

MATERIALS AND WORKMANSHIP

36.1 QUALITY OF MATERIALS & WORKMANSHIP & TESTS

All materials, plant and workmanship shall be of the respective kinds described in the Contract and in accordance with the Engineer's instructions and shall be subjected from time to time to such tests as the Engineer may direct at the place of manufacture or fabrication, or on the Site or at such other place or places as may be specified in the Contract, or at all or any of such places. The Contractor shall provide such assistance, instruments, machines, plant, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used and shall supply samples of materials before incorporation in the Works for testing as may be selected and required by the Engineer.

36.2 COST OF SAMPLES

All samples shall be supplied by the Contractor at his own cost, if the supply thereof is provided for or intended by the Contract, or have been requested by other concerned authorities.

36.3 COST OF TESTS

The cost of making any test shall be borne by the Contractor if such test is intended by or provided for in the Contract or is reasonably required in accordance with the practice in the construction industry to ascertain quality characteristics or strength of materials or any part of the Works.

36.4 COST OF TESTS NOT PROVIDED FOR, ETC..

If any test is ordered by the Engineer which is either:

- a. not so intended by or provided for, or reasonably required as aforesaid; or
- b. though so intended or provided for, is ordered by the Engineer to be carried out by an independent person at any place other than the Site or the place of manufacture or fabrication of the materials tested, notwithstanding that it is not so specified in the Contract,

then the cost of such test shall be borne by the Contractor, if the test shows the workmanship or materials not to be in accordance with the provisions of the Contract or the Engineer's instructions, but otherwise the Engineer shall, after due consultation with the Employer, certify the amount of cost to be added to the Contract Price.

37. INSPECTION OF OPERATIONS

The Employer/the Engineer and any person authorized by them shall at all times have access to the Works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the Works and the Contractor shall afford every facility for and every assistance in or in obtaining the right to such access, including access to drawings and production data, at no charge.

38.1 EXAMINATION OF WORK BEFORE COVERING-UP

No work shall be covered up or put out of view without the approval of the Engineer or the Engineer's Representative and the Contractor shall afford full opportunity for the Engineer or the Engineer's Representative to examine and measure any work which is about to be covered up or put out of view and to examine foundations before Permanent Work is placed thereon. The Contractor shall give due notice to the Engineer's Representative whenever any such work or foundations is or are ready or about to be ready for examination and the Engineer's Representative shall, without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such work or of examining such foundations.

38.2 UNCOVERING AND MAKING OPENINGS

The Contractor shall uncover any part or parts of the Works or make openings in or through the same as the Engineer may from time to time direct and shall reinstate and make good such part or parts to the satisfaction of the Engineer. If any such part or parts have been covered up or put out of view after compliance with the requirement of Sub-Clause 1 of this Clause, and are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating and making good the same, shall be borne by the Employer provided the Contractor has upon receipt of the Engineer's order, and in any case before the start of uncovering given written notice to the Engineer and the Employer of his intention to claim such expenses. In all other cases all such expenses shall be borne by the Contractor.

39.1 REMOVAL OF IMPROPER WORK AND MATERIALS

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 material, plant, which, in the opinion of the Engineer, are not in accordance with the Contract.
- b. the substitution of proper and suitable materials or plant, 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, plant or workmanship is not, in the opinion of the Engineer, in accordance with the Contract.

39.2 DEFAULT OF CONTRACTOR IN COMPLIANCE

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.

40.1 SUSPENSION OF WORK

The Contractor shall, on the written order of the Engineer, suspend the progress of the Works or any part thereof for such time or times and in such manner as the Engineer may consider necessary and shall during such suspension properly protect and secure the Works, so far as is necessary in the opinion of the Engineer. 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, or
- c. necessary by reason of climatic conditions on the Site, or
- d. necessary for the proper execution of the Works or for the safety of the Works or any part thereof insofar as such necessity does not arise from any act or default by the Engineer or the Employer or from any of the excepted risks defined in Clause 20 hereof.

Provided that the Contractor shall not be entitled to recover any such extra cost unless he gives written notice of his intention to claim to the Engineer and the Employer within 14 days of the Engineer's order. The Engineer shall determine such extra payment and or extension of time under Clause 44 hereof to be made to the Contractor in respect of such claim as shall, in the opinion of the Engineer, be fair and reasonable.

40.2 Except in cases of emergency as expressly determined by the Engineer, or cases where any partial or total suspension of work arises as a consequence of the withholding by the Engineer of his approval of any work, or as determined by the Engineer, is otherwise provided for in the Contract or considered by him expressly as necessary for the proper execution of the Works or for the safety of the Works or any part thereof, any order of suspension in all other circumstances shall be made with the prior approval of the Employer which approval shall be notified by the Engineer to the Contractor at the time of such order.

COMMENCEMENT TIME & DELAYS

41. COMMENCEMENT OF WORKS

The Contractor shall commence the Works on Site within the period named in Part II after the receipt by him of a written order to this effect from the Engineer and shall proceed with the same with due expedition and without delay, except as may be expressly sanctioned or ordered by the Engineer, or be wholly beyond the Contractor's control, in the Engineer's opinion.

42.1 POSSESSION OF SITE AND ACCESS THERETO

Save insofar as the Contract may prescribe:

- a. the extent of portions of the Site of which the Contractor is to be given possession from time to time, and

- b. the order in which such portions shall be made available to the Contractor

and subject to any requirement in the Contract as to the order in which the Works shall be executed, the Employer will, with the Engineer's notice to commence the Works, give to the Contractor possession of:

- a. so much of the Site, and
- b. such access as, in accordance with the Contract, is to be provided by the Employer

as may be required to enable the Contractor to commence and proceed with the execution of the Works, in accordance with the programme referred to in Clause 14, if any, and otherwise in accordance with such reasonable proposals as the Contractor shall, by notice to the Engineer with a copy to the Employer, make. The Employer will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due despatch in accordance with the said programme or proposals, as the case may be.

42.2 WAYLEAVES, ETC..

The Contractor shall bear all costs and charges for special or temporary wayleaves required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional accommodation outside the Site required by him for the purpose of the Works.

43. TIME FOR COMPLETION

Subject to any requirement in the Contract as to completion of any section of the Works before completion of the whole, the whole of the Works shall be completed, in accordance with the provisions of Clause 48 hereof, within the time stated in the Contract calculated from the last day of the period named in Part II as that within which the Works are to be commenced, or such extended time as may be allowed under Clause 44 hereof.

44. EXTENSION OF TIME FOR COMPLETION OF WORKS

Should the amount of extra or additional work of any kind or any cause of delay referred to in these conditions, or exceptional adverse climatic conditions, or other special circumstances of the kind whatsoever which may occur, other than through default of the Contractor, be such as fairly to entitle the Contractor to an extension of time for the completion of the Works, the Engineer shall determine the amount of such extension and shall notify the Employer and the Contractor accordingly. Provided the Engineer shall not take into account any extra or additional work or other special circumstances unless the Contractor has within twenty eight days after such work has commenced, or such circumstances have arisen, submitted to the Engineer's Representative as well as to the Employer full and detailed particulars of any extension of time to which he may consider himself entitled in order that such submission may be investigated at the time.

45. RESTRICTION ON WORKING HOURS

Subject to any provision to the contrary contained in the Contract, none of the Permanent Works shall, save as hereinafter provided, be carried on during the night or on Fridays or Sundays whichever is locally recognized as the day of rest, without the permission in writing of the Engineer's Representative, except when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer's Representative. Provided always that the provisions of this Clause shall not be applicable in the case of any work which it is customary to be carried out by rotary or double shifts.

46. RATE OF PROGRESS

If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any section is at any time, in the opinion of the Engineer, too slow to ensure completion by the prescribed time or extended time for completion, the Engineer shall so notify the Contractor in writing and the Contractor shall thereupon take such steps as are necessary and the Engineer may approve to expedite progress so as to complete the Works or such section by the prescribed time or extended time. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor shall seek the Engineer's permission to do any work at night or on Fridays if locally recognised as days of rest, or their locally recognized equivalent, such permission shall not be unreasonably refused.

47.1 LIQUIDATED DAMAGES FOR DELAY

If the Contractor shall fail to achieve completion of the Works within the time prescribed by Clause 43 hereof, then the Contractor shall pay to the Employer the sums stated in the Contract as liquidated damages for such default and not as a penalty for any and every day or part of a day which shall elapse between the time prescribed by Clause 43 hereof and the date certified for completion of the Works. The Employer may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies in his hands, due or which may become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligations to complete the Works, or from any other of his obligations and liabilities under the Contract.

47.2 REDUCTION OF LIQUIDATED DAMAGES

If, before the time for completion of the whole of the Works any part or section of the Works has been certified by the Engineer as completed, pursuant to Clause 48 hereof, and occupied or used by the Employer, the liquidated damages for delay shall for any period of delay after such certificate and in the absence of alternative provisions in the Contract be reduced in the proportion which the value of the part or section so certified bears to the value of the whole of the Works.

48.1 CERTIFICATION OF COMPLETION OF WORKS

When the whole of the Works have been substantially completed and have satisfactorily passed any final test that may be prescribed by the Contract, the Contractor may give a notice to that effect to the Employer and to the Engineer or to the Engineer's Representative accompanied by an undertaking to finish any outstanding work during the Maintenance Period. Such notice and undertaking shall be in writing and shall be deemed to be a request by the Contractor for the Engineer to issue a Certificate of Completion in respect of the Works. The Engineer shall within twenty eight days of the date of delivery of such notice either issue to the Contractor a Certificate of Completion stating the date on which, in the Engineer's opinion, the Works were substantially completed in accordance with the Contract or give instructions in writing to the Contractor specifying all the Works 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 works specified therein. The Contractor shall be entitled to receive such Certificate of Completion within twenty eight days of completion to the satisfaction of the Engineer of the works so specified and making good any defects so notified.

Provided always that the Engineer shall not issue such Certificate of Completion except with the approval of the Employer, which shall not be unreasonably withheld.

48.2 CERTIFICATION OF COMPLETION BY STAGES

Similarly, in accordance with the procedure set out in Sub-Clause 1 of this Clause, the Contractor may request and the Engineer shall issue a Certificate of Completion in respect of:

- a. any section of the Permanent Works in respect of which a separate time for completion is provided in the Contract and,
- b. any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer and used by the Employer.

48.3 If any part of the Permanent Works shall have been substantially completed and shall have satisfactorily passed any final test that may be prescribed by the Contract, the Engineer may issue a Certificate of Completion in respect of that part of the Permanent Works before completion of the whole of the Works and, upon the issue of such Certificate the Contractor shall be deemed to have undertaken to complete any outstanding work in that part of the Works during the Period of Maintenance.

48.4 Provided always that a Certificate of Completion given in respect of any section or part of the Permanent Works before completion of the whole shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Certificate shall expressly so state.

MAINTENANCE AND DEFECTS

49.1 DEFINITION OF PERIOD OF MAINTENANCE

In these Conditions, the expression "Period of Maintenance" shall mean the period of maintenance named in Part II, calculated from the date of completion of the Works, certified by the Engineer in accordance with Clause 48 hereof, or, in the event of more than one certificate having been issued by the Engineer under the said Clause, from the respective dates so certified and in relation to the Period of Maintenance the expression "the Works" shall be construed accordingly.

49.2 EXECUTION OF WORK OF REPAIR, ETC..

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 certified under Clause 48 hereof, 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.

49.3 COST OF EXECUTION OF WORK OF REPAIR, ETC..

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, plant 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, including any design default, subject to the limitations referred to in Sub Clause 8.2 hereof.

49.4 REMEDY ON CONTRACTOR'S FAILURE TO CARRY OUT WORK REQUIRED

If the Contractor shall fail to do any such work as aforesaid required by the Engineer, 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, or may be deducted by the Employer from any monies due or which may become due to the Contractor.

50. CONTRACTOR TO SEARCH

The Contractor shall, if required by the Engineer in writing and after the Employer's approval, search under the directions of the Engineer for the cause of any defect, imperfection or fault appearing during the progress of the Works or in the Period of Maintenance. 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. 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 and he shall in such case repair, rectify and make good such defect, imperfection or fault at his own expense in accordance with the provisions of Clause 49 hereof.

ALTERATIONS, ADDITIONS AND OMISSIONS

51.1 VARIATIONS

Subject to any restrictions or requirement of the approval of the Employer under the provisions of Part II of these Conditions, the Engineer may order any variation of the form, quality or quantity of the Works or any part thereof or any specified sequence, method or timing of construction provided that the Engineer may notwithstanding any restriction or requirement as aforesaid give any order, of whatsoever nature, if, in his opinion an emergency has arisen and such order is necessary to deal with such emergency.

Subject to the foregoing the Engineer shall have the power to order the Contractor to do and the Contractor shall do any of the following:

- a. increase or decrease the quantity of any work included in the Contract,
- b. omit any such work,
- c. change the character or quality or kind of such work.
- d. change the levels, lines, positions and dimensions of any part of the Works,
- e. execute additional work of any kind necessary for the completion of the Works, and
- f. change any specified sequence, method or timing of construction of any part of the Works,

and no such variation shall in any way vitiate or invalidate the Contract but the value, if any, of all such variations shall be taken into account in ascertaining the amount of the Contract Price.

51.2 ORDERS FOR VARIATIONS TO BE IN WRITING

No such variations shall be made by the Contractor without an order in writing of the Engineer with a copy to the Employer. Provided that no order in writing shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an order given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities. Provided also that if for any reason the Engineer shall consider it desirable to give any such order verbally, the Contractor shall comply with such order and any confirmation in writing of such verbal order given by the Engineer, whether before or after the carrying out of the order, shall be deemed to be an order in writing within the meaning of this Clause. Provided further that if the Contractor shall within seven days confirm in writing to the Engineer, with a copy to the Employer, and such

confirmation shall not be contradicted in writing within fourteen days by the Engineer, it shall be deemed to be an order in writing by the Engineer.

52.1 VALUATION OF VARIATIONS

All extra or additional work done or work omitted by order of the Engineer shall be valued at the rates and prices set out in the Contract if, in the opinion of the Engineer, the same shall be applicable. If the Contract does not contain any rates or prices applicable to the extra or additional work, then suitable rates or prices paid as far as possible on the same basis as the Contract rates and prices shall be agreed upon between the Engineer and the Contractor in consultation with the Employer. In the event of disagreement, the Engineer shall fix such rates or prices as shall, in his opinion, be reasonable and proper.

52.2 POWER OF ENGINEER TO FIX RATES

Provided that no increase or decrease under Sub-Clause 1 of this Clause, shall be made unless, as soon after the date of the order as is practicable and, in the case of extra work, before the commencement of the work or within fourteen days thereafter notice shall have been given in writing:

- a. by the Contractor to the Engineer of his intention to claim extra payment or a varied rate or price, or
- b. by the Engineer to the Contractor of his intention to vary a rate or price.

52.3 VARIATIONS EXCEEDING 25 PER CENT

If, on certified completion pursuant to Clause 62, of the Works, it shall be found that a reduction or increase greater than 25% of the sum named in the Letter of Acceptance, excluding all fixed sums, provisional sums and allowance for dayworks, if any, results from:

- a. the aggregate effect of all Variation Orders, and
- b. all adjustment upon measurement of the estimated quantities set out in the Bill of Quantities, excluding all provisional sums, dayworks and adjustments of price according to Part II

but not from any other cause, the amount of the Contract Price, shall be adjusted by such sums as may be agreed between the Engineer and the Contractor in consultation with the Employer, or failing agreement, fixed by the Engineer having regard to all material and relevant factors including the general overhead costs of the Contract.

52.4 DAYWORK

The Engineer may, if, in his opinion it is necessary or desirable, order in writing that any additional or substituted work shall be executed on a daywork basis. The Contractor shall then be paid for such work under the conditions set out in the Daywork Schedule included in the Contract and at the rates and prices affixed thereto by him in his Tender.

The Contractor shall furnish to the Engineer such receipts or other vouchers as may be necessary to prove the amounts paid and, before ordering materials, shall submit to the Engineer quotations for the same for his approval.

In respect of all work executed on a daywork basis, the Contractor shall, during the continuance of such work, deliver each day to the Engineer's Representative an exact list in duplicate of the names, occupation and time of all workmen employed on such work and a statement, also in duplicate, showing the description and quantity of all materials and Constructional Plant used thereon or therefor (other than plant which is included in the percentage addition in accordance with the Schedule hereinbefore referred to). One copy of each list and statement will, if correct, or when agreed, be signed by the Engineer's Representative and returned to the Contractor.

At the end of each month, the Contractor shall deliver to the Engineer's Representative a priced statement of the labour, material, plant and constructional plant, except as aforesaid, used and the Contractor shall not be entitled to any payment unless such lists and statements have been fully and punctually rendered.

PROCEDURE FOR CLAIMS

53.1 NOTICE OF CLAIMS

If the Contractor intends to claim any additional payment pursuant to any Clause of these Conditions, he shall give notice of his intention to the Engineer, with a copy to the Employer, within fourteen days after the event giving rise to the Claim has first arisen, but without prejudice to any shorter period specified for such notice in any other provision of the Contract.

53.2 CONTEMPORARY RECORDS

Upon the happening of the event referred to in Sub-Clause 53.1, the Contractor shall keep contemporary records as are relevant. Without necessarily admitting the Employer's liability or the conclusiveness of such records, the Engineer shall, on receipt of a notice under Sub-Clause 53.1, inspect such contemporary records and may instruct the Contractor to keep any further contemporary records as are reasonable and may be material to the Claim of which notice has been given. The Contractor shall permit the Engineer to inspect all records kept pursuant to this Clause and shall supply him with copies thereof as and when the Engineer so instructs.

53.3 SUBSTANTIATION OF CLAIMS

Within twenty eight days, or such other reasonable time as may be agreed by the Engineer in writing, of giving notice under sub-clause 53.1, and prior to the expiry of the period specified thereunder, the Contractor shall send to the Engineer an account giving detailed particulars of the amount claimed and the grounds upon which the Claim is based. Where the event giving rise to the Claim has a continuing effect, such account shall be considered to be an interim account, and the Contractor shall, at such intervals as the Engineer may reasonably require, send further interim accounts giving the accumulated amount of the Claim and any further grounds upon which it is

based. In cases where interim accounts are sent to the Engineer, the Contractor shall send a final account within twenty eight days of the end of the effects resulting from the event. The Contractor shall copy to the Employer all accounts sent to the Engineer pursuant to this Sub-Clause.

53.4 FAILURE TO COMPLY

Failure by the Contractor to comply with any of the provisions of this Clause shall limit the Contractor's entitlement to payment, in respect of any Claim which he shall seek to make, to that part of the claim which, in the opinion of the Employer and the Engineer can be reasonably investigated.

CONSTRUCTIONAL PLANT, TEMPORARY WORKS & MATERIALS

54.1 CONSTRUCTIONAL PLANT, ETC.. EXCLUSIVE USE FOR THE WORKS

All Constructional Plant, Temporary Works and materials provided by the Contractor shall, when brought on the site be deemed to be the property of the Employer. This is without prejudice to the right of the Contractor to use the Constructional Plant, Temporary Works and materials for the purpose of the Works and without affecting his responsibility for the costs of maintenance and operation of the same under the provisions of the Contact.

54.2 REMOVAL OF CONSTRUCTIONAL PLANT, ETC..

With a view to securing in the event of forfeiture under Clause 63, the continued availability for the purpose of executing the Works of any hired Constructional Plant, the Contractor shall not bring on the Site any hired Constructional Plant unless there is an agreement for the hire thereof which contains a provision that the owner thereof will on request in writing made by the Employer within seven days after the date on which any forfeiture has become effective and on the Employer undertaking to pay all hire charges in respect thereof from such date, hire such Constructional Plant to the Employer on the same terms in all respects as the same was hired to the Contractor save that the Employer shall be entitled to permit the use thereof by any other contractor employed by the Employer for the purpose of completing the Works under the terms of Clause 63.

54.3 IRREMOVABILITY OF CONSTRUCTIONAL PLANT

No Constructional Plant, Temporary Works or materials or any part thereof shall be removed from the Site without the written consent of the Engineer which consent shall not be unreasonably withheld where the same are no longer immediately required for the purposes of the Final Completion of the Works, but the Employer shall permit the Contractor the exclusive use of all such Constructional Plant, Temporary Works and materials in and for the Final Completion of the Works until the occurrence of any event which gives the Employer the right to exclude the Contractor from the Site and proceed with the completion of the Works.

54.4 RE-VESTING OF PROPERTY

Upon the removal of any such Constructional Plant, Temporary Works or materials as have been deemed to have become the property of the Employer under Sub-Clause 1 of this Clause with the consent as aforesaid the property therein shall be deemed to revert in the Contractor and upon the Whole Completion of the Works, the property in the remainder of such Constructional Plant, Temporary Works and materials as aforesaid shall, subject to Clause 63 and 33 or as provided otherwise in the Contract documents, be deemed to revert in the Contractor.

54.5 LOSS OR DAMAGE TO CONSTRUCTIONAL PLANT ETC.

The Employer shall not at any time be liable for the loss of or damage to any of the Constructional Plant, Temporary Works or materials which have been deemed to become the property of the Employer under Sub-Clause 1 of this Clause save as mentioned in Clauses 20 and 65.

54.6 The Contractor shall where entering into any sub-contract for the execution of any part of the Works incorporate in such sub-contract (by reference or otherwise) the provisions of this Clause in relation to Constructional Plant, Temporary Works or materials brought on to the Site by the sub-contractor.

54.7 RE-EXPORT OF CONSTRUCTIONAL PLANT

In respect of any Constructional Plant which the Contractor shall have imported for the purposes of the Works and which have reverted in the Contractor in accordance with the provisions of sub-clause 54.4 hereof, the Employer will assist the Contractor, where required, in producing any necessary Government consent to the re-export of such Constructional Plant by the Contractor upon the removal thereof as aforesaid.

54.8 CUSTOMS CLEARANCE

The Employer will assist the Contractor, where required, in obtaining clearance through the customs of Constructional Plant, materials and other things required for the Works.

54.9 Any other conditions affecting Constructional Plant, Temporary Works and materials, shall be set out in Part II in Clause 54 as may be necessary.

54.10 APPROVAL OF MATERIALS, ETC.. NOT IMPLIED

The operation of Clause 54 hereof shall not be deemed to imply any approval by the Engineer of the materials or other matters referred to therein nor shall it prevent the rejection of any such materials at any time by the Engineer.

MEASUREMENT

55. QUANTITIES

The quantities set out in the Bill of Quantities are the estimated quantities of the work, but they are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfilment of his obligations under the Contract.

56. WORKS TO BE MEASURED

The Engineer shall, except as otherwise stated, ascertain and determine by measurement the value in terms of the Contract of work done in accordance with the Contract. He shall, when he requires any part or parts of the Works to be measured, give notice to the Contractor's authorized agent or representative, who shall forthwith attend or send a qualified agent to assist the Engineer or the Engineer's Representative in making such measurement, and shall furnish all particulars required by either of them. Should the Contractor not attend, or neglect or omit to send such agent, then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of the work. For the purpose of measuring such permanent work as is to be measured by records and drawings, the Engineer's Representative shall prepare records and drawings month by month of such work and the Contractor as and when called upon to do so in writing, shall, within fourteen days, attend to examine and agree such records and drawings with the Engineer's Representative and shall sign the same when so agreed. If the Contractor does not so attend to examine and agree such records and drawings, they shall be taken to be correct. If, after examination of such records and drawings, the Contractor does not agree the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor shall, within fourteen days of such examination, lodge with the Engineer's Representative, for decision by the Engineer, notice in writing of the respects in which such records and drawings are claimed by him to be incorrect.

57. METHOD OF MEASUREMENT

The Work shall be measured net, notwithstanding any general or local custom, except where otherwise, specifically described in the Contract.

PROVISIONAL SUMS

58.1 DEFINITION OF "PROVISIONAL SUMS"

"Provisional Sum" means a sum included in the Contract and so designated in the Bill of Quantities for the execution of work or the supply of goods, materials, or services, or for contingencies, which sum may be used, in whole or in part, or not at all, at the direction and discretion of the Engineer. The Contract Price shall include only such amounts in respect of the work, supply or services to which such Provisional Sums relate as the Engineer shall approve or determine in accordance with this Clause.

58.2 USE OF PROVISIONAL SUMS

In respect of every Provisional Sum, the Engineer shall have power to order:

- a. Work to be executed, including goods, materials or services to be supplied by the Contractor. The Contract Price shall include the value of such work executed or such goods, materials or services supplied determined in accordance with Clause 52 hereof.
- b. Work to be executed or goods, materials or services to be supplied by a Nominated Sub-Contractor as hereinafter defined. The sum to be paid to the Contractor therefor shall be determined and paid in accordance with Clause 59.4 hereof.
- c. Goods and materials to be purchased by the Contractor. The sum to be paid to the Contractor therefor shall be determined and paid in accordance with Clause 59.4 hereof.

58.3 PRODUCTION OF VOUCHERS, ETC..

The Contractor shall produce to the Engineer all quotations, invoices, vouchers and accounts or receipts in connection with expenditure in respect of Provisional Sums.

NOMINATED SUB-CONTRACTORS

59.1 DEFINITION OF NOMINATED SUB-CONTRACTORS

All specialists, merchants, tradesmen, and others executing any work or supplying any goods, materials, plant or services for which Provisional Sums are included in the Contract, who may have been or be nominated or selected or approved by the Employer, and all persons to whom by virtue of the provisions of the Contract, the Contractor is required to sub-contract any work, shall, in the execution of such work or supply of such goods, materials or services, be deemed to be sub-contractors employed by the Contractor and are referred to in this Contract as "Nominated Sub-Contractors"

59.2 NOMINATED SUB-CONTRACTORS; OBJECTION TO NOMINATION

The Contractor shall not be required by the Employer or the Engineer or be deemed to be under any obligation to employ any Nominated Sub-Contractor against whom the Contractor may raise reasonable objection, or who shall decline to enter into a sub-contract with the Contractor containing provisions:

- a. that in respect of the work, goods, materials, plant or services the subject of the sub-contract, the Nominated Sub-Contractor will undertake towards the Contractor, the like obligations and liabilities as are imposed on the Contractor towards the Employer by the terms of the Contract and will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection therewith, or arising out of or in connection with any failure to perform such obligations or to fulfil such liabilities, and

- b. that the Nominated Sub-Contractor will save harmless and indemnify the Contractor from and against any negligence by the Nominated Sub-Contractor, his agents, workmen and servants and from and against any misuse by him or them of any Constructional Plant or Temporary Works provided by the Contractor for the purposes of the Contract and from all claims as aforesaid.

59.3 DESIGN REQUIREMENTS TO BE EXPRESSLY STATED

If in connection with any Provisional Sum the services to be provided include any matter of design or specification of any part of the Permanent Works or of any equipment or plant to be incorporated therein, such requirement shall be expressly stated in the Contract and shall be included in any nominated sub-contract. The nominated sub-contract shall specify that the Nominated Sub-Contractor providing such services will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection with any failure to perform such obligations or to fulfil such liabilities.

59.4 PAYMENTS TO NOMINATED SUB-CONTRACTORS

For all work executed or goods, materials, plant, or services supplied by any Nominated Sub-Contractor, there shall be included in the Contract Price:

- a. the actual price paid or due to be paid by the Contractor, on the direction of the Engineer, and in accordance with the Sub-Contract;
- b. the sum, if any, entered in the Bill of Quantities for labour supplied by the Contractor in connection therewith, or if ordered by the Engineer pursuant to Clause 58.2 (b) hereof, as may be determined in accordance with Clause 52 hereof;
- c. In respect of all other charges and profit, a sum being a percentage rate of the actual price paid or due to be paid calculated, where provision has been made in the Bill of Quantities for a rate to be set against the relevant Provisional Sum, at the rate inserted by the Contractor against that item or, where no such provision has been made, at the rate inserted by the Contractor in the Appendix to the Tender and repeated where provision for such is made in a special item provided in the Bill of Quantities for such purpose.

59.5 CERTIFICATION OF PAYMENTS TO NOMINATED SUB-CONTRACTORS

Before issuing, under Clause 60 hereof, any certificate, which includes any payment in respect of work done or goods, materials plant or services supplied by any Nominated Sub-Contractor, the Engineer shall be entitled to demand from the Contractor reasonable proof that all payments, less retention, included in previous certificates in respect of the work or goods, materials, plant or services of such Nominated Sub-Contractor have been paid or discharged by the Contractor, in default whereof unless the Contractor shall:

- a. inform the Engineer in writing that he has reasonable cause for withholding or refusing to make such payments and
- b. produce to the Engineer reasonable proof that he has so informed such Nominated Sub-Contractor in writing,

the Employer shall be entitled to pay to such Nominated Sub-Contractor direct, upon the certificate of the Engineer, all payments, less retention, provided for in the Sub-contract, which the Contractor has failed to make to such Nominated Sub-Contractor and to deduct by way of set-off the amount so paid by the Employer from any sums due or which may become due from the Employer to the Contractor.

Provided always that, where the Engineer has certified and the Employer has paid direct as aforesaid, the Engineer shall in issuing any further certificate in favour of the Contractor deduct from the amount thereof the amount so paid, direct as aforesaid, but shall not withhold or delay the issue of the certificate itself when due to be issued under the terms of the Contract.

59.6 ASSIGNMENT OF NOMINATED SUB-CONTRACTORS' OBLIGATIONS

In the event of a Nominated Sub-Contractor, as hereinbefore defined, having undertaken towards the Contractor in respect of the work executed, or the goods, materials, plant or services supplied by such Nominated Sub-Contractor, any continuing obligation extending for a period exceeding that of the Period of Maintenance the Contractor shall assign to the Employer, at the Employer's request and cost, the benefit of such obligation for the unexpired duration thereof.

CERTIFICATES AND PAYMENTS

60.1 MONTHLY STATEMENT

- a. The Contractor shall submit to the Engineer after the end of each month six copies (subject to contrary provision in Part II), each signed by the Contractor's representative approved by the Engineer in accordance with Clause 15, of a statement, in such form as the Engineer may from time to time prescribe, showing the amounts to which the Contractor considers himself to be entitled up to the end of the month in respect of:
 - i) the value of the Permanent Works executed;
 - ii) any other items in the Bills of Quantities including Temporary Works, Mobilization (if any);
 - iii) all approved amounts due in respect of work executed as Daywork;
 - iv) any amount due in respect of expenditure against any Provisional Sum entered in the priced Bill of Quantities;
 - v) any amount due in respect of the value of the goods and materials properly delivered to Site for incorporation into the Works in accordance with the approved construction programme;
 - vi) any amount for price adjustment, in accordance with the provisions of Clause 70;

- vii) any other sum to which the Contractor considers himself entitled under the provisions of the Contract;
- viii) any credits due to the Employer in respect of repayment of the advance payment;
- ix) any amount to be withheld or repaid under the retention provisions of Sub-Clause 2 of this Clause;
- x) a breakdown into the local and foreign currencies payable in accordance with the statement of Foreign Currency Requirement in the Bill of Quantities and the provisions herein contained.

The Monthly Statement should be accompanied by the relevant Monthly Progress Report referred to under Sub-Clause 14.5.

- b. The said application for Interim Payment shall be approved or amended such that in the Engineer's opinion, the certificate reflects the amount due to the Contractor in accordance with the Contract. In cases where there is a difference of opinion as to the value of any item, the Engineer's view shall prevail, without prejudice, however, to the right of the Contractor to invoke Clause 67 of the Conditions of Contract. Within twenty-eight (28) days of receipt of the said application the Engineer shall issue to the Contractor an Interim Payment Certificate approved by the Employer certifying the amount due to the Contractor.
- c. No Interim Payment Certificate shall be issued for a sum which after all retention and deduction, is less than the minimum amount for Interim Payment Certificate stated in the Appendix to Tender.
- d. No Interim Payment Certificate shall be considered as releasing the Contractor from any obligation and/or responsibility under the Contract.

60.2 RETENTION MONEY

- a. A retention amounting to five (5) percent (subject to contrary provision in Part II) of the amount included in any monthly Interim Payment Certificate due to the Contractor on account of Works executed by him shall be made by the Engineer in the first and following Certificate.
- b. The Retention Money shall be released at the Certificate of Provisional Completion notwithstanding that at such time there may be outstanding claims by the Contractor against the Employer. Provided always that, if at such time there shall remain to be executed by the Contractor any works ordered during the Maintenance Period pursuant to Clause 49 and 50 hereof, the Employer shall be entitled to withhold payment until the completion of such works of so much of the Retention Money as shall, in the opinion of the Engineer, represent the cost of the Works so remaining to be executed; and
- c. If the Contractor so requests, the Employer may pay such Retention Money as may be accumulated at that time to the Contractor upon lodgement with the Employer of a bank guarantee issued by a first class Bank and endorsed by an Egyptian Bank acceptable to the Employer in like amount, and in the same currencies.

60.3 CORRECTION OF CERTIFICATES

The Engineer may by any Certificate make any corrections or modifications in any previous Certificates (other than one purporting to be a Final Payment Certificate) which shall have been issued by him and shall have power to modify or withhold any Certificate if the Works or any part thereof are not being carried out to his satisfaction.

60.4 ADVANCE PAYMENT

- a. The Employer will make an interest-free advance payment to the Contractor for the costs of mobilization in respect of the Contract Works in a lump sum amount equivalent to ten (10) percent of the sum named in the Letter of Acceptance, payable in the proportionate amounts of foreign and local currencies as provided for in the Contract. Payment of the advance will be due after execution of the Form of Agreement by the parties thereto, and provision by the Contractor of the Performance Bond in accordance with Clause 10 hereof, and issuance of an unconditional letter of guarantee by a bank acceptable to the Employer as per Part II in an amount equal to the advance payment, such bank guarantee to remain effective until the advance payment has been completely repaid by the Contractor out of current earning under the Contract, and certified accordingly by the Employer. A form of bank guarantee acceptable to the Employer is attached hereto. The advance payment shall be used by the Contractor exclusively for mobilization expenditures, including the acquisition of plant and equipment in connection with the Contract Works. Should the Contractor misappropriate any portion of the advance payment for a purpose unrelated to the Contract Work, it shall become due and payable immediately.
- b. The advance payment shall be repaid in accordance with the provision of Part II.

60.5 FINAL ACCOUNT

- a. Not later than two months (subject to contrary provision in Part II) after the date of issue of the Maintenance Certificate, the Contractor shall submit a statement of Final Account and supporting documentation to the Engineer showing in detail the value of the work done in accordance with the Contract, together with all further sums which the Contractor considers to be due to him under the Contract up to the date of the Maintenance Certificate.
- b. Within three months (subject to contrary provision in Part II) after receipt of this Statement of Final Account and of all information reasonably required for its verification, the Employer shall then issue a statement showing the final amount to which the Contractor is entitled under the Contract. The Contractor shall be invited in writing to sign either with or without reservation the above statement within 30 days from the date of notification of such invitation.

When signing without reservation the Contractor shall be deemed to agree with the content of the Final Account statement issued by the Employer and

to admit that upon receiving the amount stated therein he shall have received full payment of all amounts due to him and shall have no claim whatsoever under the Contract against the Employer except with regard to the Performance Bond and the Bank guarantee (if any) referred to in Sub-Clause (2) of this Clause.

Should the Contractor sign the Final Account with reservation he shall then within 40 days from the date of notification of the above invitation expound such reservation(s) in one single Memorandum giving in detail the reasons thereof with all relevant documents, failing which the above reservation shall be held as non existent. Any further reservation made by the Contractor in addition to the reservation(s) expounded in the above Memorandum shall be disregarded.

Final Payment Certificate

- c. On receipt of a signed copy of the Final Account, the Engineer shall prepare and issue to the Employer and the Contractor a Final Payment Certificate certifying any further monies due to the Contractor in respect of the Contract.

60.6 PAYMENT IN FOREIGN AND LOCAL CURRENCIES

If the execution of the Works shall necessitate the importation of materials, plant or equipment from a country other than that in which the Works are being executed, or if the Works or any part thereof are to be executed by labour imported from any other such country, or if any other circumstances shall render it necessary or desirable, a proportion of the payments to be made under the Contract shall be made in the appropriate foreign currencies set out in the Contract. The conditions under which such payments are to be made shall be as set out in Part II in Clause 60.

60.7 TIME FOR PAYMENT

The amount due to the Contractor under any interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other term of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor within 49 days (Subject to contrary provision in Part II) after such interim Payment Certificate has been issued as per Sub-Clause 60.1 (b), or, in the case of the Final Payment Certificate referred to in Sub-Clause 60.5, within 63 days, after such final Certificate has been delivered to the Employer.

61. APPROVAL ONLY BY MAINTENANCE CERTIFICATE

No certificate other than the Maintenance Certificate referred to in Clause 62 hereof shall be deemed to constitute approval of the Works.

62.1 MAINTENANCE CERTIFICATE (FINAL CERTIFICATE OF COMPLETION)

The Contract shall not be considered as completed until a Maintenance Certificate shall have been signed by the Engineer and approval by the Employer stating that the Works have been completed and maintained to the Engineer's satisfaction. The Maintenance Certificate shall be given by the Engineer within twenty eight days after the expiration of the Maintenance Period, or if different periods of maintenance shall become applicable to different sections or parts of the Works, the expiration of the latest such period, or as soon thereafter as any work ordered during such period, pursuant to Clauses 49 and 50 hereof, shall have been completed to the satisfaction of the Engineer and full effect shall be given to this Clause, notwithstanding any previous entry on the Works or taking possession, working or using thereof or any part thereof by the Employer.

62.2 UNFULFILLED OBLIGATIONS

Notwithstanding the issue of the Maintenance Certificate the Contractor and the Employer shall remain liable for the fulfilment of any obligation incurred under the provisions of the Contract prior to the issue of the Maintenance Certificate which remains unperformed at the time such Certificate is issued and, for the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties hereto.

REMEDIES AND POWERS

63.1 DEFAULT OF CONTRACTOR

If the Contractor is deemed by law unable to pay his debts as they fall due, or enters into voluntary or involuntary bankruptcy, liquidation or dissolution (other than a voluntary liquidation for purposes of amalgamation or reconstruction), or becomes insolvent, or makes an arrangement with, or assignment in favour of, his creditors, or agrees to carry out the Contract under a committee of inspection of his creditors, or if a receiver, administrator, trustee or liquidator is appointed over any substantial part of his assets, or if, under any law or regulation relating to reorganization, arrangement or readjustment of debts, proceedings are commenced against the Contractor or resolutions passed in connection with dissolution or liquidation or if any steps are taken to enforce any security interest over a substantial part of the assets of the Contractor, or if any act is done or event occurs with respect to the Contractor or his assets which, under any applicable law has a substantially similar effect to any of the foregoing acts or events, or if the Contractor has contravened Sub-Clause 3.1, or has an execution levied on his goods, or if the Engineer certifies to the Employer, with a copy to the Contractor, that, in his opinion, the Contractor:

- a. has abandoned the Contract, or
- b. without reasonable excuse has failed to commence the Works or has suspended the progress of the Works for twenty-eight days after receiving from the Engineer written notice to proceed, or

- c. has failed to remove materials from the site or to pull down and replace work for twenty-eight days after receiving from the Engineer written notice that the said materials or work had been condemned and rejected by the Engineer under these conditions or
- d. despite previous warning by the Engineer in writing is not executing the Works in accordance with the Contract or not proceeding with the Works with due diligence or is persistently or flagrantly neglecting to carry out his obligations under the Contract, or
- e. has, to the detriment of good workmanship, or in defiance of the Engineer's instructions to the contrary, sub-contracted any part of the Contract:

Then the Employer after giving fourteen (14) days' notice in writing to the Contractor, may choose between two (2) alternatives:

- 1. either to terminate the Contract and confiscate the Performance Bond due at the time of termination and to impose all the due liquidated damages for incurred damages to be recoverable from the Contractor. The Employer shall have the right to retain any sum(s) which are due or to become due to the Contractor and to distrain upon all the Constructional Plant, Temporary works, unused materials on site which the Employer can sell or apply the proceeds of sales in or towards the satisfaction of any sum(s) due or to become due to him from the Contractor under this Contract.
- 2. or enter upon the Site and the Works and expel the Contractor therefrom without thereby voiding the Contract, or releasing the Contractor from any of his obligations or liabilities under the Contract, or affecting the rights and powers conferred on the Employer or the Engineer by the Contract, and may himself complete the Works or may employ any other contractor to complete the Works. The Employer or such other contractor may use for such completion so much of the Constructional Plant, Temporary Works, materials and plant which have been deemed to be reserved exclusively for the execution of the Works, under the provisions of the Contract, as he or they may think proper, and the Employer may, at any time, sell any of the said Constructional Plant, Temporary Works, unused materials and plant and apply the proceeds of sale in or towards the satisfaction of any sums due or which may become due to him from the Contractor under the Contract.

63.2 VALUATION AT DATE OF FORFEITURE:

The Engineer shall, as soon as may be practicable after any such entry and expulsion by the Employer, fix and determine ex parte, or by or after reference to the parties, or after such investigation or enquiries as he may think fit to make or institute, and shall certify what amount, if any, had at the time of such entry and expulsion been reasonably earned by or would reasonably accrue to the Contractor in respect of work then actually done by him under the Contract and the value of any of the said unused or partially used materials, plant, any Constructional Plant and any Temporary Works.

63.3 PAYMENT AFTER FORFEITURE

If the Employer shall enter and expel the Contractor under this Clause, he shall not be liable to pay to the Contractor any money on account of the Contract until the expiration of the Period of Maintenance and thereafter until the costs of execution and maintenance, damages for delay in completion, if any, and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the Engineer. The Contractor shall then be entitled to receive only such sum or sums, if any, as the Engineer may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount shall exceed the sum which would have been payable to the Contractor on due completion by him, then the Contractor shall, upon demand, pay to the Employer the amount of such excess and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly, always reserving the Employer's right to confiscate the Performance Bond or a portion thereof insofar as it is required to cover the above mentioned excess.

63.4 ASSIGNMENTS OF BENEFITS UNDER AGREEMENT

The Contractor shall, if so required by the Employer or the Engineer within fourteen days of any of the events referred to in Sub-Clause 1 of this Clause, assign to the Employer, without further payment the benefit of any agreement for the supply of materials and/or for the execution of any works for the purposes of this Contract, but on terms that a supplier or sub-contractor shall be entitled to make any reasonable objection to any further assignment thereof by the Employer and the Employer may pay the supplier or sub-contractor for any such material supplied or works executed under such agreement, whether the same be assigned as aforesaid or not, before or after the said termination, the amount due by such arrangement in so far as it has not already been paid by the Contractor.

64. URGENT REPAIRS

If, by reason of any accident, or failure, or other event occurring to in or in connection with Works, or any part thereof, either during the execution of the Works, or during the Period of Maintenance, any remedial or other work or repair shall, in the opinion of the Engineer or the Engineer's Representative, be urgently necessary for the safety of the Works and the Contractor is unable or unwilling at once to do such work or repair, the Employer may employ and pay other persons to carry out such work or repair as the Engineer or the Engineer's Representative may consider necessary. If the work or repair so done by the Employer is work which in the opinion of the Engineer, the Contractor was liable to do at his own expense under the Contract, all expenses properly incurred by the Employer in so doing 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. Provided always that the Engineer or the Engineer's Representative, as the case may be, shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof in writing.