materials, services and utilities necessary for the acceptance tests and for the operation of the plant under guarantee. In some contracts the client also assumes responsibility for the choice of the site in accordance with practices similar to those described in paragraph 4 (iv).

(iii) Consequently, if the holder of the turnkey contract can prove that a defect in the plant is due to one of the factors for which the client is responsible, he will be able to avoid, or at least reduce, his liability for it. Nevertheless, except in these specific cases - which incidentally should be expressly defined in the contract if the holder of the turnkey contract is to be able to invoke them in order to

avoid liability - his responsibility is "total", unless the contract provides for limited liability, and cannot (unless the very concept of the turnkey contract is to be meaningless) be regarded as merely the juxtaposition of a series of obligations which vary according to the types of operation constituting the contract (cf. paragraph 23).

C. Risks incurred by the holder of a full turnkey contract

27. (i) The position of the holder of a full turnkey contract closely resembles, therefore, that of the client who uses the separate contract formula.

(ii) The risks assumed by the holder of a full turnkey contract are considerably greater even than those faced by the client in an extreme case of separate contracts in that the client can hope to cover his risks with the profits from the long-term operation of the plant which becomes his property, whereas the only compensation on which the holder of the turnkey contract can count for his similar risks is the profit he can make from the performance of the contract.

(iii) It must be pointed out that the additional risks of the holder of the turnkey contract, by comparison with those incurred by the client in the case of separate contracts, or with the risks incurred by the suppliers and, in the case of comprehensive contracts, resulting from the reversal of the onus of proof, are not at present catered for under any satisfactory system of insuring the design fault" risk.

D. Limitation of choice of sub-contractors by the holder of a turnkey contract

28. (i) In addition to the above-mentioned considerations, other factors make it difficult to use the full turnkey formula in international contracts for the construction of large industrial works. Such is the case in particular. in countries where part of the operations involved in the construction of large industrial works, especially in the civil engineering work sector, but sometimes also the supply of certain equipment, is reserved for domestic undertakings. This may compel the holder of a turnkey contract to contract out of a major part of supplies and essential services with undertakings which he is not entirely free to choose.

(ii) This limitation on his freedom of choice of sub-contractors may lead him to seek to limit his liability in respect of the work, supplies and services which he will, in the circumstances, have been obliged to contract out to local undertakings whose competence he may not have been able to investigate. The transaction is thus, in part at least, reduced from the turnkey type of contract to that of other comprehensive contracts in which the responsibilities of the holder of the main contract differ according to the type of work constituting the whole transaction

E. Evaluation of full turnkey contracts

29. (i) The difficulties that have just been pointed out must not however, obscure the fact that the extension of the obligations carried by the holder of the turnkey contract, in particular with regard to the co-ordination of supplies and work as well as the client's mere ability to pass on to him the risks involved in the construction of a complete factory in a foreign country, may be for the client a decisive advantage for which he may be willing to pay a higher price than he would have to pay if he himself had accepted these obligations and risks of the operation. This applies particularly to relations between contracting parties with different technical experience, especially where the turnkey contract is combined with contracts for technical assistance in the initial operation for staff training or for other forms of industrial co-operation.

(ii) These difficulties may however, be reduced if the risks are shared between the client and the holder of the turnkey contract: if, for instance, the contract prescribes a limit, by way of penalty or automatic compensation, for the consequences deriving from the total responsibility which under the contract fall prima facie on the holder of the turnkey contract.

30. Sub-contracts play an important part in the construction of large industrial works in foreign countries, including turnkey contracts. Some aspects of these sub-contracting problems are discussed in the next chapter.

VI. Sub-contracting

A. Free choice of the sub-contractor

31. In its simplest form sub-contracting is a contractual relationship between one of the client's contracting parties and the sub-contractor, the latter being freely chosen by the former and the client playing no part whatever in the choice or in the resulting contractual relationship. Naturally in this case the contracting party remains, under the contract, solely liable to the client for any consequences not only of his own acts or omissions, but also of those of his sub-contractor.

B. Limited interventions by the client in sub-contracting

32. (i) Sometimes, however, the client wishes to be kept informed of the sub-contracts concluded by the contracting party while leaving him free to choose his sub-contractors.

(ii) In certain cases the client specifies that sub-contractors may be chosen and sub-contracts may be concluded by the contracting party only with his approval.

(iii) The client may even designate a sub-contractor for his contracting party. In that case contracts widely used in practice normally provide for the client's contracting party to be able to object to such designation or to enter reservations about it, in particular when the sub-contractor designated by the client refuses or is unable to assume the same obligations vis-à-vis the client's contracting party and to give the same guarantees for the sub-contract work as the contracting party must provide.

(iv) Normally, however, the requirement that the sub-contractor shall be acceptable to the client, like the designation of the sub-contractor by the client when the client's contracting party does not object to such designation or when he has no reservations about it, does not imply any shifting of liability. The contracting party is still liable to the client for the work for which he is awarded the contract, including that part of it which he has sub-contracted to an undertaking approved or designated by the client. There are still contractual relationships between the client and the contracting party on the one hand, and between the latter and the sub-contractor on the other, but there is no legal relationship between the client and the sub-contractor.

C. Joint liability of the client's contracting party and his sub-contractor

33. In practice, another method of sub-contracting is encountered under which the sub-contractor assumes direct liability vis-à-vis the client jointly with the client's contracting party for the part of the work which is sub-contracted. Under this system the client obtains an additional guarantee in that, for the part of the work which is sub-contracted, he can claim directly, on the basis of the contract, not only against his own contracting party, but against the contracting party and the sub-contractor jointly. There is no change, however, in the liability of the client's contracting party who is still fully liable vis-à-vis the client for the performance of both his own obligations and those of his sub-contractor.

D. Sub-contractor imposed by the client

34. The situation is different, however, when the client intervenes more radically, in particular when the sub-contractor is imposed upon the client's contracting party; the latter might in some circumstances (cf. paragraph 7 (i) and (ii)), perhaps be prepared to assume liability for the work of such a sub-contractor subject to special limitations which would depend on the type of sub-contract involved. However, the consequences of sub-contract work carried out by a party not selected by the holder of the main contract might too seriously affect the results of the entire project for the latter to be in a position to cover them under his over-all liability. The question should in any case be clearly specified in the contract.

E. Value of sub-contracting in concluding contracts for large industrial works

35. It therefore appears that, in the case of turnkey contracts, the client's contracting party cannot always transfer the appropriate part of the over-all liability to his sub-contractors. Consequently, it might sometimes be suitable to go beyond simple sub-contracting and to envisage more integrated formulas, such as the constitution of a joint venture.

VII. Joint ventures⁴

A. General principles of the liability of joint ventures

36. (i) Whatever legal form a joint venture established for the purposes of the construction of a large industrial works may take - whether a legal form peculiar to a particular national law, such as a temporary association or an economic grouping, or a simple contract combining a series of undertakings into an association - it will always be based economically on the desire of the participants to carry out the supplies and works in the best possible conditions as well as on a sharing of the risks of the operations by the participating parties, while the joint venture will assume liability vis-à-vis the client for all these risks accepted under the contract.

(ii) A joint venture with legal personality shall be represented to the client as a single contracting party. A joint venture without legal personality may be represented by one of its members, who is appointed by the joint venture for this purpose. The latter will be answerable to the client for the obligations which the joint venture assumes, it being understood that, in specific cases, he may be assisted, in negotiations with the client, by the member or members of the joint venture who are directly

concerned by the claims of the client. The members of the joint venture may also agree to accept joint liability towards the client. However this latter solution might be difficult to accept for the members of the joint venture who are only minimally involved in the work as a whole. These solutions may also be applied even when, as often occurs, the client reserves the right to notice of the membership of the joint venture.

(iii) Within the joint venture, it is recommended that there should be a distribution of liabilities among its members which will enable the joint venture to accept under a turnkey contract, on terms involving less risk for each of its members, the over-all liability which an individual party would find it more difficult to accept.

B. Distribution of liability within the joint venture

37. (i) The principles according to which the over-all liability under a turnkey contract is distributed among the members of a joint venture may vary from case to case. As a general rule, each member of the joint venture is ultimately liable for the consequences of its own work.

(ii) If the individual liability of one of its members cannot be determined (for example, liability for an unknown cause) or if there is a prima facie evidence of the joint venture's over-all liability, as a whole, which exceeds the sum of the liabilities under the provisions applicable to the various works forming part of the industrial works, the liability which the joint venture must assume is generally shared among the members in proportion to the volume of work assigned to each one.

(iii) Although this distribution of liabilities and risks among the members of the joint venture according to the size of their participation in the work carried out reduces the burden which full liability under a turnkey contract would impose on a single contracting party, it may nevertheless be viewed as still constituting too heavy a burden for those members of the joint venture whose contribution to the project as a whole is very small.

(iv) Some joint venture agreements therefore include arrangements under which parties whose participation does not exceed a certain percentage of the entire cost share only up to a certain limit in the consequences of the joint venture's liability - whether or not the consequences arise from their own work. The share of liability of a party whose participation exceeds this limit is again divided among the other members of the joint venture, also in proportion to their participation in the work carried out by the joint venture.

(v) In other arrangements, however, in order to avoid the complications which might be caused by such a regulation of relations between the members of a joint venture, and to ensure a better balance between the services and the liabilities of the members of the joint venture, a distinction is made between those parties which will play an important part in the construction of the large industrial works planned and those which will make only a small contribution to the project or whose work will have no repercussions on the over-all liability of the joint venture. Only the former join the joint venture as members sharing in the profits and the risks according to the volume of their work, while the others merely conclude sub-contracts with it.

(vi) The formulas described above are certainly not easy to apply. They call for very careful and detailed drafting, with precise stipulation of the rights and obligations of all the parties involved. Even the best-drafted contracts will not prevent difficulties from arising in the performance of work which technically, financially and legally is clearly very complex, it therefore seems necessary to include in all such contracts, and especially in turnkey contracts which a client concludes with a joint venture, particularly detailed procedures for the settlement of any disputes, such as those described in chapter XI.

VIII. Guarantees, damages, penalties and termination

A. Consequences of non-performance of the contract

38. (i) Clauses specifying the consequences which the contracting parties intend to apply to the non-performance of the contract on the part of one or the other party are often to be found in industrial contracts. The parties consider such clauses to be necessary because of the differences in various national laws in this respect and the difficulties to which inadequate choice of applicable law or the absence of such choice in the contract might therefore give rise. The importance of this problem appears to be particularly marked in international contracts for large industrial works, because of the extent of the damages that may result from the non-performance of the contract and the specific problems presented by the guarantee of attainment of the parameters specified in the contract.

(ii) In some contracts, the parties merely stipulate that the non-performance of the contract by one of the parties entails the responsibility of that party to indemnify the other party for damages actually sustained. However, in many cases, a general provision of this kind is insufficient to prevent the difficulties to which the problems of the applicable law, of proof and of the amount of damages give rise in certain cases. Hence, the parties to industrial contracts, particularly complex contracts for large industrial works, often find it necessary to establish in their contract either lump-sum amounts of damages or penalties to be applied to the non-fulfilment of contractual obligations. When the parties select this method they should take into account the law applicable to the contract in solving this particular difficult question, because the various national legislations differ considerably in scope from the various clauses mentioned above.

B. Delays In payment

39. (i) The clauses providing for lump-sum damages or penalties are usually drawn up in terms of the categories of non-performance to which they are intended to apply. In contracts relating to large industrial works, the categories of non-performance are essentially delays in payment on the part of the client and delay in construction and non-attainment of parameters specified in the contract on the part of the client's contracting parties.

(ii) When delays in payment are governed by the payment of moratory interest on the sums in arrears, in view of the differences in the legal rates of moratory interest in the various countries, it will be in the interest of the parties to apply the conditions adopted in this connexion in the General Conditions for the Supply and Erection of Plant and Machinery and to establish in their contract the interest rate to be applied.

C. Delay in delivery and completion of works

40. (i) In the case of contracts for the supply of single items of equipment, the penalties for delay are normally calculated as a percentage of the price of the delayed item. In the case of comprehensive or turnkey contracts for large industrial works, the parties may choose either to establish time-limits and penalties separately for each part of the installation and then to calculate penalties in relation to the price of the parts of the works which are delayed, or simply to use only the date for completion of the works and apply the penalties, calculated in relation to the over-all price of the contract, from the time at which the client's contracting party has failed to meet the contractual completion date. In certain contracts, the parties combine the two systems by providing that, if deliveries or partial works are in arrears but this fact does not affect the date of over-all completion, the penalties paid for delayed items will be reimbursed to the client's contracting party.

(ii) In view of the importance of the establishment of this date of over-all completion the parties would certainly be well advised to establish this date in the contract with all necessary precision. In some contracts, the effective date of over-all completion is considered as the date on which the works have successfully passed the acceptance tests. When this completion is later than the date provided for in the contract, the penalties for delay will be applicable between the contractual date and the date of the successful acceptance tests. A difficult problem might arise in the case of disagreement between the parties on the results of acceptance when, as sometimes happens, the client proceeds to put the works into operation despite such disagreement and despite the fact that he has made reservations on the quality of the works. On this point, the parties could provide for a solution to this problem in their contract either by deciding that the penalties for delay will cease from the time the works are put into operation or that such penalties will continue to apply up to the date of the successful acceptance test or of the client's acceptance of the works with parameters inferior to those of the contract.

(iii) Industrial contracts often provide for conventional limitation of penalties for delay to a certain maximum. It is sometimes provided that the client has the right to terminate the contract when penalties have reached this maximum. Such a termination clause gives rise to a number of difficult questions which are dealt with in paragraph 42, as regards both delay in delivery and non-attainment of the parameters stipulated in the contract.

D. Guarantee

41. (i) In addition to penalties for delay, contracts for large industrial works sometimes also carry penalties for non-attainment of the parameters specified in the contract. The first obligation of an industrial works supplier who has assumed contractual responsibility for attaining a certain performance but who, at the first test, is unable to do so, although the client has fulfilled all his

obligations, is to undertake at his expense the necessary repairs and improvements to attain the performance specified in the contract. If, in repeated acceptance tests, he is unable to attain the contractual parameters, the parties sometimes agree that the work shall be accepted with parameters below those specified in the contract, but that the price shall be reduced accordingly.

(ii) The attainment, at the time of the acceptance tests, of the parameters specified in the contract does not necessarily end the responsibilities of the client's contracting party for proper performance of the contract. However, the provision by the client's contracting party of a guarantee for the works beyond the time of successful passing of the acceptance tests raises extremely complex and awkward problems which are difficult to solve in the absence of clear indications by the parties regarding them. It is therefore on this point that the parties would be particularly well advised to include in their contract as detailed an explanation as possible of the purpose of the guarantee, its duration, the time at which it commences and any other particulars.

E. Termination

42. (i) As in the case of penalties for delay, penalties for the non-attainment of the parameters stipulated in the contract are often fixed within a certain percentage representing the maximum amount of price reduction. However, whenever this limitation of penalty is designed above all as a measure of protection for the client's contracting party, the client will often find himself unprotected when delay or lowering of parameters has exceeded the limits provided for in the contract. The situation will be particularly serious in the case of a lowering of parameters beyond the limits provided for in the contract, since it could completely upset the basis of the transaction.

(ii) In this extreme case, the client might consider that what has been supplied is entirely different from the object of the contract and seek remedies in the provisions governing termination of the applicable law. However, such provisions differ greatly from country to country and are sometimes vague. Hence the parties often undertake to set out in their contracts the terms and consequences of termination.

Termination usually entails the obligation of the client's contracting party to compensate the client for damages actually sustained. In some cases the determination of the amount of actual damages is left wholly to the arbitrators; in others, it is limited,

(iii) Whatever the solution adopted by the parties in this connexion, the consequences of termination are particularly serious for the client's contracting party. They may also be disastrous for the client, particularly where the damages resulting from termination, as is often the case, are limited to a certain maximum. Thus it would appear that before thinking of termination, to be considered as an extreme measure the parties would be well advised to consider other remedies, for example by asking qualified technical experts, at the expense and risk of the client's contracting party, to determine how the works could be overhauled, repaired or adapted so as to obtain or approximate to the expected parameters.

(iv) Owing to the serious consequences which might result from the non-attainment of parameters stipulated in the contract, the parties should take particular care to determine and specify in detail the technical conditions on which their transaction is based. The client's contracting parties should, among other things, be particularly aware of their responsibilities when establishing parameters which they agree to guarantee and should make only such commitments as they really believe they can fulfil under the conditions of industrial works construction abroad.

IX. Monetary clauses and price revision

A. Monetary clauses

43. It will be in the best interest of the contracting parties to specify beyond any doubt - account being taken of any payment agreements between countries as well as of the monetary regulations in force in the countries concerned - the currency or currencies in which prices are stated and that or those in which payments must be made, with a distinction being made, where applicable, between the various supplies and services covered by the contract, depending on their origin. Such prices and payments may be calculated in or based on the currency of a third country. In view of the possible uncertainty of the international monetary situation, however, the contracting parties should take particular care in drafting monetary clauses.

B. Price revision clauses

44. In a number of contracts for large industrial works, the contracting parties stipulate fixed prices. However, they may agree to include in their contracts price revision clauses such as those contained in

the annex to the General Conditions relating to plant and machinery, for supplies and services relating to industrial plants or other formulas for the building and civil engineering work.

X. Applicable law

A. Determination of the applicable law

45. (i) It will be in the best interest of the contracting parties to determine in advance the law which will be applicable in the case of a dispute. This point should therefore be specified in the contract.

(ii) The contracting parties sometimes stipulate that the contract is governed by the law of the country of the client's contracting party. This solution, whereby the supplier may easily be informed of the provisions of the applicable law, is, however, subject to derogations from the obligatory provisions of the law of the place where the industrial work is situated (provisions on working conditions, social security, work safety, taxes, etc.).

(iii) The parties, deeming the centre of the operations relating to the construction of industrial works to be in the country where the plant is to be constructed, sometimes adopt the law of the place where the plant is situated. However, the drawback to this solution is that this law and the jurisprudence might not be well known to the client's contracting party. This choice might also make it more difficult to determine the relationship between the holder of the main contract and his sub-contractors.

(iv) An alternate solution is to specify in the contract that the applicable law will be the law of a third country. However, the law of a third country may also run counter to the provisions of the law of the place where the industrial works is situated.

(v) Another alternate solution is to divide the contract so as to have, for the various supplies and services, applicable laws corresponding to the location of the various operations (seller's law for supplies, buyer's law for the erection or construction of buildings, etc.). The disadvantage of this solution is that the application of several laws might create contradictory situations.

(vi) Where such an arrangement is permitted under the applicable laws and international conventions, the parties may also authorize the arbitrators to act as *amiable compositeurs*. However, this solution does not always produce the expected results because of uncertainty about the very concept of *amiable composition*.

(vii) In view of the difficulties involved in the choice of the applicable law, the parties might ultimately prefer to settle for the solution of Article VII of the European Convention on International Commercial Arbitration of 1961, and leave the arbitrators to decide on the applicable law, it being understood that the arbitrators would take into account the terms of the contract and the practices in the sector of trade in question. This solution would not, however, enable the parties to know in advance the law which would be applied in the case of a dispute. It may therefore be recommended to the parties, in deciding in their contract on the law which should apply in the case of disputes, to draw up contracts in a sufficiently specific and detailed manner so that, if a dispute should arise, recourse to a national law would be necessary only in exceptional cases.

B. Identify of the laws applicable in relations between the holder of the main contract and the client, in the one case, and his main sub-contractors, in the other

46. In the case of comprehensive or turnkey contracts, it will be in the interest of the holder of the main contract to ensure that, in his relations with the client, the applicable law is the same as the law applicable in his relations with sub-contractors or the other contracting parties with whom he shares liability.

XI. Settlement of disputes

A. Need to submit disputes arising from the construction of large industrial works to the same arbitration procedures

47. (i) Like virtually all international contracts, contracts for the construction of large industrial works generally contain arbitration clauses for the settlement of any dispute among the parties. On this subject international business practice offers to those concerned a sufficient variety of arbitration-procedures for them to be able to select the one best suited to the particular case.

(ii) The relationships established between the different parties involved in the construction of large industrial works are, however, of many different kinds; and this creates special problems as regards arbitration in contracts relating to such projects.

(iii) The difficulties which may arise between the client and the holder of the main contract during the performance of such contracts may, in many cases, be paralleled by identical difficulties in relations between the holder of the main contract and his sub-contractors or associates. Consequently, in order to avoid conflicts between different arbitral or judicial decisions, it would seem desirable for all disputes arising in the performance of contracts for large industrial works to be made subject when possible, to identical procedures before the same arbitrators, whoever the parties to the disputes may be. Thus, the parties would either have to agree in advance, when signing the contract, on the choice of the arbitrators to settle their disputes, or the appointment of all the arbitrators would have to be left to the discretion of the arbitration body responsible for settling the parties' disputes. However, even with such solutions, the contents of the various contracts which constitute such transactions might give rise to different arbitral decisions before the same arbitrators, depending on whether the dispute was between the client and the holder of the main contract, or between the holder of the main contract and one or several other contracting parties participating in the project.

(iv) The situation is not different where, for carrying out such a project, the client concludes separate contracts with a number of contracting parties each of which is liable for one part of the total project, or where the client concludes turnkey contracts with a joint venture. The solution proposed in the preceding sub-paragraph might also be applied to these cases, where possible.

(v) Standardization of arbitration procedures in contracts for large industrial works, which would seem to be necessitated by the inter - related character of the different operations making up the over-all project, may however involve certain procedural difficulties. It might, for instance, be difficult to organize a single arbitral procedure in the case of a contract which is international in regard to relations between the client and a holder of the main contract, a number of contracting parties or a joint venture, but purely domestic in regard to relations between the holder of the main contract and his sub-contractors or between the participants in the joint venture, as the case may be. This is why two different arbitral procedures are generally used: the first for the settlement of disputes between the client and the holder of the main contract or between the client and the joint venture, and the second for the settlement of disputes between the members of the joint venture. In fact, however, the existence of these two procedures ceases to be a source of difficulty when the sub-contractors or the members of the joint venture agree, and provide for this principle in their contracts or in the agreement establishing the joint venture, that arbitral decisions in disputes between the holder of the main contract or the joint venture, on the one hand, and the client, on the other, will also apply to the holder of the main contract and his sub-contractors or to the members of the joint venture in their relations between themselves, provided, however, that it was possible for the sub-contractors or the members of the joint venture to be associated with the arbitral procedure between the holder of the main contract or the joint venture and the client.

(vi) There is a need to harmonize arbitral procedures in order to avoid any conflict of decisions not only in the case of disputes between the parties with regard to legal issues, but also with regard to issues relating to the technical quality and capacity of a large industrial works for which separate, comprehensive or turnkey contracts have been concluded.

B. Technical appraisal

48. (i) In this connexion, it may be noted that, in recent experience of international commercial arbitration, many disputes between parties to contracts for delivery of equipment or industrial plants arise from disagreements concerning the quality of the supplies, their conformity with the contract specifications, the capacity of the plant or its performance. In arbitral procedure in most international contract cases, the technical questions at issue in these disputes come before the arbitrators long after the technical difficulties arise. Even if, as usually happens, the arbitrators appoint technical experts, these are called upon to give their opinion at a stage when on-the-spot verification, which might have been necessary, has become more difficult.

(ii) In the case of industrial buildings, it might be suggested to the parties that they should agree in advance on the appointment of technical experts to whom would be submitted, without delay, disagreements arising during the construction work, at the time of the acceptance of industrial plants or during the period of the guarantee of functioning. If the parties themselves cannot reach agreement on the choice of the experts, they may request that the experts should be appointed by a specialized institution selected by agreement between the parties. If a solution of this kind was acceptable to the

parties in specific cases, it would undoubtedly be useful for the same solution to be adopted in all contracts for the construction of a large industrial works. In this way it would be possible to avoid, on a basic issue, a possible conflict of arbitral decisions concerning the construction of such a works.

(iii) To avoid any uncertainty as to the actual implication of the opinions given by the expert or experts requested to make technical observations during, or at the end of, operations, it would be useful for the parties to specify this implication in their contract, clearly stating whether these opinions should be considered as final or whether they should merely constitute evidence with a certain weight in subsequent arbitral procedures. In the absence of such a stipulation, it should be assumed that the opinion of the expert will not be binding on the arbitrator.

(iv) With regard to building and civil engineering work, certain international contracts provide that the consulting engineer responsible for the supervision of the work may also, without prejudice to subsequent arbitration which may be requested by either of the parties, make observations or take decisions concerning issues giving rise to disputes between the parties.

¹ For the supply and erection of industrial plant, basic documents have been published by the United Nations Economic Commission for Europe: General Conditions for the Supply of Plant and Machinery for Export, Nos. 188 and 5,74; General Conditions for the Supply and Erection of Plant and Machinery for Import and Export, Nos. 188 A and 574 A; Additional Clauses for Supervision of Erection of Plant and Machinery Abroad. Nos. 188 B and 574 B; General Conditions for the Erection of Plant and Machinery Abroad. Nos. 188 D and 574 D; General Conditions of Sale for the Import and Export of Durable Consumer Goods and of other Engineering Stock Articles, No. 730. The Council for Mutual Economic Assistance (CMEA) has published "General Conditions of Supply of Goods between Organizations of the Member Countries of the CMEA". For building and civil engineering work the International Federation of European Contractors of Building and Public Works (FIEEBTP) and the International Federation of Consulting Engineers (FIDIC) have drawn up "Conditions of Contract (International) for Works of Civil Engineering Construction". The CMEA has also drawn up General Conditions for the Erection and Performance of other Technical Services related to the Supply of Machinery and Equipment between Organizations of the Member Countries of the CMEA.

² See footnote 4.

³ In drafting contractual clauses on force majeure, the parties may be guided by the solution adopted for this problem in the various General Conditions Nos. 188, 188 A 188 B, 188 D, 574, 574 A, 574 B, 574 D and 730, drawn up under the auspices of the Economic Commission for Europe.

⁴ The words "joint venture" are used in this Guide not in a strictly legal sense but in broad terms to include all forms of "grouping of enterprises" whether they have a legal personality or not