



**COMMON DOCUMENT  
TECHNICAL SPECIFICATION  
VOLUME-II (SECTION-I)**

# **GENERAL**

## **GENERAL CLAUSES**

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## **1. GENERAL CONDITIONS**

### **1.1 Responsibility of the Contractor**

The Contractor shall also be responsible for the complete design and engineering, overall co-ordination with internal and external agencies, project management, training of Employer's manpower, loading, unloading, storage at site, inventory management at site during construction, dismantling, re-erection of installations as per Engg Incharge advice, handling, moving to final destination, obtaining statutory authority's clearance for successful erection, and testing and commissioning of the substation.

### **1.2 Specific exclusions:**

The following items of work are specifically excluded from the Contractors scope of work unless otherwise specifically brought out..

I. Substation site selection

II. Land acquisition

### **1.3 Interfacial point for line termination at substation**

The line Contractor shall terminate the transmission line along with insulator hardware and other essential fittings at the substation gantry. The substation Contractor shall provide necessary anchoring plates in co-ordination with the transmission line contractor. The substation Contractor shall be responsible for providing the necessary electrical interconnection from the line conductor to the substation.

### **1.4 Limit of contract**

The scope of work shall also include all work incidental for successful operation and commissioning and handing over of works whether specifically mentioned or not. In general works are to be carried out by the Contractor in accordance with stipulations in Conditions of Contract.

### **1.5 Quantity variation**

The Employer reserves the right to order and delete such works which may be necessary for him within the quantity variation option laid down in the conditions of the contract. This shall include but not be limited to: the manufacture, supply, testing, and delivery to site, erection and commissioning as may be required in accordance with the Conditions of Contract at the prices stated in the Schedules.

The Employer shall be at liberty to order from the Contractor such quantities of the apparatus at any time before the expiration of the maintenance period of the scope of work, provided that such quantities do not exceed the limitation of the Contract Value as defined in the Conditions of Contract. Each separate order for Work at the Option of the Employer shall constitute a section for the purpose of payment and taking over.

The Employer shall also be at liberty to delete from the Contractor such quantities of the apparatus at any time before commencement of supply of works under the detailed scope of work.

### **1.6 Supply of non specified equipment/service during execution of contract.**

The Employer may require the Contractor to supply and install a number of items such as testing and measuring instruments, vehicles, repairing of existing equipment, removal and refurbishment of plant/equipment from one place to another etc., which in the opinion of the Engg Incharge are to the interest of the project execution. These items and services shall not be limited to proprietary goods provided for the project.

Such supplies and services shall be reimbursed against supply and service invoices for the materials or services actually supplied from the manufacturer or supplier of these items. The bidder shall quote on cost for these items for the earmarked funds in appropriate schedules which shall be considered in bid prices. However these costs shall be payable to the Contractor on pro rata basis for the actual amount spent for procurement and availing of the services.

For such items of supply the Contractor shall follow the fair principle of contracting procedure to the satisfaction of Engg Incharge.

## **2. GENERAL PARTICULARS OF SYSTEM**

### **System description**

The following are the general particulars governing the design and working of the complete system of which the Contract Works will eventually form a part:

Electrical energy is generated at a number of thermal and hydro power plants generally located in the North, Central and Southern areas of Orissa State. The system is three phase, 50Hz and power is transmitted at 400kV, 220kV and 132kV to the distribution system, via grid substations, which operate at 33kV, 11kV and 400V. The 400kV and 220kV networks tie into the OPTCL's 400kV and 220kV grid systems operated by OPTCL. The proposed works will increase the interconnection of, and will thus reinforce the 400kV and 220kV networks within Orissa State. The detailed technical parameters of the system are given in the schedules.

### **Substation description:**

OPTCL has adopted the philosophy of installing open terminal air insulated substations. The busbars for 400 KV rigid type and for 220 KV flexible strain type depending upon the choice of the designer considering the overall suitability and economy of the substation to be installed.

### **Layout arrangement**

The Contractor shall study the details of layout arrangements already indicated in the schedules details for the existing substations. The bay width and height of the conductors for these substations shall be achieved by the Contractor in case of extension substations. However the Contractor shall finalise the layout arrangements in case of new substations in line with this Specification with the approval of the Engg Incharge, which shall be meeting at least the basic minimum electrical clearances as specified in the schedules.

### **Location and site description**

Details of the sub-substation locations, their approach, geography and topography has been provided to the extent possible. The Bidder shall make necessary visit to the substation sites and fully appraise himself before bidding. Deviations on account of inadequate data for substation works shall not be acceptable and the Bid shall not be considered for evaluation in such cases.

### **Meteorological data**

Appropriate meteorological data is given in the schedules.

### **Soil data**

Detailed soil investigations in respect of various substations have not been made. However the general characteristics of the soil are given in the schedules. The Contractor shall investigate the properties of the substations and measure the soil resistivity as part of the scope of work.

### **Completeness and accuracy of information**

The Contractor shall note that the information provided above and in the relevant schedules may not be complete or fully accurate at the time of bidding. For his own interest the Contractor is advised to make site visits and fully satisfy himself regarding site conditions in all respects, and shall be fully responsible for the complete design and engineering of the substations.

### **3. DRAWINGS ATTACHED WITH TENDER DOCUMENT**

The various drawings and schedules provided are a part of the specification and for information purposes only. These are not necessarily binding on the part of the Contractor. Bids shall be prepared by the Bidder based on information provided in the drawings and schedules and that gathered by the Bidder himself.

### **4. GUARANTEES TECHNICAL PARTICULARS**

The Contract Works shall comply with the guaranteed technical particulars specified or quoted in the bid. All plant and apparatus supplied under this Contract shall be to the approval of the Engg Incharge .

All plant and equipment supplied under this contract must have been type tested, have been in manufacture and satisfactory service at identical ratings for at least two years. The bidder shall furnish in his bid the necessary supporting data in specified formats for consideration during bid evaluation. If during evaluation non compliance is identified the successful Contractor shall be bound to supply the equipment from manufacturers complying with the stipulated requirements / OPTCL approval renders.

The Contractor shall be responsible for any discrepancies, errors or omissions in the particulars and guarantees.

The Bidder for his own interest, shall establish the technical responsiveness of his bid, shall provide all data in appropriate technical data sheets, general/ technical information, literature, and pamphlets etc. along with the bid.

### **5. COMPLIANCE WITH SPECIFICATION**

All apparatus should comply with this Specification. Any departures from the requirements of this Specification shall be stated in the relevant Bid Proposal Schedules and will be considered-during Bid evaluation. Unless brought out clearly in the technical schedules, it will be presumed that the equipment is deemed to comply with the technical specification.

In the event of there being any inconsistency between the provisions of the conditions of contract and the provisions of this Specification in respect of commercial requirements, the provisions of the conditions of contract shall take precedence for commercial matters and the provisions of this Specification shall take precedence in respect of technical matters.

In case of inconsistency between technical specification & bid proposal sheet, quantities of various items as specified in the bid proposal sheet shall be considered for quoting however the work shall be executed as specified in the technical specification. Only brief description is given in the BPS & the work shall be executed in line with the requirement given in the TS.

The manufacturer and places of manufacture, testing and inspection of the various portions of the Contract Works shall be stated in the relevant Bid Proposal Schedules.

### **6. TEST AND MAINTENANCE EQUIPMENT**

The Contractor shall supply the type and quantity of test and maintenance equipment specified in the Schedules as part of the contract works.

### **7. SPARES**

#### **7.1 General**

The Contractor shall provide the mandatory spares detailed in the Schedules. Provide a list of recommended spare parts (optional spares) together with their individual prices, but that will not be considered for evaluation. The Employer may order all or any of the Optional spare parts listed at the time of contract award . Mandatory spares shall be supplied as part of the Works under this

specification. Additional spares(Mandatory) may be ordered at any time during the contract at the rates stated in the Price Schedule.

## **7.2 Mandatory spares**

The Employer has indicated the requirement of mandatory spares as a percentage of the population of main equipment together with proposed storage locations. The quantities shall be determined by the Contractor and indicated in the relevant Bid Price Schedules. These quantities shall be considered for evaluation of the bids.

## **7.3 Optional spares ( shall not be considered for evaluation purpose).**

The Contractor may recommend a list of optional spare parts together with the quantity and usage rates for their equipment in the relevant Bid Proposal Schedule. The Engg Incharge shall assess their requirement and place orders.

The spares shall include consumable items sufficient for a plant operational period of five years after commissioning, as well as essential replacement parts to cover the event of a break-down which would affect the availability or safety of the plant. Spares shall be available during the life of the equipment and the Contractor shall give 12 months notice of his, or any sub-contractor's, intention to cease manufacture of any component used in the equipment.

The Contractor shall ensure that sufficient spare parts and consumable items are available for his own use during commissioning of the plant. Spares ordered by the Employer shall not be used by the Contractor without the written consent of the Engg Incharge and any spares so used by the Contractor during the commissioning of the plant shall be replaced by the Contractor at the Contractor's expense.

Any spare apparatus, parts and tools shall be subject to the same specification, tests and conditions as similar material supplied under the Scope of Works of the Contract. They shall be strictly interchangeable and suitable for use in place of the corresponding parts supplied with the plant and must be suitably marked and numbered for identification and prepared for storage by greasing or painting to prevent deterioration.

All spare apparatus or materials containing electrical insulation shall be packed and delivered in cases suitable for storing such parts or material over a period of years without deterioration. Such cases shall have affixed to both the underside and topside of the lid a list detailing its contents. The case will remain the property of the Employer.

## **8.0 TRAINING**

The Contractor will be required to provide suitable training for selected staff both on site and at the Contractor's place of work. Details of the training considered appropriate shall be stated clearly, at the bidding stage, based on the number of trainees specified. The cost of training including all course fees shall be included.

The areas in which it is considered training should be provided, and duration of the training courses, are given in this section. Alternative arrangements, where considered appropriate, should be suggested.

Four categories of training are considered appropriate namely:

- I. Hardware maintenance.
- II. Operator familiarisation.
- III. Software management.
- IV. Installation and commissioning techniques.

## **8.1 Hardware maintenance**

Courses for hardware maintenance shall identify techniques for preventative physical maintenance and for identification, isolation and replacement of faulty components. This course shall take place before equipment is delivered to site.

An essential part of the hardware maintenance course shall include highlighting the philosophy of computer based preventive maintenance and identification of the various diagnostic/interrogation facilities available. The Contractor shall supply adequate documented instructions to enable a detailed interrogation and analysis process to be carried out using the diagnostic software facilities. All items of hardware to be supplied shall be covered by the course.

## **8.2 Operator familiarisation**

This course is intended to familiarise the operators with the system and its use in operating and controlling the PLCC network. The course shall ensure that the control room staff are completely familiar with all operational aspects of the equipment. The means of obtaining special data, report logs and all other facilities which would enable the operators to be fully conversant with the system, shall also be incorporated.

It is envisaged that it will be necessary for the Contractor to run operator familiarisation courses each of approximately one week in duration at site for the training of the Employer's staff.

## **8.3 Software management**

This course shall comprise two main areas and shall take place at the Contractor's works before equipment is delivered to site .

**I). A FORMAL COURSE ON THE SOFTWARE FOR EPAX ETC. DETAILING THE VARIOUS MODULES USED AND THEIR INTERACTION.**

**II). A PRACTICAL COURSE ON EDITING THE DATABASE (TO INCORPORATE EXTENSIONS TO THE POWER NETWORKS, INCLUSION OF ADDITIONAL ANALOGUE/DIGITAL SIGNALS FROM EXISTING EQUIPMENT, ETC.) AND GENERATING NEW LOGS, ALPHANUMERIC DISPLAYS, ETC.**

It is envisaged that the software management courses shall extend for a period of approximately six weeks.

### **II.A) Installation and commissioning techniques**

The Employer's staff will be present during the installation and commissioning period and it is essential that they be fully involved in any on-site corrections or modifications to hardware and software equipment.

It is envisaged that it will be necessary for the Contractor to run installation and commissioning techniques courses each of approximately one week in duration at site for the training of the Employer's staff.

### **II.B) Proposals for training and manning**

For each course recommended the following information shall be provided:

- I. Course name and identification.
- II. Short description of the curriculum.
- III. Level of competency required for each course.
- IV. Date and duration.
- V. Maximum number of staff that can attend.
- VI. Location.

## VII. Other important information.

The times at which the various training courses will take place shall be stated, and fully documented notes shall be available to the Employer not later than two months before the commencement of the course.

All training course notes and documentation shall be in the English language.

An estimate of the total number of the Employer's staff required to run, operate and service the works covered by this Specification shall be given if this is different to the numbers specified.

The prices of the training courses shall be detailed in full such that additions or deletions to personnel or courses can be calculated by the Employer without necessarily having to contact the Contractor. This is particularly important for the 'Software management' courses where prices for formal course days and practical course days shall be individually detailed.

## 9.0 ERECTION AT SITE AND ACCOMMODATION

The Contractor shall provide, at his own cost and expense, all labour, plant and material necessary for unloading and erection at the Site and shall be entirely responsible for its efficient and correct operation.

The Contractor shall be responsible for arranging and providing all living accommodation services and amenities required by his employees. He shall also provide suitable office accommodation at each substation site for the sole use by the Engg Incharge (Divisional Engr.) **for new substations only**.

## 10 .0 SITE CONSTRUCTION SUPPLIES

The Contractor shall provide at his own cost and expense, any site supplies of electrical energy which he may require for supplying power for heavy erection plant, welding plant or other tools and lighting and testing purposes.

All wiring for such tackle and for lighting from the point of supply shall be provided by the Contractor and all such installations shall comply with all appropriate statutory regulations to which the Employer is subject.

Wiring shall be of the best quality double insulated flexible cable, suitably fixed, protected and maintained. All necessary precautions shall be taken to ensure the safety of every person employed or working on the Site and this shall include routine inspection of all temporary installations and portable equipment.

The Engg Incharge or his authorised representative may require the disconnection or alteration of any parts which he may consider dangerous.

As soon as any part or the whole of the Contractor's installation is no longer required for the carrying out of the works, the Contractor shall disconnect and remove the same to the satisfaction of the Engg Incharge or his authorised representative.

The contractor shall be responsible for arranging construction water at his own cost.

How ever in case water is available at any substation site, Contractor may request Engg Incharge for availing water at one point, which shall be charged to the contractor at prevailing rates for supply of water by Govt. Dept. / Municipal Authorities.

In no case the work shall suffer on account of the Employer not making available the supply of water and electricity for construction purposes.

## 11.0 SUPERVISION AND CHECKING OF WORK ON SITE

All work on site included in the Contract scope of works shall be supervised by a sufficient number of qualified representatives of the Contractor.



Before putting any plant or apparatus into operation the Contractor shall satisfy himself as to the correctness of all connections between the plant and apparatus supplied under this and other contracts. The Contractor shall advise the Engg Incharge in writing, giving the period of notice as specified in the General Conditions of Contract, when the plant or apparatus is ready for inspection or energisation.

## **12.0 RESPONSIBILITY FOR THE RUNNING OF PLANT BY CONTRACTOR**

Until each Section of the Contract Works has been taken over or deemed to have been taken over under the Conditions of Contract, the Contractor shall be entirely responsible for the Contract Works, whether under construction, during tests, or in use for the Employer's service.

The Contractor shall instruct the Employer's operating staff in the recommended method of operation of the plant supplied. Such instruction shall commence prior to the commissioning of the plant and shall be followed by practical instruction for a period of up to one month after the plant is taken over by the Employer. During this one month period the Contractor shall provide an engineer, on each site that is taken over, to assist with operation of the plant and to provide on-site training of the Employer's operating staff. The training schedule and programme for each substation shall be submitted to the Engg Incharge for approval, three months prior to the substation's planned completion date.

If the Employer shall so require, the Contractor shall provide the services of a skilled engineer acquainted with the running of the plant for any period required by the Employer between commencing of use of any portion of the plant (whether taken over or not) and the expiry of the period of maintenance, the wages for such services being paid by the Employer to the Contractor, except in respect of the carrying out of any work already covered by the Contractor's obligations under this Contract.

When the Contractor ceases to be obliged to maintain a supervising engineer on the Site under the foregoing provisions of this clause, the Contractor shall, until the expiration of the period of maintenance, make such arrangements as to ensure the attendance on site within 24 hours of being called upon by the Engg Incharge of a competent supervising engineer for the purpose of carrying out any work of maintenance or repair for which the Contractor shall be liable. During such part or parts of the said period as the Engg Incharge shall deem it necessary the said representative shall be continuously available on the Site.

Any work which may be necessary for the Contractor to carry out in pursuance of his obligations under the Conditions of Contract shall be carried out with the minimum of interference to the normal operation of the substation. Work on the Site shall be carried out at such time and during such hours as the Engg Incharge may require.

## **13.0 COMPLIANCE WITH REGULATIONS**

All apparatus and material supplied, and all work carried out shall comply in all respects with such of the requirements of all Regulations and Acts in force in the country of the Employer as are applicable to the Contract Works and with any other applicable regulations to which the Employer is subject.

The Contractor shall fully inform himself of the requirements of the local Laws, Regulations and rules in-force in the State of Orissa, especially with respect to local employment laws, licensing requirements, electrical safety rules and regulations, building regulations and planning procedures.

The Contractor shall be responsible for applying for all necessary licenses; including Electrical Contractors License, Workman's Permits and Certificates of Competency for Supervisors, and local government approvals required for the contract works and for the payment of all necessary fees associated with such licenses and approvals.

Correspondence with the Electrical Inspector shall be conducted through the Engg Incharge (Divisional Engr.), but the Contractor shall provide all necessary information, regarding the contract works, as may be required by the Electrical Inspector.

Additionally the Contractor shall also follow the minimum regulations on safety, employees welfare, industry etc. as stipulated under the relevant Clause of this section.

#### **14.0 MAINTENANCE AND CLEARING OF SITE**

The placing of materials and plant near the erection site prior to their being erected and installed shall be done in a neat, tidy and safe manner. The Contractor shall at his own expense keep the site area allocated to him and also the erection area of the Contract Works reasonably clean and shall remove all waste material as it accumulates and as directed by the Engg Incharge from time to time.

#### **15.0 INSURANCE**

##### **15.1 General**

In addition to the conditions covered under the Clause titled insurance in the Special Conditions of Contract, the following provisions will also apply to the portion of works to be done beyond the Suppliers own or his sub-Contractors manufacturing Works.

##### **15.2 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 the claims for injury, disability, disease or death of his or his sub-contractor's employees, which for any reason are not covered under the Workman's Compensation Act, 1948. The liabilities shall not be less than;

- |     |                         |                             |
|-----|-------------------------|-----------------------------|
| I.  | Workmen's' Compensation | As per statutory provisions |
| II. | Employee's liability    | As per statutory provisions |

\* According to the Govt. rules.

##### **15.3 Comprehensive auto mobile insurance**

This insurance shall be in a such a form to protect the Contractor against all claims for injuries, disability, disease and death to members of public including the Employer's men and damage to the property of others arising from the use of motor vehicles during on or off the Site operations, irrespective of the ownership of such vehicles. The minimum liability covered shall be as herein indicated:

- |      |              |   |                               |
|------|--------------|---|-------------------------------|
| I.   | Fatal Injury | : | Rs. 100,000/- each person     |
| II.  | Property     | : | Rs. 200,000/- each occurrence |
| III. | Damage       | : | Rs. 100,000/- each occurrence |

\* As per latest prevailing Govt. rules.

##### **15.4 Comprehensive General Liability Insurance**

This insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of members or public or damage to property of others, due to any act or omission on the part of the Contractor, its agents, its employees, its representatives and sub-contractors or from riots, strikes and civil commotion.

The hazards to be covered will pertain to all works and areas where the Contractor, its sub-contractors, agents and employees have to perform work pursuant to the Contracts.

The above are only an 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 its liabilities either direct or indirect, in pursuance of the Contract.

## **16.0 PROTECTION OF MONUMENTS AND REFERENCE POINTS**

The Contractor shall ensure that any finds such as relics, antiques, coins, fossils, etc. which he may come across during the course of performance of his works either during excavation or elsewhere, are properly protected and handed over to the Employer. Similarly, the Contractor shall ensure that the bench marks, reference points, etc. which are marked either with the help of Employer or by the Employer shall not be disturbed in any way during the performance of his works. If any work is to be performed which disturbs such reference points, the same shall be done only after these are transferred to other suitable locations under the direction of the Employer. The Contractor shall provide all necessary materials and assistance for such relocation of reference points etc.

## **17 .0 WORK AND SAFETY REGULATIONS**

The Contractor shall ensure safety of all the workmen, plant and equipment belonging to him or to others, working at the Site. The Contractor shall also provide for all safety notices and safety equipment required by the relevant legislation and deemed necessary by the Engg Incharge .

The Contractor will notify, well in advance to the Engg Incharge, his intention to bring to the Site any container filled with liquid or gaseous fuel, explosive or petroleum substance or such chemicals which may involve hazards. The Engg Incharge shall have the right to prescribe the conditions under which such a container is to be stored, handled and used during the performance of the works and the Contractor shall strictly adhere to and comply with such instructions. The Engg Incharge shall also have the right, at his sole discretion, to inspect any such container or such construction plant and equipment for which materials in the container is required to be used and if in his opinion, its use are not safe, he may forbid their use.

No claim due to such prohibition or towards additional safety provisions called for by him shall be entertained by the Employer.

Further, any such decision of the Engg Incharge shall not, in any way, absolve the Contractor of his responsibilities and in case use of such a container or entry thereof into the Site areas is forbidden by the Engg Incharge the Contractor shall use alternative methods with the approval of the Engg Incharge without any cost implication to the Employer or extension of work schedule.

Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, the Contractor shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulations laid down in Petroleum Act 1934, Explosives Act 1948 and amendments thereof, and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the Engg Incharge. In case, any approval is necessary from the Chief Inspector (Explosives) or any statutory authorities, the Contractor shall be responsible for obtaining the same.

All equipment used in construction and erection by Contractor shall meet Indian or International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipment shall be strictly operated and maintained by the Contractor in accordance with manufacturers operation manual and safety instructions and as per any existing Guidelines/Rules in this regard.

Periodical examinations and all tests for all lifting and hoisting equipment and tackle shall be carried out in accordance with the relevant provisions of Factories Act 1948, Indian Electricity (Supply) Act and associated Laws/Rules in force, from time to time. A register of such examinations and tests shall be properly maintained by the Contractor and will be promptly produced as and when desired by Engg Incharge.

The Contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need, as may be directed by the Engg Incharge who will also have the right to examine such safety equipment to determine it's suitability, reliability, acceptability and adaptability.

Where explosives are to be used, the same shall be used under the direct control and supervision of an expert, experienced and qualified competent person, strictly in accordance with the Code of Practices/Rules framed under Indian Explosives Act pertaining to handling, storage and use of explosive.

Contractors employing more than 250 workmen whether temporary, casual, probationer, regular or permanent or on contract, shall employ at least one full time officer exclusively as Safety Officer to supervise safety aspects of the equipment and workmen. Such an officer will co-ordinate with the Project Safety officer of the Employer.

The name and address of the Safety Officer of the Contractor will be promptly informed in writing to the Engg Incharge with a copy to the Safety Officer-in-charge before he starts work or immediately after any change of the incumbent is made during currency of the Contract.

In case any accident occurs during the construction, erection or other associated activities undertaken by the Contractor, thereby causing any minor or major or fatal injury to his employees due to any reason whatsoever, it shall be the responsibility of the Contractor to promptly inform the same to the Engg Incharge and also to all the authorities envisaged under the applicable laws.

The Engg Incharge shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way as may cause accidents or endanger the safety of the persons and/or equipment. In such cases, the Contractor shall be informed in writing about the nature of hazards and possible injury/accident and he shall remove shortcomings immediately. The Contractor, after stopping the specific work, can if felt necessary appeal against the order of stoppage of work to the Engg Incharge within three days of such stoppage of work and the decision of the Engg Incharge in this respect shall be conclusive.

The Contractor shall not be entitled for any damages or compensation for stoppage of work due to safety reasons and the period of such stoppage of work will not be taken as an extension of time for completion of work, nor will it be the grounds for waiver of any part of suppliers liability for timely completion of the works.

The Contractor shall follow and comply with all Safety Rules, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any conflict between statutory requirement and Safety Rules referred above, the most stringent clause shall be applicable.

If the Contractor fails in providing safe working environment as per Safety Rules or continues the works even after being instructed to stop work by the Engg Incharge, the Contractor shall promptly pay to the Employer on demand, compensation at the rate of Rs. 5,000/- per day or part thereof till the instructions are complied with and so certified by the Employer. However, in case of accident taking place causing injury to any individual, the provision contained in subsequent paragraph as here below shall also apply in addition to the compensation mentioned in this paragraph.

If the Contractor does not take all safety precautions and comply with Safety Rules as prescribed by the Engg Incharge or as prescribed under the applicable law, to safeguard equipment, plant and personnel the Contractor shall be responsible for payment of compensation to the Employer as per the schedule given below.

If the Contractor does not prevent hazardous conditions which may cause injury to his own employees, employees of other Contractors, or the Employer or any other person at Site or adjacent thereto, the Contractor shall be responsible for payment of compensation to the Employer as per the following Schedule:

Fatal injury or accident causing death.	Rs. 100,000/- per person	Applicable for injury or death to any person whomsoever.
Major injuries or accident causing 25% or more permanent disability.	Rs. 20,000/- per person	Applicable for injury or death to any person whomsoever.

\* As per prevailing Govt. rules.

Permanent disability shall have the same meaning as indicated in Workmen's Compensation Act. The compensation mentioned above shall be in addition to the compensation payable to the workmen/employees under the relevant provisions of the Workmen's Compensation Act and rules framed thereunder or any other applicable law as applicable from time to time. In case the Employer is made to pay such compensation, the Contractor will reimburse the Employer such amount(s) in addition to the compensation indicated above.

## **18 .0 FOREIGN PERSONNEL**

If necessary for the execution of the works, the Contractor shall bring foreign supervisors for the execution of the Contract at his own cost. The Contractor shall submit to the Employer data on all personnel he proposes to bring into India for the performance of the works under the Contract, at least Sixty (60) days prior to their arrival in India. Such data shall include the name of each person, his present address, his assignment and responsibility in connection with the works, and a short resume of his qualifications and experience etc. in relation to the work to be performed by him.

Any person unsuitable and unacceptable to the Employer, shall not be brought to India. Any person brought to India, and found unsuitable or unacceptable to the Employer shall be immediately removed from Site and repatriated. If found necessary, he may be replaced by other personnel acceptable to the Employer.

No person brought to India by the Contractor for the works shall be repatriated without the consent of the Employer in writing, based on a written request from the Supplier for such repatriation giving reasons for such an action to the Employer. The Employer may give permission for such repatriation provided the Employer is satisfied that the progress of work will not suffer due to such repatriation.

The cost of passports, visas and all other travel expenses to and from India, shall be to the Contractor's account. The Employer will not provide any residential accommodation and/or furniture for any of the Contractor's personnel including foreign personnel. Contractor shall make his own arrangements for such facilities.

The Contractor and his expatriate personnel shall respect all Indian Acts, Laws, Rules and Regulations and shall not in any way, interfere with Indian political and religious affairs and shall conform to any other rules and regulations which the Government of India, and the Employer may establish on them. The Contractor's expatriate personnel shall work and live in close co-operation and co-ordination with their co-workers and the community and shall not engage themselves in any other employment either part-time or full-time nor shall they take part in any local politics.

The Employer shall assist the Contractor, to the extent possible, in obtaining necessary certificates and other information needed by the Government agencies.