

**GENERAL CONDITIONS FOR ERECTION SUPERVISION (GCES)**

**1.0 GENERAL**

1.1 The following shall supplement the conditions already contained in the other parts of these specifications and documents and shall govern the scope of Contract related to the supervision of erection and performing, testing and commissioning as a part of the supply cum erection supervision Contract only.

1.2 The Contractor and the Purchaser upon signing of the Contract shall, in addition to their respective Project Managers, nominate one or two responsible officers as their alternate suitably designated for the purposes of overall responsibility and co-ordination of the services to be performed in respect of supervision of erection, etc.

**1.3 NOTICE**

The Purchaser shall advise the Contractor in writing at least thirty (30) days in advance of the date the supervisors are required at site for performance of their services.

**2.0 SCOPE OF SERVICES**

2.1 The scope of work and duties and responsibilities of the Contractor shall broadly include the following:

2.1.1 Indicate the requirement for adequate storage at site.

2.1.2 Assisting the Purchaser, whenever required by him, in checking and verification of plant and equipment and materials supplied by the Contractor.

2.1.3 Provision of detailed instructions regarding unloading, handling store and preservation of the equipment to be supplied under this Contract in advance including supplying of related manuals.

2.1.4 Supervision of unloading, handling, preservation and storage at site.

2.1.5 Technical supervision of erection including disassembly, pre-assembly etc. and performing trial and pre-commissioning tests, adjustments, calibration etc. of the plant and equipment supplied by the Contractor.

2.1.6 Technical supervision of the initial operation of the plant and equipment supplied by the

Contractor till successful completion of trial operations.

- 2.1.7 Assisting the Purchaser in carrying out the performance and guarantee tests.
- 2.1.8 Technical supervision of the work of repairs, modifications and alternations, etc. of the plant and equipment, whenever necessary.
- 2.1.9 Providing technical assistance in training of personnel of the 'Purchaser' in erection, testing and operation and maintenance of the plant and equipment at site.
- 2.1.10 Rendering technical assistance, clarifications and guidance, on technical problems and drawings/documents relating to the plant and equipment supplied by the Contractor.
- 2.1.11 Providing necessary guidance for preparation of detailed programmes/schedules for erection and testing and commissioning activities of the plant and equipment including material and manpower planning.
- 2.1.12 Any other related supervisory services though not specifically mentioned herein before but necessary for proper execution of the work, as stipulated.
- 2.1.13 All temporary instrumentation measuring devices special tools and tackle etc., if any required for performing the services under this Contract will be provided by the Contractor.
- 2.1.14 **ERECTION LABOUR AND TOOLS**
  - i) The Contractor shall make available the required standard / special erection tools and hand tools during execution of works.
  - ii) The Supervisor may select to bring with him certain personal tools required for erection which are to remain his property at all times. Use of such personal tools for erection work shall not entitle the Contractor to any additional payment. Any assistance required by the Supervisor in securing entry and exit permits for such tools shall be rendered by the Purchaser.

### **3.0 FIELD ENGINEERING CLARIFICATIONS**

The Contractor shall provide all necessary field engineering clarifications to the Purchaser that they may require for the purposes of their works. The Contractor shall also provide all engineering clarifications and details to the Purchaser for the overall engineering/start-up of the plant and equipment supplied by the Contractor.

#### **4.0 IMPLEMENTATION AND FIELD QUALITY PLANS**

- 4.1 It will be the responsibility of the Contractor to ensure through adequate supervision that the erection of the equipment supplied by the Contractor is being carried out according to the quality plans and standard manufacturing practice/instructions as given by the Contractor. In case of any deviations noticed in performing the erection in accordance with such quality plans, etc. The Contractor shall forthwith inform the Purchaser of such deviations for taking necessary corrective action. In case the Purchaser fails to ensure such corrective action, the Contractor shall be absolved of any consequential liability.

The Purchaser / Contractor will further identify specific hold points beyond which work will not proceed without Purchaser's / Contractor's consent so as to further ensure that the Erection Contractor performs the above quality functions effectively.

#### **4.2 ASSEMBLY**

During the assembly the Contractor shall record all measurements, check measurements data at each stage. The Contractor should also give in writing all the precautions and steps to be taken in each stage of assembly to the Purchaser. However this does not absolve the responsibility of the Contractor in ensuring that each such step and precaution is actually taken during erection.

#### **4.3 PRE-COMMISSIONING TRIALS AND INITIAL OPERATIONS**

- 4.3.1.1 On completion of all works, all the measurements shall be jointly taken by the Contractor and the Purchaser and the record shall be signed by both. The tests and trial operations shall be conducted only after signing of the same.
- 4.3.2 The supervision of pre-commissioning trials and initial operations of the equipment/material supplied by the Contractor shall be the responsibility of the Contractor as per details in relevant clauses in the accompanying Technical specifications. The Contractor shall provide, in addition, any special instruments/ calibrating devices, etc., if required for the successful performance of these trials. If it is anticipated that the above test may prolong for a long time, the Contractor's personnel required for the above test shall be present at site during such trials charging any additional cost.

#### **5.0 COMMISSION REPORT**

The Purchaser and Contractor shall properly maintain in the agreed formats their respective

records of all observations and measurements taken in respect of all tests and operations. Joint protocol shall be signed on completion of each and every test/check till the trial operation. During trial operations all readings shall be jointly maintained and signed. On successful completion of trial operations, a report shall be jointly prepared and signed indicating results of all the tests/checks and trial operation readings. 15 such copies of the reports in bound volumes shall be supplied for each Substation.

#### **6.0 DELAYS**

In the event when delays occur during the period of field assembly erection or testing as a result of which, the services of the supervisory Contractor's personnel are not required, the Purchaser may direct that any or all of the supervisory staff to return to their head quarter or remain at the site of work whichever the Purchaser deems fit to be in his best interest. In case of erection work interrupted and the Contractor's personnel have returned to their headquarters, the Purchaser may request again the services of the same personnel if available or of others with similar experience and qualification.

#### **7.0 GUARANTEE**

By virtue of services rendered by the Contractor's supervisors the Contractor's guarantee for all equipment shall hold good. If any portion of the work supervised by the Contractor proves to be defective within one (1) year from the date of commissioning of equipment, the Contractor, if notified there of in writing shall at the Contractor's own expense either make repairs or supply replacement parts directly for the equipment as necessary to correct the defects in such equipment directly resulting from such defective work of supervision on the part of the Contractor, and shall at his own expense furnish the necessary supervision for such corrections. The Contractor's liability in connection with the Contractor's furnishing supervisor(s) hereunder shall in no event exceed the cost of correcting any such defective work of supervision in the manner herein provided, and upon the expiration of the said one (1) year, all such liability shall terminate. The Contractor shall not, however, be liable in any event for any loss or injury to persons or property (including the equipment/installed) caused in whole or in part by (a) the negligence or fault of the Purchaser, his employees, and the Contractor's employed agents or sub-contractors (b) failure to observe the Supervisor's instruction or (c) by the failure of malfunctioning of any tools, equipment, material, facilities or devices not furnished by the Contractor and in no event, shall be Contractor be liable for special, indirect or consequential damages.

## **8.0 REGULATION OF LOCAL AUTHORITIES AND STATUS**

The Contractor shall, to the extent relevant and applicable, comply with all the rules and regulations of local authorities, during the performance of the Contractor's field activities. The Contractor's shall also comply with the minimum Wages Act 1948 and any modifications thereof the Payment of Wages Act (both of the Government of India) and the rules made thereunder, in respect

of employees or workmen employed or engaged by the Contractor, if any in addition to any other relevant act/rules.

## **9.0 CONSTRUCTION MANAGEMENT**

9.1 The field activities of other Contractors working at site, will be coordinated by the Engineer and the Engineer's decision shall be final in resolving any disputes or conflicts between the Contractor and other Contractors and the staff of the Purchaser regarding scheduling and coordination of work.

9.2 The Engineer shall hold meetings of all the Contractors working at site, at a time and a place to be designated by the Engineer. The Contractor shall attend such meetings and take notes of discussions during the meeting and the decisions of the Engineer and shall strictly adhere to these decisions in performing his services. In addition to the above weekly meetings, the Engineer may call for other meetings either with individual Contractor or with selected number of Contractors and in such a case the Contractor, if called, will also attend such meetings.

## **10.0 CONTRACTOR'S ASSISTANCE IN WORK PLAN FOR FIELD OPERATION**

10.1 Erection organization or schedule submitted by the Contractor and discussed with the Purchaser and finalised with necessary modifications to form a part of Contract documents, will be the essence for planning erection activities.

10.2 First preparation of such erection plan will cover erection activities to be performed for three months period. Every subsequent plan in the last week of every month, will contain updated report for reflecting progress achieved upto 20th day of the month hereinafter 'reporting month'), a firm programme for the first ensuing month and tentative programme for the second ensuing month. The firm erection programme for the first ensuing month will reflect the progress of the reporting month, erectable equipment and material available at site, resources at the immediate disposal of the Contractor and the inputs to be provided by the Purchaser. The firm work plan shall be broken down in week-wise erection plan. The

tentative work plan must set target for the complete month based on progress achieved in the reporting month, progress likely to be achieved through firm plan of first ensuing month and identify constraints.

10.3 The erection work plan will be reviewed by the Engineer with the assistance of the Contractor. The Contractor will advise the Engineer about appropriate actions for implementation of work plan.

10.4 The Contractor shall decide mutually with the Purchaser, from time to time, in regard to the Contractor's supervision plans and schedules for providing the services under the Contract to match the erection programme of the Purchaser.

10.5 The Contractor shall also intimate the programme of the visit of the Contractor's personnel to site and departure from site. The Engineer will have the right to review the list of such personnel and ask for increase in the strength or reschedule the visits of such personnel, if in the opinion of the Engineer, the list of personnel furnished by the Contractor is not sufficient for effective performance of the Contract.

10.6 The Contractor shall have the complete responsibility for the safety of all persons employed by the Contractor, and all the properties under his custody during the Contract. This requirement shall apply continuously till the completion of the Contract and shall not be limited to normal working hours.

#### **11.0 ACCESS TO SITE**

11.1 The Contract, so far as it is executed on the Purchaser's premises, shall be carried out at such time as the Purchaser may approve.

11.2 In the execution of the Contract, no person other than the Contractor or his duly appointed representatives, shall be allowed to work on the site, except by special permission, in writing, from the Engineer or his representative.

#### **12.0 CONTRACTOR'S SITE OFFICE ESTABLISHMENT**

The Contractor can establish a site office at the site and keep posted an authorized representative for the purposes of the Contract if felt necessary at his cost. In such a case any written order or instruction of the Engineer or his duly authorized representatives, shall be communicated to the Contractor at the site office and the same shall be deemed to have been communicated to the Contractor at his legal address.

**13.0 COOPERATION WITH OTHER CONTRACTORS**

- 13.1 The Contractor shall cooperate with all other Contractors and staff of the Purchaser, who may be performing other services on behalf of the Purchaser and the workmen who may be employed by the Purchaser and doing work in the vicinity of the Contractor's work site.
- 13.2 The Engineer shall be notified promptly by the Contractor of any defects in the Erection Contractor's work that could affect the performance of the equipment. The Contractor and the Engineer shall determine the corrective measures, if any, required to rectify this situation after inspection of the works.

**14.0 QUALIFICATION OF CONTRACTOR'S SUPERVISORY PERSONNEL**

- 14.1 The Contractor's supervisory personnel will be adequately qualified, trained and experienced so as to carry out the duties most efficiently and effectively as expected of them. The Contractor's personnel shall have adequate experience of working on similar type of the equipment and similar job. The Contractor's supervisory personnel shall be fluent in English for day to day Communications.
- 14.2 Notwithstanding above if any of the supervisory personnel is not found to be performing his services in a manner as expected of him, under the Contract, the Contractor on advice from the Engineer, shall replace such person(s) at his cost with those acceptable to the Engineer, by mutual agreement.

**15.0 DISCIPLINE OF WORKMEN**

The Contractor shall adhere to the disciplinary procedure set by the Engineer in respect of the employees of the Contractor, if any, at site. The Engineer shall be at liberty to object to the presence of any representative or employee of the Contractor at the site, if in the opinion of the Engineer, such employee has mis-conducted himself, or is incompetent or negligent or otherwise undesirable, and then the Contractor, after mutual agreement, shall replace such a person objected to.

**16.0 MANPOWER REPORT**

- 16.1 The Contractor shall furnish to the Engineer on the first day of every month, manpower report of the previous month detailing the number of persons scheduled to have been deployed and actually deployed.
- 16.2 The Contractor shall assist the Purchaser to review the 'Manpower Report' in line with Work

Plan as brought out in Clause 12.0 of this section and accordingly advise the Engineer for timely and successful commissioning of the equipment and materials supplied under the Contract.

**17.0 CLEANLINESS**

The offices and the residential areas of the Contractor's employees shall be kept neat and clean to the entire satisfaction of the Engineer.

**18.0 FIELD OFFICE RECORD**

The Contractor shall maintain at his site office, up-to-date copies of all drawings, specifications and other Contract documents and any other supplementary data, complete with all the latest revisions thereto. The Contractor shall also maintain in addition the continuous record of all changes to the above Contract documents, drawings, specifications, supplementary data, etc. effected at the field and on completion of his total assignment under the Contract shall incorporate all such changes on the drawings and other engineering data to indicate as installed conditions of the equipment furnished and erection supervised under the Contract. Such drawings and engineering data shall be submitted to the Engineer in requisite number of copies as per terms of the Contract.

**19.0 INSURANCE**

19.1 The insurance of all Contractor's personnel against any accident during erection, testing and commissioning etc., shall be arranged by the Contractor at his cost. The Contractor shall also indemnify the Purchaser against all liabilities arising out of any accidents, loss and/or any other reasons. The personal insurance for the Contractor's personnel deputed to site under this Contract shall also be arranged by the Contractor at his cost.

**19.2 COMPREHENSIVE AUTOMOBILE INSURANCE**

This insurance shall be in such a form as to protect the Contractor against all claims for injuries, disability, disease and death to member of Public including the Purchaser's men and damage to the property of others arising from the use by the Contractor's personnel of motor vehicles during on or off the site operations, irrespective of the ownership of such vehicles.

**19.3 WORKMEN'S COMPENSATION INSURANCE**

This insurance shall protect the Contractor against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the Contractor against claims for injury, disability, disease or death of his or his subcontractor's employees which for any reason are not covered under the Workmen's Compensation Act, 1948. The



liability shall not be less than Workmen's Compensation: As per statutory provisions  
Employee's Liability: As per statutory provisions.

**19.4 COMPREHENSIVE GENERAL LIABILITY INSURANCE**

This insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the Contractor, his agents, his employees, his representatives and subcontractors or from riots, strikes and civil commotion. This insurance shall also cover all the liabilities of the Contractor arising out of the Clause entitled "Defence of Suits" under General Conditions of Contract of this Volume.

The hazards to be covered will pertain to all the works which and areas where the Contractor, his subcontractors, his agents and his employees have to perform work pursuant to the Contract.

19.5 The above are only illustrative list of insurance covers normally required and it will be the responsibility of the Contractor to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either direct or indirect, in pursuance of the Contractor.

**20.0 SERVICES AND FACILITIES TO BE PROVIDED BY THE PURCHASER FOR SUBSTATION.**

20.1 The Purchaser shall provide the following facilities to the Contractor.

20.1.1 Adequate unfurnished office accommodation at site for the Contractor's supervisory personnel with necessary provision of ceiling fans, lighting, drinking water and sanitary facilities. No charges shall be leviable for the electricity and water consumed for the site office.

20.1.2 The Contractor shall provide necessary first-aid facilities for all his employees, representatives working at the site. Enough number of Contractor's personnel shall be trained in administering first-aid.

The Purchaser will assist the Contractor, in case of an emergency, in obtaining the services of an ambulance for transportation to the nearest hospital.

20.1.3 One intercom telephone connection in Contractor's site office from the project's local telephone exchange without cost if available at the site.

20.1.4 Necessary assistance to the Contractor for getting P&T telephone connections for use in their office/residence on specific request from the Contractor.

**21.0 RESIDENTIAL ACCOMMODATION:**

No accommodation will be provided to the Contractor's personnel at site. The Contractor shall make his own arrangements in this regard. The Purchaser shall not provide any arrangement for the transportation of the contractor's personnel from the place of residence to the place of work.

**22.0 DELETED**

**23.0 WORKING HOURS AND LEAVE, ETC., OF SUPERVISORY PERSONNEL**

23.1 The personnel shall work normally 8 hours per day within the time from 6-00 to 8-00 PM including one hour rest and six days working per week. If the personnel has worked exceeding this time band, the wages shall be calculated on the basis of overtime payment rate to be mutually agreed upon.

23.2 The personnel shall work normally from Monday to Saturday and shall be given holiday on Sunday every week. The personnel shall also be released from work on national holidays of India i.e., 26th January and 15th August.

23.3 If the personnel has worked in excess of 8 hours a day or worked on holidays, the wages shall be calculated on the basis of overtime payment rate. However, the total hours of overtime per month, should be adjusted not to exceed forty hours.

23.4 Any idle time during the work time schedule, not caused by responsibilities of the Contractor or his personnel, shall be regarded as working time. No payment shall be made for periods of absence.

**24.0 GENERAL**

Subject to the general terms and conditions applicable to erection supervisory service referred to in paragraphs (1.0) to (23.0) above the Contractor shall provide for competent and qualified supervisors to :

- a) assist the Purchaser in planning, coordination, directing and supervising all phases of work.
- b) erect the equipment; and

c) start-up, test and commission the equipment.

**25.0 SAFETY**

The Contractor shall abide by all safety standards as covered in statutory provisions regulations and where such safety standards are not prescribed, the Contractor will ensure a safety standard as directed by the Engineer.

**26.0 COMMISSIONING SPARES:**

It will be the responsibility of the Contractor to provide all commissioning spares required for initial operation till the equipment is declared by the Purchaser as ready for Trial operation.

The Contractor shall furnish a list of all commissioning spares within 60 days from the date of letter of award and such list shall be reviewed by the Purchaser and mutually agreed to. However, such review and agreement will not absolve the Contractor of his responsibilities do not suffer for want of commissioning spares. All commissioning spares shall be deemed to be included in the scope of the Contract at no extra cost to the Purchaser.

These spares will be received and stored by the Contractor at least 3 months prior to the schedule date of commencement of Trial operation of the respective equipment and utilized as and when required. The unutilized spares and replaced parts, if any, at the end of successful completion of performance and guarantee test shall be the property of the Contractor and he will be allowed to take these parts back at his own cost with the permission of the Purchaser.

**27.0 CONTRACTOR'S WORK PLAN FOR FIELD OPERATION:**

27.1 In case during the course of construction or during the period of operation of the Contract, erection programme is reviewed by the Purchaser, the same shall be communicated to the Contractor for the purposes of his rescheduling the supervision activities. Such revision in the work programme carried out by the Purchaser shall not in any way be considered as an assumption of any risk or liability by the Purchaser.

**28.0 RESPONSIBILITY:**

By virtue of these services rendered by the Contractor's, supervisors, the Contractor shall assume full responsibility for the result of assembly and erection, and the subsequent performance of the equipment.