"Alternative 2

"If the negotiations do not succeed within this time limit the contract will be readapted by a third Party, designated in accordance with the Rules on Adaptation of Contracts of the International Chamber of Commerce. This third Party will carry out his task on the conditions and in accordance with the procedure provided by the said Rules."

78. In regard to Alternative 2, ICC has drafted Rules for the regulation of contractual relations and related Standard Clauses (1978) which are designed to make third party intervention possible.

79. Although the ICC "suggested hardship clause" is not specifically drafted for use in a specific type of contract, nevertheless, it is designed for general application in international contracts, particularly in contracts involving a series of closely interrelated operations which, in the normal course of events, take place over a number of years.

[A/CN.9/WG.V/WP.4/Add.6*]

XV. Guaranties

A. *General remarks*

1. This study deals with two types of guaranties (*a*) a guaranty[1] for material, design and workmanship (mechanical guaranty); and (*b*) a guaranty for the proper performance of the works (performance guaranty).

2. In some contexts "warranty"[2] is used synonymously with "guaranty".

3. There are also various types of "bank" guaranty found in a works contract which are, however, outside the scope of this study.

B. *Mechanical guaranty*

4. The mechanical guaranty is called differently in the various forms under study. The ECE General Conditions speak of "guarantee" (clause 23). UNIDO-TKL speaks of "guarantee of workmanship and materials" (article 25) as well as of "warranties" (article 28). UNIDO-CRC uses "mechanical guarantees and warranties" (article 28.3). The FIDIC-EMW Conditions do not use the expression "guaranty" but speak of "defects liability" (clause 33).

5. The function of a mechanical guaranty is generally to limit the extent of the contractor's liability on the one hand and to give assurances and safeguards to the purchaser in regard to quality on the other hand. Clause 33.13 of FIDIC-EMW for instance provides:

"the Contractor shall be under no liability in respect of defects in or damage to the Works or any Section thereof developing or arising after the Works or any Section thereof has been taken over"

save as provided in the Conditions themselves, especially in clause 33.

1. *Extent of guaranty*

6. Under clause 23.1 of both ECE 188A/574A:

"the Contractor undertakes to remedy any defect resulting from faulty design, materials or workmanship."

7. Under clause 33.2 of FIDIC-EMW the contractor is responsible for any defect in or damage to any portion of the works which arises either (*a*) from any defective materials, workmanship or design, or (*b*) from any act or omission of the contractor done or omitted during the guaranty period.

8. The UNIDO model contracts, as criticized by an international group of contractors, deal with many questions repetitiously. Thus, for instance, the extent of the mechanical guaranty is covered in articles 25.1, 25.2, 28.1, 28.2, 28.3, 28.4, 28.8 and 28.9 of UNIDO-TKL.

9. Article 28.1 of UNIDO-TKL provides:

"The CONTRACTOR warrants that the Plant, equipment, materials, tools and supplies incorporated in the Works pursuant to this Contract conform with the specifications, plans and all of the contractual criteria, and that the work in every particular is free from defects in design, engineering, processes, materials, workmanship and construction."

10. Article 28.2 of UNIDO-TKL add further elements:

"The CONTRACTOR also warrants as to the correctness and completeness of the plans, all technical data and documents supplied by him as well as to the technical criteria of the equipment fabricated in accordance with his plans and instructions under the present Contract."

11. Article 28.4 of UNIDO-TKL refers to:

"faulty or improper design, workmanship, material, manufacture, fabrication, shipment or delivery."

12. Article 28.8 of UNIDO-TKL includes the warranty of all civil engineering structures,

"and in particular for the foundations for all buildings, plant and equipment."

* 21 April 1981.
[1] Also spelt as "guarantee".
[2] Also spelt as "warrantee".

13. Under article 28.9 of UNIDO-TKL:

"The CONTRACTOR warrants that the erection of all Plant and equipment has been accomplished by him in accordance with standard erection codes or as specified in the Annexure . . ."

2. *Exceptions*

14. Contractors do not usually give guaranties without certain exceptions (e.g. normal wear and tear). Furthermore guaranties are given subject to the scrupulous observation and performance by the purchaser of instructions given by the contractor as regards the operation of the plant (e.g. as to the raw materials to be used, a suitable work force and adequate services). In addition, the purchaser is not permitted to carry out any alterations to the plant without the contractor's approval. To sum up, the contractors do not guaranty any defects caused by the purchaser, by third parties or by circumstances beyond their control.

15. Thus clause 23 of both ECE 188A/574A formulates the exceptions from the guaranty as follows:

"23.12: The Contractor's liability does not apply to defects arising out of materials provided, or out of a design stipulated, by the Purchaser.

"23.13: The Contractor's liability shall apply only to defects that appear under the conditions of operation provided for by the Contract and under proper use. It does not cover defects due to causes arising after taking over. In particular it does not cover defects arising from the Purchaser's faulty maintenance or from alterations carried out without the Contractor's consent in writing or from repairs carried out improperly by the Purchaser, nor does it cover normal deterioration."

16. Clause 33.2 of FIDIC-EMW excludes defects which arise from

"a design made, furnished or specified by the Employer and for which the Contractor has disclaimed responsibility in writing within a reasonable time after receipt of the Employer's instructions."

17. According to article 28.7 of UNIDO-TKL:

"the CONTRACTOR's warranty shall not be deemed to cover:

"28.7.1: Damage arising through disregard of the CONTRACTOR's written instructions after Provisional Acceptance by the PURCHASER.

"28.7.2: Normal wear and tear."

18. In their comments to UNIDO-TKL the international group of contractors suggested that "any remaining warranties would be voided" in case the purchaser should "proceed with any remedial measures without the Contractor's approval".

3. *Period of guaranty*

(a) *Length of period*

19. The liability of the contractor is limited to defects which arise during a certain period. In the ECE General Conditions it is called "the Guarantee Period"; in the FIDIC-EMW Conditions "the Defects Liability Period"; and in the UNIDO model contracts "the warranty period".

20. The ECE General Conditions do not specify the guaranty period but leave its determination to the parties. The period may be dependent on the frequency of usage. For example, clause 23.4 of both ECE 188A/574A stipulates that the parties may take into account the intended use of the plant, e.g. one, two or three shifts daily.

Clause 23.4 of ECE 188A provides:

"The daily use of the works and the amount by which the Guarantee Period shall be reduced if the Works are used more intensively are stated in paragraph J of the Appendix."

In contrast, clause 23.4 of ECE 574A provides (a rare instance where it differs from ECE 188A):

"The parties, having taken into account the nature of the Works, may provide in the Contract for a reduction of the Guarantee Period if use of the Works is abnormally intensive."

21. Clause 33.1 of FIDIC-EMW also leaves it to the parties to state the length of the guaranty period in the contract but provides for a period of 12 months if no period is stated. And this clause also takes into account the intensity of the use:

"If the use of the Works by the Employer exceeds that given in the Appendix to the Tender the Defects Liability Period shall be reduced by the amount stated therein."

22. The guaranty period in articles 28.3 and 28.9 of UNIDO-TKL is 12 months.

(b) *Commencement of period*

23. Usually the guaranty period commences on taking-over of the plant (clauses 22.1 and 23.2 of both ECE 188A/574A, clause 33.1 of FIDIC-EMW, and article 28.9 of UNIDO-TKL). Article 28.3 of UNIDO-TKL also refers to the date of provisional acceptance (see part two, X, *Take-over and Acceptance*).

24. If the taking-over is postponed by reason of difficulties encountered by the purchaser, clause 22.3 (*d*) of both ECE 188A/574A provides:

"the Guarantee Period shall run from the date when the postponed tests have been successfully carried out."

If, however, the purchaser is unwilling to have the taking over tests carried out, the guaranty period "shall start to run on a written notice to that effect being given by the Contractor" (clause 22.2 of both ECE 188A/574A).

(c) *Extension of period*

25. If the plant becomes inoperative because of defects which are covered by the guaranty, the original guaranty period shall be extended to the extent of such non-operation.

26. Thus under clause 23.5 of both ECE 188A/574A, the guaranty period of the works shall be extended:

"by a period equal to the period during which the works are out of action as a result of a defect covered by this Clause."

27. In this regard, clause 33.4 of FIDIC-EMW refers not only to the works but also to portions thereof:

"The Defects Liability Period shall be extended by a period equal to the period during which the Works (or that Portion thereof in which the defect or damage to which the Clause applies has appeared or occurred) cannot be used by reason of that defect or damage . . ."

28. Similarly, article 28.6 of UNIDO-TKL provides:

". . . In relation to such other equipment which could not be operated due to the necessity of repair or replacement of the defective part(s) of the Work(s) referred to herein, the warranty period shall be extended by a time equivalent to their periods of non-operation."

(d) *Maximum period of guaranty*

29. Sometimes contracts provide that a maximum period of guaranty is to commence on a date earlier than that of taking-over, e.g. at the first or last delivery of equipment or at the time when a certain percentage of equipment is delivered.

30. Article 28.3 of UNIDO-TKL provides for a maximum period of

"thirty (30) months from the Mechanical Completion of Plant and Equipment under this Contract, if for reasons only attributable to the PURCHASER the plants cannot be started up or brought into commercial production (within the said thirty (30) months period) . . ."

31. In their comments the international group of contractors suggests a reduction of the above period to 18 months and also the substitution of the phrase "reasons only attributable to the Purchaser" by "reasons not attributable to the Contractor."

32. Article 28.3 of UNIDO-CRC provides for a maximum period of 30 months "from the date of shipment".

33. Clause 33.3 and 33.4 of FIDIC-EMW sets a maximum for any extension of the original guaranty period, i.e. two years from the date of taking-over in case of extension where the plant is inoperative by reason of replacements or renewals of parts.

(e) *Special periods for parts*

34. There may well be different guaranty periods in respect of various parts of the plant. Sometimes, special periods are provided for spare parts.

35. Clause 23.3 of both ECE 188A/574A provides:

"In respect of such parts (whether of the Contractor's own manufacture or not) of the Works as are expressly mentioned in the Contract, the Guarantee Period shall be such other period (if any) as is specified in respect of each of such parts."

36. Article 25.10 of UNIDO-TKL contains a special provision in respect of spare parts procured by the contractor on behalf of the purchaser from vendors and/or suppliers. For those parts a special period of guaranty of 12 months "after commencement of use" not exceeding 36 months "after the date of shipment" is provided.

37. For repaired or replaced items the same guaranty period as given originally for the whole plant is usually provided. Thus clause 23.5 of both ECE 188A/574A reads:

"A fresh Guarantee Period equal to that stated in paragraph H of the Appendix shall apply, under the same terms and conditions as those applicable to the original Works, to parts supplied in replacement of the defective parts or to parts renewed in pursuance of this Clause . . ."

38. Similar provisions are contained in clause 33.3 of FIDIC-EMW and article 28.6 of UNIDO-TKL.

4. *Content of guaranty*

(a) *Obligation of contractor*

39. The obligation of the contractor is to remedy (or to make good) the defect (article 23.7 of both ECE 188A/574A, clause 33.2 of FIDIC-EMW, article 28.4 of UNIDO-TKL).

40. The above-mentioned provisions require the contractor to act *forthwith* (ECE and UNIDO) or *with all possible speed* (FIDIC).

41. The same provisions as well as article 25.4 of UNIDO-TKL require the contractor to remedy the defects at his own expense.

42. Clause 23.7 of both ECE 188A/574A deals with the question as to the place *where* the defect is to be cured:

". . . Save where the nature of the defect is such that it is appropriate to effect repairs on site, the Purchaser shall return to the Contractor any part in which a defect covered by this Clause has appeared, for repair or replacement by the Contractor, and in such case the delivery to the Purchaser of such part properly repaired or a part in replacement thereof shall be deemed to be a fulfillment by the Contractor of his obligations under this paragraph in respect of such defective part."

43. Clause 33.6 of FIDIC-EMW foresees the possibility of removal of defective work:

"The Contractor may with the consent of the Engineer remove from the Site any Portion of the Works which is defective or damaged if the nature of the defect or damage is such that repairs cannot be expeditiously carried out on the Site."

44. Article 28.5 of UNIDO-TKL lays down the time to be spent in case of replacement:

". . . should the removal of the defect require replacement of the equipment, the replacement shall be accomplished in minimal time, plus the shortest possible erection time for this equipment in the CONTRACTOR's country . . ."

45. If transport is involved, clause 23.8 of both ECE 188A/574A provides:

"Unless otherwise agreed, the Purchaser shall bear the cost and risk of transport of defective parts and of repaired parts or parts supplied in replacement of such defective parts between the place where the Works are situated and one of the following points:

(i) The Contractor's works if the Contract is "ex works" or FOR;

(ii) The port from which the Contractor dispatched the Plant if the Contract is FOB, FAS, CIF, or C and F;

(iii) In all other cases the frontier of the country from which the Contractor dispatched the Plant."

46. In contrast, article 28.4 of UNIDO-TKL includes transportation cost in the cost to be borne by the contractor.

47. Clause 23.9 of both ECE 188A/574A leaves the apportionment of any additional expenses to the parties or the arbitrator:

"Where in pursuance of paragraph 7 hereof, repairs are required to be effected on site, the incidence of any travelling or living expenses of the Contractor's employees and the cost and risk of transporting any necessary material or equipment shall be settled, in default of agreement between the parties, in such manner as the arbitrator shall determine to be fair and reasonable."

48. Clause 23.10 of both ECE 188A/574A deals with replaced parts:

"Defective parts replaced in accordance with this Clause shall be placed at the disposal of the Contractor."

49. Clause 33.10 of FIDIC-EMW relates to the apportionment of cost in search for the cause of any defect:

"The Contractor shall, if required by the Engineer in writing, search for the cause of any defect, imperfection or fault under the directions of the Engineer. Unless such defect, imperfection or fault shall be one for which the Contractor is liable under the Contract the cost of the work carried out by the Contractor in searching as aforesaid shall be borne by the Employer. But if such defect, imperfection or fault shall be one for which the Contractor is liable as aforesaid the cost of the work carried out in searching as aforesaid shall be borne by the Contractor."

(b) *Breach of obligation*

50. Clause 23.11 of both ECE 188A/574A provides:

"If the Contractor refuses to fulfil his obligations under this Clause or fails to proceed with due diligence after being required so to do, the Purchaser may proceed to do the necessary work at the Contractor's risk and expense, provided that he does so in a reasonable manner."

51. Clause 33.5 of FIDIC-EMW grants the same right to the purchaser "if any such defect or damage be not remedied *within a reasonable time*".

52. Article 28.4 of UNIDO-TKL deals with the same issue in more detail:

". . . If . . . the CONTRACTOR shall make default or delay in diligently commencing, continuing and completing the making good of such defect, breakage or failure . . . the PURCHASER may proceed to do so independently and to place the work in good operating condition in accordance with the Contract, and the CONTRACTOR shall be liable for all costs, charges and expenses incurred by the PURCHASER in connection therewith and shall forthwith pay the PURCHASER an amount equal to such costs, charges and expenses, upon receipt of invoices certified correct by the PURCHASER."

(c) *Minor defects*

53. Sometimes the purchaser is given the right to rectify minor faults and charge the cost to the contractor. The parties should define in their contract what constitutes a minor fault.

54. Article 28.5 of UNIDO-TKL deals with repair by the purchaser on a case-by-case basis:

". . . Subject to prior approval by the CONTRACTOR (which shall not be unreasonably withheld) the PURCHASER shall have the right to repair minor defects at the CONTRACTOR's cost."

5. *Procedure for claims*

55. Clause 23.6 of both ECE 188A/574A provides:

"In order to be able to avail himself of his rights under this Clause the Purchaser shall notify the Contractor in writing without delay of any defects that have appeared shall give him every opportunity of inspecting and remedying them."

56. Clause 33.3 of FIDIC-EMW also requires the purchaser (or the engineer) to inform the contractor forthwith stating in writing the nature of the defect or damage.

57. Article 28.4 of UNIDO-TKL provides for notification in writing from the purchaser whereas article 28.10 of UNIDO-TKL requires immediate information by telegram/telex.

6. *Limitation of or exemption from liability*

58. Often the guaranty of the contractor is limited to the rectification of defects and expressly excludes claims for loss of profit or in respect of personal injury. Thus clause 23.14 of both ECE 188A/574A reads:

". . . It is expressly agreed that the Purchaser shall have no claim in respect of personal injury or of damage to property not the subject matter of the Contract arising after taking over nor for loss of profit unless it is shown from the circumstances of the case that the Contractor has been guilty of gross misconduct."

59. According to clause 33.11 of FIDIC-EMW, the contractor is not liable in respect of damage to or loss of property not forming part of the works arising after the expiration of the guaranty period. He is also not responsible for loss of profit "unless it is shown from the circumstances of the case that the Contractor has been guilty of gross misconduct and the circumstances giving rise to the claim occur within the [guaranty] period" as agreed by the parties (if no period is stated, then four years after the date of taking-over). The liability of the contractor is further subject to notice being given by the purchaser within 60 days after the event giving rise to the claim.

60. Clause 23.15 of both ECE 188A/574A and clause 33.12 of FIDIC-EMW contain a nearly identical definition of "gross misconduct". The former reads:

"'Gross misconduct' does not comprise any and every lack of proper care or skill, but means an act or omission on the part of the Contractor implying either a failure to pay due regard to serious consequences which a conscientious Contractor would normally foresee as likely to ensue, or a deliberate disregard of any consequences of such act or omission."

C. *Performance guaranty*

1. *Extent of guaranty*

61. Neither the ECE General Conditions nor the FIDIC Conditions contain any provisions on performance guaranty.

62. The ECE Guide speaks of a guaranty for attainment of the parameters specified in the contract at the time of the acceptance tests (paragraph 41).

63. The UNIDO model contracts contain very detailed provisions on performance guaranty as well as on performance guaranty tests (see part two, X, *Inspection and Tests*).

64. According to article 26.2 of UNIDO-TKL the contractor guaranties that the plant "shall be capable of meeting the full requirements of normal operation, capacity, quality of Products, consumption of raw materials and utilities . . ."

65. The international group of contractors, in commenting on this provision, suggests that the requirements which are guarantied should be precisely stated in the contract.

66. The performance guaranty is given provided that the plant is operated in accordance with the contractor's technical directions and instructions (article 26.2 of UNIDO-TKL).

2. *Demonstration*

67. The performance guaranty is fulfilled if (or when) it has been proven and demonstrated by test runs that the plant meets all the specified requirements.

3. *Content of guaranty*

68. If the performance tests are not successful the performance guaranty is not fulfilled. For the breach of guaranty the parties may agree on various consequences.

69. UNIDO-TKL distinguishes between "absolute" and "penaltiable" guaranties. According to article 1.2 absolute guaranties means the performance guaranties of the plants relating to their capacity and quality of the products. Article 1.27 defines penaltiable guaranties as the performance guaranties relating to consumption of raw materials and utilities.

70. All the UNIDO models contain very detailed provisions in regard to the various items which fall under the "absolute" or "penaltiable" type of performance guaranty. In their comments the international group of contractors observes "that they should not appear in this

amount of detail in model conditions and [that they are] in any event . . . subject to individual negotiation case by case."

71. The contractor is liable to the payment of liquidated damages for non-fulfilment of absolute guaranties at 100% capacity. However, the minimum capacity which is permitted for the purpose of liquidated damages is a 95% capacity. Where the capacity falls short of a 95% capacity other remedies are available (article 27.1.4 of UNIDO-TKL).

72. For the non-fulfilment of penaltiable guaranties, the contractor is liable to the payment of specified amounts of money if he does not rectify the defects (article 27.2 of UNIDO-TKL).

XVI. Rectification of defects

A. *Meaning of "defect" in works contract*

73. "Defect" in a works contract covers any condition which adversely affects the quality of the work. The defect may be due to faulty design, defective workmanship or materials. The plant and material will be regarded as defective if it is not in accordance with the description of the work to be found in the contract as a whole. Strict adherence to the contract terms is particularly important in a works contract. Indeed, one of the basic obligations of the contractor is to deliver the works free of defects; even in the absence of an express provision to this effect, this obligation will be implied.

74. Defects may appear at any one of the following stages: during production, at taking-over, during the guaranty period and after the expiration of the guaranty period.

B. *Defects during production*

1. *Removal of defects*

75. Once a defect has been discovered a purchaser has an interest in ensuring that it is cured as early as possible. The purchaser should not have to wait until completion of the work before intervening. Most of the forms under study therefore empower the engineer to issue instructions when defects appear at any time during production. Clause 39.(1) of FIDIC-CEC provides:

"The Engineer shall during the progress of the Works have power to order in writing from time to time

"(*a*) The removal from the Site, within such time or times as may be specified in the order, of any materials which, in the opinion of the Engineer, are not in accordance with the Contract

"(*b*) The substitution of proper and suitable materials and

"(*c*) The removal and proper re-execution, notwithstanding any previous test thereof or interim payment therefor, of any work which in respect of materials or workmanship is not, in the opinion of the Engineer, in accordance with the Contract."

76. The above provision emphasizes the duty of the contractor to comply strictly with the requirement of the contract. Previous approval of or payment for the materials by the purchaser will not relieve the contractor of this responsibility.

77. The FIDIC-EMW Conditions also give the engineer the right to intervene during production, and to order the re-execution of the works. Clause 28 provides:

"If, in respect of any Section or Portion of the Works not yet taken over, the Engineer shall at any time:

"(*a*) Decide that any work done or Plant supplied or materials used by the Contractor or any Sub-Contractor is or are defective or not in accordance with the Contract, or that such Section or Portion of the Works is defective or does not fulfil the requirements of the Contract . . . and

"(*b*) As soon as reasonably practicable give to the Contractor notice in writing of the said decision specifying particulars of the defects alleged and of where the same are alleged to exist or to have occurred, and

"(*c*) So far as may be necessary place the Plant at the Contractor's disposal,

"then the Contractor shall with all speed . . . at his own expense, make good the defects so specified."

78. Under the UNIDO model contracts, the activities in relation to the rectification and modification of the plant prior to provisional acceptance are the responsibility of the contractor to be performed at his own cost within a stipulated time. Article 29.6 of UNIDO-CRC provides:

"Should the CONTRACTOR discover any discrepancy or mistake in his process, engineering, instructions, specifications, inspections or procurement, or errors or omissions as the case may be which require rectification(s) to be undertaken to correct the defects . . . the CONTRACTOR and the PURCHASER shall meet and agree to such extension in time to be allowed the CONTRACTOR for the rectification of defects and corrective engineering."

79. Under the UNIDO-TKL and UNIDO-STC model contracts, the contractor is given the power to modify or

re-execute the work at his own discretion. UNIDO-TKL states:

"*Article 29.12:* The CONTRACTOR's obligations to execute the modifications, corrections, rectifications and replacement of equipment . . . shall not be restricted."

80. The ECE 188A/574A General Conditions give the purchaser a right to inspect the materials before they are delivered to the construction site (for further details regarding the parties' obligations, see part two, VIII, *Inspection and Tests*).* If defects are detected during the inspection the ECE General Conditions do not expressly state the contractor's obligation to remedy the defects: clause 8.2 of both ECE 188A/574A states:

"If as a result of such inspection and checking the Purchaser shall be of the opinion that any materials or parts are defective or not in accordance with the Contract, he shall state in writing his objections and the reason therefor."

81. It would, however, be in the interest of the contractor to remedy the defects which have been detected.

2. *Suspension of the work*

82. To avoid delay and additional costs it is always in the interests of the contractor and purchaser to carry out an investigation as soon as symptoms of a defect appear. A suspension of the works may be necessary in order to discover the cause of the defect and to prevent further damage to the works.

83. The FIDIC-CEC and FIDIC-EMW Conditions define the situation in which the contractor shall suspend the work either at his own expense or at the expense of the purchaser. Clause 40.(1) of FIDIC-CEC states:

"The Contractor shall, on the written order of the Engineer, suspend the progress of the Works or any part thereof . . . The extra cost incurred by the Contractor in giving effect to the Engineer's instructions under this Clause shall be borne and paid by the Employer unless such suspension is

"(*a*) Otherwise provided for in the Contract, or

"(*b*) Necessary by reason of some default on the part of the Contractor . . ."

84. The UNIDO model contracts also have provisions requiring the contractor to suspend the work during construction, at the instruction of the purchaser. Article 32.1 of UNIDO-CRC states:

"The PURCHASER may, when in the PURCHASER's opinion it is deemed necessary, require the CONTRACTOR to suspend execution of the work or part of the work, either for a specified or unspecified period by communicating notice to that effect to the CONTRACTOR . . ."

85. The ECE General Conditions do not contain express provisions requiring the suspension of the works.

C. *Defects at taking-over*

86. All the forms under study contain provisions for inspection and tests upon completion to ensure that the plant meets the contract requirements (for further details, see part two, VIII, *Inspection and Tests*). Under most of these forms the issuance of a completion certificate is conditional upon the removal of defects which are discovered during the inspection. Clause 48. (1) of FIDIC-CEC states:

". . . The Engineer shall, within twenty-one days of the date of delivery of such notice . . . give instructions in writing to the Contractor specifying all the work which, in the Engineer's opinion, requires to be done by the Contractor before the issue of such Certificate. The Engineer shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the works specified therein. The Contractor shall be entitled to receive such Certificate of Completion within twenty-one days of completion to the satisfaction of the Engineer of the works so specified and making good any defects so notified."

87. Under the FIDIC-EMW there is also a provision requiring that the plant shall pass the completion tests before a taking-over certificate can be issued. Should the plant fail to pass the tests or repetition thereof, then, according to clause 29.6,

". . . the Engineer shall be entitled:

". . .

"(*b*) To reject the Works or Section thereof in accordance with Clause 28 (Defects before taking-over)[3] if the results of the tests show that the Works or the Section fail to meet the performance guarantees or the agreed tolerances specified in the Contract, or if there are no such guarantees or tolerances, the results show that the Works or the Section are not in accordance with the Contract . . ."

88. Under the UNIDO model contracts, the contractor has, upon completion, the obligation to demonstrate that the plant meets the performance guaranties contained in the contract.

89. According to the UNIDO-CRC model, if the plant fails the performance tests the obligation of the contractor to rectify the plant at his own cost would depend upon whether or not the defect is due to the

* A/CN.9/WG.V/WP.4/Add.3 (reproduced above).

[3] See paragraph 77, *supra*.

contractor's own fault or to matters falling within his responsibility. Article 29.1 states:

"In the event that due to mistakes, negligence or errors in the processes and/or in the detailed engineering performed by the CONTRACTOR and/or in the CONTRACTOR's procurement, or specifications, instructions and inspections, or for whatever reason falling within the CONTRACTOR's obligations, the CONTRACTOR is unable to demonstrate the Absolute Guarantees . . . the CONTRACTOR shall proceed to effect the rectifications, modifications, additions and/or changes which in the CONTRACTOR's professional judgment are necessary to eliminate the defects and/or faults and thereby to achieve the specified guarantees . . ."

90. Under the UNIDO-CRC model the plant will not be taken-over until the plant's capability to meet performance guaranties has been demonstrated. Article 29.7 provides:

"The CONTRACTOR's obligation to rectify defects and to take corrective steps shall continue unabated even if the period of extension . . . is exhausted, and the CONTRACTOR shall continue his endeavours at his own cost to rectify the defects and take corrective measures . . . The obligation of the CONTRACTOR herein shall not end until the Absolute Guarantees of the Plants are successfully demonstrated."

91. The UNIDO-TKL model has similar provisions requiring the contractor to demonstrate the plant's capability to meet performance guaranties and to perform the intended function.

92. Under the UNIDO-TKL and UNIDO-STC models, the contractor, before proceeding to execute the work, shall consult with the purchaser on the nature of the defect. The extent of the contractor's responsibility will depend upon the seriousness of the defect. Article 29.8 of UNIDO-TKL provides:

"Whenever any of the defects . . . appear, the CONTRACTOR shall immediately thereafter advise the PURCHASER, and the procedure specified hereunder shall apply in connection with any repair and/or replacement . . . The defective material, machinery and/or equipment shall be examined by the CONTRACTOR and PURCHASER (or their duly authorized representatives).

"29.8.1: In the event that the defect and/or damage is agreed to be minor the CONTRACTOR shall satisfactorily rectify the same through the most expeditious means.

"29.8.2: In the case of a serious or extensive defect or damage the CONTRACTOR shall state the method of making good the defect or damage in any event at his own cost, and one of the following methods shall be adopted, subject however to the considerations of efficiency, speed and the contractual time schedules:

"29.8.2.1: The undertaking of repair/rectification work or alteration at Site.

"29.8.2.2: Removal of the defective material or equipment from the Site and the undertaking of repair or rectification away from the Site.

"29.8.2.3: The removal of defective material, machinery or equipment and replacement by new and unused materials, machines or equipment."

93. Under the ECE General Conditions there are also provisions for taking-over tests to ensure that the plant is in conformity with the contract requirements. If defects are detected during the tests, clause 21.2 of both ECE 188A/574A states:

"If as a result of such tests the Works are found to be defective or not in accordance with the Contract, the Contractor shall with all speed and at his own expense make good the defect or ensure that the Works comply with the Contract . . ."

94. Where the taking-over tests are delayed by the purchaser and defects appear in the interim, the purchaser must bear the cost of rectifying such defects. Article 22.3 of both ECE 188A/574A provides:

"If by reason of difficulties encountered by the Purchaser . . . it becomes impossible to proceed to the taking-over tests . . .

". . .

"(*c*) The Contractor may, at the cost of the Purchaser . . . make good any defect or deterioration therein that may have developed, or loss thereof that may have occurred, after the date when the Works were first ready for testing in accordance with the Contract."

95. Under the FIDIC-CEC, defective work at taking-over covers: work outstanding at the date of completion, work which does not comply with the contract requirements and which under the contract is explicitly or impliedly within the responsibility of the contractor. Under FIDIC-CEC the contractor is obliged to rectify these defects at his own cost; defects due to any other cause shall also be rectified by the contractor but at the expense of the purchaser. Clause 49 states:

"(2) To the intent that the Works shall at or as soon as practicable after the expiration of the Period of Maintenance be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall finish the work, if any, outstanding at the date of completion . . . as soon as practicable after such date and shall execute all such work of repair, amendment, reconstruction, rectification and making good defects, imperfections, shrinkages or other faults as may be required of the Contractor in writing by the Engineer during the Period of Maintenance, or within fourteen days after its expiration, as a result of an

inspection made by or on behalf of the Engineer prior to its expiration.

"(3) All such work shall be carried out by the Contractor at his own expense if the necessity thereof shall, in the opinion of the Engineer, be due to the use of materials or workmanship not in accordance with the Contract, or to neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract."

D. *Defects during the guaranty period*

96. Most of the forms examined expressly require the contractor to rectify defects which appear during the guaranty period.

97. A dispute can arise whether a defect is due to a matter within the contractor's obligation. Under the FIDIC-CEC Conditions, the engineer determines whether the contractor is liable in this situation. Clause 49.(3) provides:

". . . If, in the opinion of the Engineer, such necessity shall be due to any other cause, the value of such work shall be ascertained and paid for as if it were additional work."

98. Under the FIDIC-EMW Conditions, the contractor's obligation to re-execute the work will depend upon whether the defects are due to matters within his responsibility. Clause 33.2 states:

"The Contractor shall be responsible for making good with all possible speed at his expense any defect in or damage to any portion of the Works which may appear or occur during the Defects Liability Period and which arises either:

"(*a*) From any defective materials, workmanship or design . . . or

"(*b*) From any act or omission of the Contractor done or omitted during the said period."

99. The UNIDO model contracts state a period within which the contractor shall cure the defects. Under the UNIDO-TKL and UNIDO-STC, the purchaser has the authority to specify the time within which the contractor has to re-execute the work. Article 29.10 of UNIDO-TKL provides:

". . . The PURCHASER . . . shall provide the CONTRACTOR with an allotted time upon specified conditions . . . for the undertaking of such modifications, rectification(s), replacement(s), corrective engineering . . . and (if applicable) the making good of faulty workmanship and defective materials . . ."

100. The specified time may be extended at the purchaser's discretion. Article 29.10 of UNIDO-TKL states:

". . . The CONTRACTOR shall complete the work in conformity with the requirements of the Contract and shall (at the discretion of the PURCHASER) be granted such further extensions as may be necessary without prejudice to any of the PURCHASER's rights . . ."

101. Under the UNIDO-CRC the time within which the contractor shall rectify the defects is stated in advance, subject to a right to have the time extended under specified conditions. Article 29.8 of UNIDO-CRC provides:

"The CONTRACTOR's obligations to execute the rectifications . . . shall be limited to twelve (12) months from the date of start-up of the Plant(s), however the period during which the Plant(s) cannot be operated normally due to any default on the part of the PURCHASER or the period in excess of ten (10) months spent in the replacement of equipment (if any such replacement is required from Vendors) shall not be counted in computing the said twelve (12) months period."

102. The ECE General Conditions require the contractor to rectify defects during the guaranty period forthwith and at his own expense (clause 23.7 of both ECE 188A/574A). (For a discussion of the parties' obligations during the guaranty period, see XV, *Guaranties, supra.*)

E. *Requirement of notice*

1. *Obligation to notify and form of notice*

103. After taking-over only the purchaser has the practical means of detecting defects. Most of the forms analysed therefore require the purchaser to give notice of defects which appear after taking-over.

104. Most of the forms under study state that the contractor should be given written notice of a defect. The form and content of the notice will depend upon the nature of the defect and upon whether the defect is discovered before or after taking-over. If the defect occurs before taking-over and is due to the contractor's default, a general notice will normally suffice.

105. The FIDIC-CEC Conditions state only that the notice of defect during production and maintenance periods should be given in writing (see paragraph 75, *supra*).

106. Under clause 28 of FIDIC-EMW Conditions (see paragraph 77, *supra*) written notice has to contain particulars of the defect stating the extent of the work to be done.

107. Under the UNIDO model contracts, the contractor is obliged to give the purchaser notice of any defects which may appear before taking-over. The form

and content of the notice is not stated. Article 29.5 of UNIDO-STC provides:

"Should any defects . . . occur, the CONTRACTOR shall immediately thereafter advise the PURCHASER, and the procedure specified hereunder shall apply in connection with any rectification and/or modification work . . ."

2. *Failure to notify*

108. Under the forms analysed, the purchaser's failure to give notice of defects which appear during production does not absolve the contractor from his liability for defective work. Most of the forms under study, however, do not state the consequences of the purchaser's failure to give notice of defects which may appear after taking-over.

109. Under the ECE General Conditions, written notice of defects is a precondition to the purchaser's exercise of his rights under the guaranty provisions. Clause 23.6 of both ECE 188A/574A states:

"In order to be able to avail himself of his rights under this Clause the Purchaser shall notify the Contractor in writing without delay of any defects that have appeared and shall give him every opportunity of inspecting and remedying them."

F. *Failure to remedy defects*

110. The FIDIC-CEC and FIDIC-EMW Conditions contain express provisions entitling the purchaser to bring another contractor on the site to do the required work on the failure of the original contractor to re-execute the work. In certain defined circumstances the purchaser has a right of forfeiture and termination of the contract.

111. On the contractor's failure to do the required work during construction, clause 39.(2) of FIDIC-CEC provides:

"In case of default on the part of the Contractor in carrying out such order, the Employer shall be entitled to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental thereto shall be recoverable from the Contractor by the Employer, or may be deducted by the Employer from any monies due or which may become due to the Contractor."

112. There is a similar provision under the FIDIC-CEC Conditions. In the event of failure by the contractor to remedy defects which appear during the "maintenance" period, clause 49.(4) of FIDIC-CEC states:

"If the Contractor shall fail to do any such work . . . the Employer shall be entitled to employ and pay other persons to carry out the same and if such work is work which, in the opinion of the Engineer, the Contractor was liable to do at his own expense under the Contract, then all expenses consequent thereon or incidental thereto shall be recoverable from the Contractor by the Employer . . ."

113. The FIDIC-EMW Conditions require the contractor to act expeditiously in remedying the defects; if he does not do so the purchaser may do the required work at the cost of the contractor. Clause 28 provides:

". . . In case the Contractor shall fail so to do the Employer may, provided he does so without undue delay, take at the cost of the Contractor such steps as may in all the circumstances be reasonable to make good such defects . . ."

114. Under the UNIDO model contracts the purchaser is entitled to take any measures to carry out the remedial work. Article 29.3 of UNIDO-CRC provides:

"If the CONTRACTOR shall neglect or refuse to take the necessary measures to ensure the elimination of the defects and/or faults within a reasonable time, then the PURCHASER may take such remedial steps to carry out the engineering, procurement, inspection and supervision of erection of new equipment or undertake repair and/or replacement of used equipment to rectify the defects and correct all associated problems, and the cost of such remedial steps taken by the PURCHASER shall be to the CONTRACTOR's account, and/or may be recovered in any manner at the discretion of the PURCHASER."

115. Under the UNIDO-CRC, where a contractor fails to perform the required work within the stipulated time, and the purchaser does not consent to the extension of time, the purchaser is given the right to terminate the contract. Article 29.4 provides:

"In the event that . . . the PURCHASER does not agree to further extend any periods requested by the CONTRACTOR for such modifications, additions, and/or changes, the PURCHASER shall have the right to terminate the Contract . . ."

116. The UNIDO-TKL and UNIDO-STC model contracts make reference to the purchaser's right of recourse to his other remedies under the contract if the defects are not cured within the stipulated time. Article 29.13 of UNIDO-TKL states:

"Any extension of time granted to the CONTRACTOR shall be without prejudice to any rights or remedies of the PURCHASER whatsoever under this Contract, should the CONTRACTOR fail to accomplish work within the extended time so allowed."

117. The ECE General Conditions limit the contractor's liability to the obligations defined under the guaranty (for further details, see XV, *Guaranties, supra*).

G. *Defects after the guaranty period*

118. The liability for defects ceases at the expiration of the guaranty period. The contractor has no contractual obligation to rectify defects which appear outside this period. As a matter of good practice, contractors would, at the purchaser's request, repair any defects which may appear outside the guaranty period at the expense of the purchaser.

[A/CN.9/WG.V/WP.4/Add.7*]

XVII. Termination

A. *General remarks*

1. In this study the term "termination" denotes the dissolution of a contract brought about by breaches of obligation, exonerating circumstances or other grounds. It may be noted that a contract can be put to an end only for the future or retrospectively. The term "termination" in this study also covers "rescission", "cancellation" and "avoidance" of a contract.

2. In a works contract a termination clause usually makes provision for only serious breaches of obligation (see part two, VII, *Quality*** and XI, *Delays and Remedies*)*** or for non-performance due to exonerating circumstances (see part two, XIII, *Exoneration*).****

B. *Grounds for termination*

1. *Breach of contract*

3. To put an end to a works contract is never a decision to be taken lightly nor is it one of slight consequence. The costs involved in a particular works contract coupled with the nature of its performance may render the question of termination one in which the parties would only have recourse to after all other remedies prove ineffective.

(a) *Breach of contract by the contractor*

4. Not every breach of contract is serious enough to enable the aggrieved party to terminate the contract. The Sales Convention recognizes this fact and grants the buyer and the seller the right to avoid the contract only in specific cases. Article 49 of the Sales Convention provides:

"(1) The buyer may declare the contract avoided:

"(*a*) If the failure by the seller to perform any of his obligations under the contract or this Convention amounts to a fundamental breach of contract; or

"(*b*) In case of non-delivery, if the seller does not deliver the goods within the additional period of time fixed by the buyer in accordance with paragraph (1) of article 47 or declares that he will not deliver within the period so fixed."

5. Article 25 of the Sales Convention contains a definition of what is to be considered as a fundamental breach: one which results in such detriment to the other party as substantially to deprive him of what he is entitled to expect under the contract, unless the party in breach did not foresee and a reasonable person of the same kind in the same circumstances would not have foreseen such a result.

6. In a works contract the parties usually specify in detail the grounds for termination.

(i) Delay in completion

7. It is not uncommon to find certain delays in the completion of a large industrial plant. Before the purchaser is given the right to terminate the contract he must usually give the contractor an additional period of time to complete the works. For instance clause 20.5 of both ECE 188A/574A provides:

"If any portion of the Works . . . remains uncompleted, the Purchaser may by notice in writing to the Contractor require him to complete and . . . fix a final time for completion . . . If . . . the Contractor fails to complete within such time, the Purchaser shall be entitled . . . to terminate the Contract in respect of such portion of the Works."

8. A similar provision is contained in clause 31.2 of FIDIC-EMW. The relevant portion of the clause reads:

"If for any reason, other than one for which the Employer or some other contractor employed by him is responsible, the Contractor fails to complete within such time, the Employer may by further written notice to the Contractor elect

"either (*a*) To require the Contractor to complete,

"or (*b*) To terminate the Contract in respect of such Portion of the Works . . ."

In contrast to the position in some other forms under study, the above clause does not require the employer to terminate the contract even after failure of the contractor to complete within the additional period of time which had been given to him. The purchaser is still given the option to require the contractor to complete the works.

9. The UNIDO model contracts also treat the question of delay as a ground for termination of the

* 3 April 1981.
** A/CN.9/WG.V/WP.4/Add.2 (reproduced above).
*** A/CN.9/WG.V/WP.4/Add.4 (reproduced above).
**** A/CN.9/WG.V/WP.4/Add.5 (reproduced above).