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VOLUME - IA

Technical Conditions of Contract (TCC)
"Material Handling & Hiring of site establishment"
services

FOR

IOCL Paradip-Standby SRU (525TPD) Train
project

BHARAT HEAVY ELECTRICALS LIMITED

 <p>BHEL Maharashtra Company</p>	<p>Technical Conditions Of Contract (TCC) PROJECT ENGINEERING & SYSTEMS DIVISION HYDERABAD</p>	<p>Ref No: HY/PE&SD/SC- Projects/TCC/2020- 21/MH&SE/ IOCL- SRU/01</p>		
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<p>COPYRIGHT AND CONFIDENTIAL</p> <p>The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company.</p>	<p>TECHNICAL CONDITIONS OF CONTRACT (TCC)</p> <p>FOR "Material Handling & Hiring of site establishment" services</p> <p>FOR</p> <p>IOCL PARADIP-STANDBY SRU (525TPD) TRAIN PROJECT</p>			
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Chapter I- Project Information

1.0 Project Details			
1	Customer	:	IOCL, Paradip, Odisha
2	Project Information	:	IOCL Paradip-Standby SRU (525TPD) Train project
3	Location	:	Paradip, Odisha
4	Address Detail	:	IOCL, Paradip, Jagatsinghpur District, Odisha, India
5	Nearest Railway Station	:	Paradip Railway Station
6	Road Approach	:	118KM from Bhubaneswar via Cuttack and NH 53
7	Nearest Air Port	:	Biju Patnaik Airport, Bhubaneswar, Odisha, 125KM
11	Ambient Air Temperature (Average)	:	a) Maximum : 39 ⁰ C b) Minimum : 16 ⁰ C
12	Average Relative Humidity	:	71 %
13	Climatic Condition	:	Tropical Climate

Bidder is advised to visit the project site and appraise himself about the local conditions and infrastructure available in the area for fulfilling their commitments under the contract. BHEL will not admit any claims whatsoever on account of Contractor's non-familiarization of local conditions.

Chapter II- Scope of Work

SCOPE OF WORK

1. **Material handling and material management services:** The scope of work in general is as follows:
 - 1.1 Receipt of project material, unloading (from trailers / wagons by suitable crane or by jack and sleeper method or any other approved method by bhel engineer. all the requisite equipment to be arranged by the contractor). This includes the supply of all consumables (sleepers, wooden planks, supports, Tarpaulins) tools & tackles (Hydra/Crane, Slings etc.) and all type of labor (Hydra operator, supervisor, store keeper, rigger, helper etc.) required for Material handling and material management work.
 - 1.2 Preliminary verification of materials at the time of unloading, reporting immediately the discrepancies like damages and shortages noticed.
 - 1.3 Detailed verification of materials with reference to packing list and loading advice slip after unpacking of boxes & crates; repacking, where called for, after detailed verification; preparation of receipt inspection reports.
 - 1.4 Stacking and storing at bhel open storage yard/ covered stores/ closed & semi closed sheds, submission of stacking/storing records.
 - 1.5 Preservation of the materials in accordance with bhel's preservation manual and/or as per bhel's instructions.
 - 1.6 General cleaning, grass cutting and upkeep of storage yard, covered and semi-closed stores sheds within the quoted rates for unloading, verification and stacking.
 - 1.7 Providing materials management services as specified in relevant chapter.
 - 1.8 Rehandling and restacking of materials as and when called for by bhel. This also includes excess/ redundant/ scrap materials returned to stores by bhel's construction & erection contractors.
 - 1.9 Handling and loading of outgoing materials those are to be sent to other destinations.
 - 1.10 Storing, preservation, issuing of material with proper documentation and providing & maintaining the site office set up materials as per chapter-IX for office establishment at IOCL, Paradip on as and when required basis for the period of Twenty four months.
 - 1.11 Approximate weight to be handled in the scope of this work is of the order of 5750 MT. Most of these material required for erection shall be arrive at site well in time for which the contractor shall be required to carry out proper handling, verification, storage and issue as per the scope mentioned in this NIT.
 - 1.12 However depending on site requirements, some of delayed items may need to be delivered directly at site, which may be done by BHEL through its respective erection agency. In such cases where material is received, unloaded and verified by erection agency, the contractor (Material Handling Contractor) will NOT be eligible for any payment for such works. Besides above, BHEL entirely at its discretion (including cases where the contractor is not able to mobilize adequately), may arrange unloading / handling of items through its other contractors. The contractor (Material Handling Contractor) in such cases will NOT be eligible for any payment.
- 1.13 **General**

- a. It is not the intent to specify herein all details of material. Any item related to this work not covered, but necessary to complete the system will be deemed to have been included in the scope of the work.
- b. Site testing wherever required shall be carried out for all standard T& P's.
- c. The contractor shall take full responsibility for satisfactory handling of Material & reconciliation under overall guidance of BHEL and shall locate any cause of malfunction and rectify the same for proper operation.
- d. The work shall be executed under the usual conditions without affecting project work and in conjunction with other operations and contracting agencies at site. The contractor and his personnel shall cooperate with the personnel of other agencies, co-ordinate his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.
- e. All the work shall be carried out as per instructions of BHEL engineer. BHEL engineer's decision regarding the correctness of the work and method of working shall be final and binding on the contractor.
- f. All necessary certificates and licenses required to carry out this work are to be arranged by the contractor expeditiously at his cost.
- g. The contractor shall note that whenever required items/materials shall be unloaded at erection site / assembly yard by the prescribed route without disturbing and causing damage to other works in the most professional manner. All items, Hardware, etc., shall be stored in appropriate manner as per instructions of BHEL engineer.
- h. Contractor shall remove all scrap materials periodically generated from his working area and collect the same at one place earmarked for the same. Load of scraps is to be shifted to a place earmarked by BHEL. Failure to collect the scrap is likely to lead to accidents and as such, BHEL reserves the right to collect and remove the scrap at contractor's risk and cost if there is any failure on the part of contractor in this respect.
- i. The contractor shall ensure that his premises are always kept clean and tidy to the extent possible. Any untidiness noted on the part of the contractor shall be brought to the attention of the contractor's site representative who shall take immediate action to clean the surroundings to the satisfaction of the Engineer-in-Charge
- j. The Contractor may have to execute work in such a place and condition where other agencies also will be under such circumstances.
- k. If any item or equipment is not covered but requires to be unloaded, it shall be carried out by the contractor. Unit rate shall be considered for payment purpose. The unit rates quoted by the contractor shall be uniform for all the items.
- l. Scope of work covered under this specification requires quality workmanship & Material Management. The contractor shall ensure timely completion of work. The contractor shall have

adequate tools, Consumables etc. in his possession. He shall also have adequate trained, qualified and experienced engineers, supervisory staff and skilled personnel.

- m. The manpower deployed by contractor shall match with above scope of works
- n. Contractor shall deploy adequate Manpower for Material Management to meet scope of works and Minimum manpower & T&P's shall be available at site on continuous basis to meet the daily site requirements.

1.14 SITE VISIT

Contractor should visit site and acquire full knowledge & information about site conditions and in & around the plant premises, together with all statutory, obligatory, mandatory requirements of various authorities before submission of bid. Post Award no claim shall be admissible in this regard.

- 1.15 It will be responsibility of the contractor to keep in touch with M/s IOCL and BHEL at site to find out the arrival of consignments, and release of truck/trailers after unloading.
- 1.16 It will be the responsibility of the contractor to coordinate with IOCL and arrange the gate pass for all the material consignments coming inside and going out of the IOCL premises. All the necessary documents required, shall be prepared and get approved from IOCL/BHEL by the contractor for smooth material movement at IOCL Paradip site.
- 1.17 All necessary preservatives, thinners, rust preventives, grease, lubricants etc. required for preservation of components shall be in the scope of contractor. All tools & tackles and other consumables required for preservation of components including supervision shall however be provided by contractor at his own cost. Preservation of components includes applying preservatives, paints, rust preventives, greasing of threaded portions, repainting of work order / DU numbers, component codes etc. After preservation wherever necessary, components will be stacked properly as per original stacking for which no additional payment shall be made.
- 1.18 After the stacking/verification, the materials may need to be restacked / shifted within the storage area as per the instructions of the Engineer. The activity of restacking shall be applicable and payable only if the material after verification need to be shifted and restacked to different location with the help of trailer, crane as per the instruction of BHEL Engineer.
- 1.19 It shall be the responsibility of the contractor to keep in touch with Engineer at site and find out arrival of road consignments. The Contractor shall collect all the parcel way bills / lorry waybills from BHEL site office either personally or through an authorized representative. The contractor or his authorized representative shall, for the purpose, visit the said office every day and collect available GR, RR, LWB, and PWB etc. While collecting the GR, RR, LWB, PWB, contractor or his authorized representative will sign the register maintained for the purpose indicating date and time of collection. The contractor shall keep in touch with carriers and arrange to effect delivery of consignments immediately on their receipts. Delay may cause deterioration of goods apart from attracting demurrage charges. Contractor shall also maintain a register (Manual & Digital both) indicating date of RR, LWB, PWB, date of collection of the materials from road transport agencies / Lorries and date of stacking them at storage yard of BHEL.

- 1.20 Payment of all demurrage that are due to contractor's fault, would be the responsibility of contractor and to his account. If BHEL has to make payment of demurrage along with freight, the amount so paid as demurrage, for the reasons stated above, shall be paid by the contractor forthwith or would be recovered from bills of the contractor.
- 1.21 Any discrepancy / shortage / damage found in the consignment after taking delivery from the carriers after giving clear receipt would be the responsibility of the contractor and the amount liable to be lost by BHEL on such accounts is recoverable from the contractor. The contractor shall verify the consignments in detail within 7 days of Receipt and report the discrepancies in prescribed formats not later than 14 th day. Any loss on account of delayed reporting shall be recoverable from contractor's bill/any payment due. Contractor shall arrange all facilities to open packages - where required in the presence of BHEL engineer, verify the contents, repack wherever and whenever called for and properly stack them as per storage manual or/and as may be directed by BHEL.
- 1.22 BHEL reserves the right to recover from the contractor any loss which arises out of undue delay / discrepancy / shortage / damage or any other cause during transit and stacking (between the Road and BHEL storage yards / store sheds / project site), when the custody of the equipment is with the contractor.
- 1.23 Pre-defined identification system of the locations of open storage yard, covered stores as well as storage racks has to be designed by the contractor with the approval of BHEL.
- 1.24 Contractor shall submit procedure with sketches of handling of all heavy components to BHEL well in advance and obtain prior approval before unloading and stacking.
- 1.25 Since this contract is intended to be a complete package from material receipt through issue/transactions right up to material reconciliation, full responsibility w.r.t the proper upkeep of facilities e.g. computers, stationary items; ensuring befitting discipline among the store assistants/staff under its control and accounting of materials on stock shall rest with the contractor at all times. In the remote possibility of any untraceable material, customarily BHEL has to process the insurance claim.
To kick off such claim, the contractor shall render all necessary assistance including augmentation of documents (FIR etc) within the quoted price as may be required for realization of the insurance claim.
- 1.26 Since, the trucks / trailers are expected to arrive during any time of the day / night, the contractor shall have his workmen round the clock at site as well as other places as required to unload the materials. Consignments coming on Sundays and Holidays are also required to be handled by the contractor promptly. It will be the responsibility of the contractor to contact the site Engineer / his authorized representative of BHEL at their residence, if required, and obtain instructions to make suitable arrangements. The detention charges, if any, in the event of delay in unloading from the carrier, will be on contractor's account.
- 1.27 It shall be the responsibility of the contractor, to provide all necessary facilities and tools to open the packages, in the presence of the Engineer, verifying their contents, re-packing wherever and whenever necessary, properly stacking them as may be directed by the Engineer. These works should be so done so as to facilitate proper handling, periodical verification of materials, receipt position, stock taking etc.

The contractor shall have experienced persons at site who can maintain the records of dispatch / receipt/ stacking / verification / shortage / damage / missing items etc.

- 1.28 The material / equipment requiring indoor storage will be handled and stacked inside the storage shed (provided by BHEL) by the contractor using own material handling equipment's.
- 1.29 Stacking of the material shall be done as per the instructions and to the satisfaction of the Engineer. The materials shall be so stacked that the same should facilitate easy handling. In the event of any improper stacking BHEL may ask the contractor to re-stack the material properly failing which BHEL may get the job done by any other agency at the risk and cost of the Contractor.
- 1.30 The contractor shall execute the work in the most substantial and workman like manner. The stores shall be handled with care and diligence. Any loss to BHEL due to contractor's lapse / negligence shall have to be made good by the contractor.
- 1.31 In case contractor is not able to unload, transport, stack the material at a pre-determined area, as per direction of the Engineer for any reason whatsoever (including non-availability of crane, tractor trailer and other T&P etc.), BHEL shall be at liberty to get the work done by engaging other agency / equipment / T&P etc. at the risk and cost of the contractor.
- 1.32 If the contractor or his workmen shall break, deface injure or destroy any part of a building, road, Serbs, fenced enclosures, water pipes, cables, drains, electric or telephone posts or wires, trees, stored components or any other property or to any part of erected equipment etc., the contractor shall make the same good at his cost or in default the Engineer may cause the same to be made good by other workmen/agency or by other means and deduct the expense (of which the BHEL Engineer's decision is final) from any sum that may be then or at any time thereafter become due to the contractor or from his security deposit or any other money due.
- 1.33 Mandatory Spares from various manufacturing units of BHEL may come early during the course of the project and handing over to customer shall be taken up accordingly till completion. Vendor has to do proper identification, separate storage, stacking, verification and separate record keeping of these materials. Vendor has to provide assistance to BHEL during handing over of the materials to customer. Any discrepancy / shortage / damage found in the consignment after taking delivery from the carriers after giving clear receipt would be the responsibility of the contractor and the amount liable to be lost by BHEL on such accounts is recoverable from the contractor. The contractor shall verify the consignments in detail within 12 days of Receipt and report the discrepancies in prescribed formats not later than 14 th day. Any loss on account of delayed reporting shall be recoverable from contractor's bill/any payment due.
- 1.34 The contractor will arrange for gate passes and any other permits required for carrying out his work from the respective agencies at his own cost. He will also comply with regulations of the customer within the project area, any of the State Government and other Government agencies.
- 1.35 The owner / employer or his authorized agents may inspect stores, storage yard, etc during the period of the contract awarded to him. The contractor shall make necessary arrangements for such inspection and carry out the rectification pointed out by the owner/employer without any extra cost to the owner / employer. No cost whatsoever such duplication of inspection of work be entertained.

1.36 **Material Management Services:** The contractor under this contract shall provide following categories of services at the project site:

A. Supervision services: Working level supervision of each work spot shall be in the scope of contractor under regular material handling work. On the other hand, supervisory services under MM services shall be at one level higher than working level supervision being done as contractor's responsibility towards material handling work. BHEL requires that these services shall be to oversee and monitor the various operations/activities of material handling process. MM supervisory services shall ensure setting broad guidelines to the working level supervisors, monitoring progress of overall plan vis-à-vis implementation, proper and prompt traceability of stock in the stores, identification of corrective & preventive actions in material handling & storage work and implementation of a systematic process to finally ensure achievement of the project schedule.

These shall also include services of personal assistance in the official work of BHEL's construction manager, secretarial services for correspondences and documentation of various departments of BHEL site (erection, commissioning, finance & accounts, stores/material management etc.). Contractor shall render the services by ensuring deployment of requisite personnel with adequate (minimum diploma in engineering for mm supervision, graduation for secretarial services) educational qualification, having thorough experience in related field to enable understanding the intricacies of and special requirements involved in handling of project materials, inconsistencies and uncertainties associated with in/out flow of materials, project activities at odd hours & holidays and irregular working hours. Contractor shall ensure prompt and timely availability of such services. The unit of measurement of such services rendered satisfactorily by one person during one month shall be termed as one 'Man-Month'.

B. Menial Services: Scope shall include services of Office Boy/ Messenger/ Peon/ Watchman/ at BHEL office and stores, for handling correspondences (Dak, Documents, Drawings, etc), and other services e.g. Gardening, Cleaning etc. Man-months spread across various nature of services shall be deployed promptly as per the instruction of BHEL. For definition of Man-Month refer above.

1.37 **Record Keeping:** Contractor shall prepare, maintain and update various MM records, associated with materials management operation of BHEL at project site.

Two systems of record keeping/capturing information & data at various stages are in vogue viz.

I. Manual ledgers & records.

II. Computerized database application: BHEL has developed a software application named site operations management system (SOMS) that Captures all the data in the entire chain of transactions starting with Master list of project materials, records of dispatch, receipt, Inspection, issue, return, consumption etc. Some of these records are master shipping/packing list, LR/RR register, Daybook register, stock register, records of issues to & return of materials in respect of various erection subcontractors, insurance claim records, periodical status reports in various formats covering desired aspects and output information as per BHEL/Client's requirement. Contractor will provide necessary hardware, software & stationary etc. and shall take utmost care to ensure that these properties and records are protected from any Damage or loss. BHEL will recover the cost of such property / expenses of restoration from the contractor with 30% overhead charges

in case of any loss/damage attributable to negligence/failure on contractor's part. The contractor under this contract shall complete induction of following categories of resources within the quoted item rates, to ensure establishment of proper materials management at the project site.

1.38 Contractor shall make necessary arrangements to ensure following :

1. Contractor has to maintain contact with local hospital having ambulance facility, scanning & other ultra-modern medical facilities required during emergency.
2. Contractor has to ensure pre-employment medical check for all staff & workers.
3. **EMERGENCY VEHICLE:** Contractor shall arrange / tie-up with nearest Hospital / Nursing Home to deal with any emergency including arrangement of ambulance as and when needed.

1.39 **The contractor shall comply with following towards Social Accountability:**

- a. The contractor shall not employ any employee less than 15 years of age in pursuant to ILO convention. If any child labour were found to have been engaged, the Contractor shall be levied with expenses of bearing his education expenditure which will include stipend to substantiate appropriate education or employ any other member of family enabling to bear the child education expenditure.
- b. The contractor shall not engage Forced/ Bonded Labour and shall abide by abolition of Bonded Labour System (Abolition) Act, 1976.
- c. The contractor shall maintain Health & safety requirement as stipulated in the Contract and Contract Labour (Regulation & Abolition) Act, 1970.
- d. The Contractor shall abide by UN convention w.r.t. Human Rights and shall be liable for discrimination / Corporal Punishment for failure in meeting with relevant requirements.
- e. The Contractor shall abide the requirement of Contract Labour (Regulation & Abolition) Act, 1970 for working hours.
- f. The Contractor shall abide by the statutory requirement of Minimum Wages Act 1948, payment of Wages Act 1936.
- g. The Contractor shall arrange potable drinking water to its employees & workers.

2.0 Vehicle services for BHEL Employees: Contractor shall provide services of vehicle to BHEL as specified in the price bid format and as below:

- 1) The vehicle deployed should have standard tools, first aid kit and stepony.
- 2) Vehicle deployed should be of at least 2016 make or later one.
- 3) Not all the vehicle quantity mentioned in the price bid format shall be engaged at once at the start of the contract. Vehicles shall be engaged progressively as per the directions and instructions of BHEL site engineer.
- 4) Amount pertaining to diesel shall be paid extra as per actual rates and consumption based on logbook readings certified by BHEL site engineer.
- 5) The vehicle will be maintained clean both inside & outside on a daily basis.
- 6) The contractor shall pay all applicable taxes and duties.
- 7) Toll/ Border tax/ Parking charges will be reimbursed by BHEL upon production of documentary evidence.

- 8) In case of non-availability of vehicle for minor/major breakdown, an alternative vehicle shall be arranged for maximum of seven days for minor breakdown and about twenty-one days for major breakdown. However, the arrangement of alternative vehicle shall be allowed subject to fitness, roadworthiness and proper documentation of vehicle. Operation hour shall be decided by site representative based on requirement.
- 9) In general, operation of vehicle shall be from 8AM to 8PM. However, in case vehicle is required by BHEL after 8PM, night charges shall be paid extra at the rate of Rs. 200/-per night.
- 10) The contractor shall submit the insurance of the car, which includes the insurance of driver also (valid during the tenure of the contract) after the receipt of the work order.
- 11) All expenses towards salary of drivers, repair & maintenance, engine oil, damages due to accident, comprehensive insurance, road tax, or any other renewals, etc. shall have to be met by owner of vehicle.
- 12) The drivers so deployed must have valid driving license. Drivers so employed should not be under the influence of liquor or intoxicated during the duty hours.
- 13) Refusal to perform duty by drivers will be treated as non-deployment of the vehicle for that particular day and deduction at the rate of three times as per day rental charges will be recovered.
- 14) In case of misbehavior by the drivers, the contractor has to take immediate action and the decision of BHEL's representative in this regard will be final and binding.
- 15) The drive/contractor representative will meet BHEL's representative regularly to get instruction regarding the deployment of the vehicle.
- 16) Should the vehicle deployed meet with an accident, no claim on account of damage to the vehicle or the persons travelling in such vehicle including the employees of the contractor, drivers, cleaner of the vehicle shall be entertained by the company.
- 17) Should the vehicle deployed by the contractor meet with an accident due to reasons attributable to the contractor or his employees and cause damage to the persons/property of the company, the contractor shall liable to make good such losses in the manner as prescribed by the company.
- 18) The company shall further be entitled to recover the amount so paid by way of compensation under the previously mentioned act or under any other deducting the sum from bill or from any other sum due to him.
- 19) The bill along with logbook/ trip sheet and any other documents as required by BHEL's representative will be submitted on completion of a month.
- 20) If contractor fails to provide vehicle services as mentioned in detail in price bid format, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 10% of applicable amount for period of services not provided for respective items on monthly billing. Further, BHEL shall get that work done at the risk & cost of the contractor as per contract conditions and as decided by site engineer of BHEL.

3.0 Catering Services to BHEL Employees:

- 1) Services in scope of this contract shall include cooking and serving of breakfast, lunch and dinner to BHEL employees as per directions and instruction given by BHEL site engineer. Place of cooking and serving shall be provided by BHEL.
- 2) Cook cum caretaker and helper should be skilled in preparing all kind Indian food.
- 3) Cleaning of utensils and cooking premises shall be the responsibility of bidder.

- 4) All the utensils (Cooking and serving) shall be supplied in new condition. No old items shall be accepted.
- 5) One (1) Gas cylinder should always be on standby (Reserve).
- 6) Refrigerator supplied by the contractor shall be of new condition.
- 7) Bidder has to ensure quality and hygiene of food.
- 8) All the cooking ration supply shall be in the scope of BHEL.
- 9) Decision of BHEL's site representative shall be final in case of any dispute.
- 10) Items shall be supplied in perfect working condition. All the services and materials within the scope of this contract shall have to be supplied within seven days of issue of work order.
- 11) Maintenance and repair of materials shall be in the scope of bidder.
- 12) If contractor fails to provide catering services (all services/ individual item) as mentioned in detail in price bid format, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 10% of applicable amount for period of services not provided for respective items on monthly billing. Further, BHEL shall get that work done at the risk & cost of the contractor as per contract conditions.

Chapter III- Facilities in the scope of Bidder/BHEL

S. No.	Description PART I	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.1	ESTABLISHMENT			
3.1.1	FOR CONSTRUCTION PURPOSE:			
a	Open space for office (as per availability)			Location shall be finalized after joint survey with IOCL.
b	Open space for storage (as per availability)			Location shall be finalized after joint survey with IOCL.
c	Construction of bidder's office, canteen and storage building including supply of materials and other services		Yes	
d	Bidder's all office equipment, office / store / canteen consumables		Yes	
e	Canteen facilities for the bidder's staff, supervisors and engineers etc		Yes	
f	Firefighting equipment like buckets, extinguishers etc		Yes	
g	Fencing of storage area, office, canteen etc of the bidder		Yes	
3.1.2	FOR LIVING PURPOSES OF THE BIDDER			
a	Open space for labour colony (as per availability)		Yes	Bidder has to take care.
b	Labour Colony with internal roads, sanitation, complying with statutory requirements.		Yes	
3.2.0	ELECTRICITY			
3.2.1	Electricity For construction purposes of Voltage 415/440 V			
a	Single point source		Yes	NA
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	

S. No.	Description PART I	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.2.2	Electricity for the office, stores, canteen etc of the bidder			Electricity shall be provided by IOCL at one point on chargeable basis. Further distribution shall be done by contractor.
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.3	Electricity for living accommodation of the bidder's staff, engineers, supervisors etc		Yes	.
a	Single point source		Yes	
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.3.0	WATER SUPPLY			
3.3.1	For construction purposes			Water shall be provided by IOCL at one point on chargeable basis. Further distribution shall be done by contractor.
a	Making the water available at single point		Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.2	Water supply for bidder's office, stores, canteen etc			
a	Making the water available at single point		Yes	

S. No.	Description PART I	Scope / to be taken care by		Remarks
		BHEL	Bidder	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.3	<u>Water supply for Living Purpose</u>			Bidder has to take care.
a	Making the water available at single point		Yes	
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.4.0	LIGHTING			
a	For construction work (supply of all the necessary materials) 1. At bidder's office/ area		Yes	
b	For construction work (execution of the lighting work/ arrangements) 1. At bidders office/area		Yes	
c	Providing the necessary consumables like bulbs, switches, etc during the course of project work		Yes	
d	Lighting for the living purposes of the bidder at the colony / quarters		Yes	
3.5.0	COMMUNICATION FACILITIES FOR SITE OPERATIONS OF THE BIDDER			Bidder has to take care
a	Téléphone, fax, internet, e-mail etc.		Yes	
3.6.0	COMPRESSED AIR wherever required for the work		Yes	Bidder has to take care
3.7.0	Demobilization of all the above facilities		Yes	Bidder has to take care
3.8.0	TRANSPORTATION			Bidder has to take care
a	For site personnel of the bidder		Yes	

S. No.	Description PART I	Scope / to be taken care by		Remarks
		BHEL	Bidder	
b	For bidder's equipment and consumables (T&P, Consumables etc)		Yes	
3.9	Work Permits, gate pass etc. from customer for inward and outward movement of manpower, machinery and material		Yes	Bidder shall coordinate, arrange all required gate pass, work permit from customer for smooth work at site without any delay.

Note:

1. BHEL will not be responsible for any loss or damage to the contractor's equipment as a result of variation in voltage or frequency or interruptions in power supply.
2. The Contractor shall be responsible for providing all necessary facilities like residential accommodation, transport, electricity, water, medical facilities etc. at his own cost as required under various labour laws and statutory rules and regulations framed there under to the personnel employed by him.
3. Provision of distribution lines of both electrical power and water from the central points to the required place with proper distribution boards observing the safety rules laid down by the electrical authorities of the state shall be done by the contractor, supplying all the materials like cables, distribution board, switch boards, TPN, CBS, ELCBS/ MCCBS/ Copper / Brass clamps, copper conductor, change over switches pipes etc. at his own cost. If any failure is caused in supply of the power and water, it is the responsibility of the contractor to make alternate arrangements at his cost. The contractor shall adjust his working shifts / hours accordingly and deploy additional manpower if necessary so as to achieve the targets. The energy meter to be installed by the contractor & shall be tested and certified by State Electricity Board or any other agency approved by M/s THDCIL at his cost.
4. The contractor while drawing construction power supply from Distribution Board should strictly adhere to following points.
 - a) All electrical installations should be as per Indian Electricity rules.
 - b) All distribution Boards installed by the contractor should be constructed with fireproof materials viz. Steel frames, Bakelite sheets etc.
 - c) Connection for single phase should be taken from phase and neutral. Nowhere the connection should be taken with earth as neutral.
 - d) All electrical connections should be made through connectors, nuts and bolts, switches, plug and sockets. Loose connections or hooking up of wires shall not be permitted.
 - e) Contractor have to make their own earthing arrangement for their equipment / DB earthing.
 - f) All electrical equipment / tools and plants should be properly earthed. DBs to be earthed diagonally opposite at two points.
 - g) Contractor should use “MCCB” and “ELCB” either on incoming or outgoing connections to the DBs.
 - h) Contractor should ensure that all the CBs / TPNs/ Fuses/ MCCB / ELCB cables etc. should be of adequate rating/ capacity.
 - i) For permission of supply connections contractor has to submit a test report of their installations with a single line diagram of connected/ proposed loads.
 - j) Contractor should install PCs ALONG WITH MODEM (Other than PC and other IT supplies for BHEL as mentioned in price bid format) to connect with BHEL server (LAN) AT SITE.

Chapter IV- Tools & Plants to be deployed by Bidder

4. List of minimum major Tools & Plants to be deployed by the contractor:

a) All T&Ps & Consumables are to be arranged by the contractor at his cost.

Sl No	Equipment Description	Qty (In Nos)	Deployment Period		
01	40 MT Crane (Tire mounted)	01	As and when required as per directions of BHEL site engineer		
02	Crane (Pick and carry type Hydra 18 MT)	01			
03	Fork Lift 3T-1 No with operator	01			
03	Wire rope slings	4 sets minimum			
04	Wooden Sleepers Assorted sizes(LXBXH) 3'ft x 6" x 6"	500	Start of contract		
05	Chain block pulley	As per requirement			
06	Slings, 'D'-shackles, Max puller	As per requirement			
07	10/20/50 MT Hydraulic Jacks	As per requirement	As per BHEL site engineer's directions		
08	SPANNER SETS RING/ D UPTO 56 MM	1 Set	Start of contract		

Note:

1. Contractor shall bring all the T&Ps required to handle the material as mentioned in chapter VI.
2. The above list specifies only major T&Ps (may not be complete) to be deployed by the contractor and is based on minimum requirement. All additional / other tools and plants including suitable capacity D shackles, slings, rails, sleepers, hydraulic / mechanical jacks etc which are required for satisfactory & timely completion of work shall also be deployed by the contractor within finally accepted rate / price.

3. The above list is only indicative and these T&Ps may not be required for entire contract period but contractor shall ensure the availability of the T&Ps as per work requirement and T&P Deployment schedule. T&P Deployment schedule shall be finalized at site in consultation with BHEL Engineer based on the work fronts/work requirement. BHEL decision shall be final and binding regarding the T&P deployment schedule. Contractor shall mobilize / maintain the T&P's as per the deployment schedule notified time to time by BHEL Engineer.
4. Any additional item required in addition to above mentioned T&P for proper execution of scope of work, contractor has to arrange such T&P within quoted rate on the instruction of BHEL in writing in a reasonable period within two weeks from the written instruction from BHEL.
5. Contractor shall ensure that all the MMEs, T&Ps, cranes and trailers mentioned in the deployment plan shall be in good working condition throughout the period mentioned in the deployment plan.

4.1 Other Requirements of Contractor's Instruments & T&P

- a) All the distribution boards, connecting cables, hoses etc., and temporary connection work including electrical connections shall have to be arranged by the contractor at his cost.
- b) Equipment, vehicles, tools and plants and materials brought to site by the contractor from his resources shall have distinctive identification marks and the description and quantity shall be intimated to BHEL in writing by the contractor.
- c) No material or equipment or tools etc. shall be taken out of the worksite without the written consent of BHEL.
- d) BHEL shall not be responsible for the safety and protection of the materials of the contractor and the contractor shall make his own arrangements for proper watch and ward for his materials.
- e) Until such time the work is taken over by BHEL/Execution Agencies, the contractor shall be responsible for proper protection of material. The contractor shall during the progress of work properly cover up and protect any part of the work liable to damage by exposure to the weather and shall take every reasonable precaution against accident or damage to the work from any cause.

NOTE:

**THIS ABOVE LIST IS ONLY INDICATIVE AND NEITHER EXHAUSTIVE NOR LIMITING.
CONTRACTOR SHALL DEPLOY ALL NECESSARY T&P AND CONSUMABLES TO MEET
THE SCHEDULES & AS PRESCRIBED BY BHEL ENGINEER AND REQUIRED FOR
COMPLETION OF WORK.**

Chapter V-Time Schedule

5.1 Time Schedule

5.1.1

The entire work of material handling and site office establishment services for this project shall be completed within 24 (Twenty Four) months from the date of commencement of site work.

5.1.2

During the total period of contract, the contractor has to carry out the activities in a phased manner as required by BHEL.

5.1.3

The Material Handling work shall be commenced as may be stipulated in the letter of intent and shall be deemed as completed in all respect only when the project is completed and the decision of BHEL in this regard shall be final and binding of the contractor.

5.1.4

Overall project schedule for this Project shall be as mutually agreed between BHEL & bidder.

5.2 Commencement of Contract Period

The date of commencement of contract period shall be within one week of issue of LOI or from date of the mutually agreed date between the bidder and BHEL engineer to start the work. In case of discrepancy, the decision of BHEL engineer will be final.

Commencement of services pertaining to line item A and B may vary and decision for the same shall be based on sole discretion of BHEL. Contractor shall mobilize the resources accordingly.

5.3 Mobilization for material Handling & Associate works.

5.3.1

Vendor shall reach at site & deploy all the minimum T&P's, Consumable, and Manpower along with Bidder's site establishment as per directions of Construction Manager/ Project Manager of BHEL

5.3.2

In order to meet above schedule in general, and any other intermediate targets set, to meet customer / project schedule requirements, contractor shall arrange & augment all necessary resources from time to time on the instructions of BHEL.

5.4 CONTRACT PERIOD

The contract period for completion of entire work under scope shall be **24 (Twenty Four) months** from the —COMMENCEMENT OF CONTRACT PERIOD as specified earlier for completion of the entire work under this package.

Chapter VI- List of Major Equipment

6.0 List of Major Equipment for Material Handling: Following is the tentative list of equipment and materials that are to be handled by MM contractor. Contractor shall unload, stack, and preserve, re stack the material, which can be handled by 18MT and 40MT capacity crane. Material handling of consignments for which crane capacity of more than 40MT is required, shall be handled by respective erection agencies directly.

Material details					
A	HPEP Hyderabad Material				
Sl No	Description of item	Dimension	Qty (Nos)	Weight (Kg/Unit)	Total Weight
1	Amine Acid Gas preheater (088-E-001)				
1.1	Complete Assly	L 8000 x W 1000 x H 1500	1	16000	16000
2	Air Preheater (088-E-002)				
2.1	Complete Assly	L 5000 x W 1400 x H 1900	1	25000	25000
3	1st Condenser (088-E-003)				
3.1	Complete Assly.	L 16000 x W 2400 x H 3000	1	40000	40000
4	1st Reheater (088-E-004)				
4.1	Complete Assly.	Ø 1500 x H 7500	1	42000	42000
5	2nd Condenser (088-E-005)				
5.1	Complete Assly.	L 15500 x W 2300 x H 3000	1	40000	40000
6	2nd Reheater (088-E-006)				
6.1	Complete Assly.	Ø 1500 x H 7500	1	43000	43000
7	Final Condenser (088-E-007)				
7.1	Complete Assly.	L 17000 x W 1600 x H 3500	1	50000	50000
8	BFW Preheater (088-E-008)				
8.1	Complete Assly.	L 3400 x W 400 x H 800	1	1500	1500
9	Sulphur Cooler (088-E-009)				
9.1	Complete Assly.	L 6000 x W 500 x H 900	1	2,500	2500
10	Condensate Drum Vent Condenser (088-AC-001)				
10.1	Complete Assly.	L 5500 x W 5000 x H 4000	1	12,500	12500

11	Blowdown Cooler (088-AC-002)				
11.1	Complete Assy.	L 6500 x W 2500 x H 3500	1	8,500	8500
12	SULFUR PIT EJECTORS (088-EJ-001A/B				
12.1	Complete Assy.	L 2900 x W 800 x H 900 *	2	450	900
	Total Weight A (MT)				282
B.1	Vessels				
1	Degassing Contactor	2300x15000x16		35000	Assy. weight
2	Acid Gas KO Drum	2200x11000x16		18000	
3	SWS Acid Gas KO Drum	1600x9000x14		9000	
4	Waste Heat Exchanger Steam Drum	-		-	
5	1st Condenser Seal Pot	559x8000x10,12,14		5000	
6	2nd Condenser Seal Pot	508x8000x10,12,14		5000	
7	Final Condenser Seal Pot	457x8000x10,12,14		5000	
8	Degassing Seal Pot	559x8000x10,12,14		5000	
9	Condensate Drum	1200x10000x10		6500	
10	Blowdown Drum	1200x6500x10		5800	
11	Incinerator WHE Steam Drum	-		-	
12	Incinerator WHE Mud Drum	-		-	
13	Fuel Gas KO Drum	900x5500x10		4500	
14	1 st converter	3600x18000x24		8500	Assy. weight
15	1 st converter	3600x18000x24		8500	Assy. weight
	Total Weight B.1 (MT)			269	
B.2	INCINERATOR PACKAGE				
S.No	ITEM DESCRIPTION	Dimensions	Qty	Weight (KG)	
1	Incinerator Burner	Dia - 2.0m , Length - 4m		6000	
2	Incinerator Chamber	Dia - 4.87m , Length - 15.9m		120000	Assy. weight
3	Incinerator Chamber Refractory			130000	Assy. weight

4	Incinerator Fans (Along with motor)	2 no.s, 560kW motors		100000	Assy. weight
5	Incinerator Waste Heat Exchanger	Length-10m, Width-6m, Steam Drum C.L Elevation -14m	200000	Assy. weight	
6	Incinerator Steam Drum				
7	Incinerator Mud Drum				
8	Incinerator Desuperheater				
9	Incinerator Stack	Dia-5m/2.5m, Height-71m		200000	Assy. weight
10	TSP Dosing Package (Skid Mounted)	L-3m, W-3m, H-5m		5000	
11	Supporting Structures & Platforms			40000	
	Total Weight B.2 (MT)			801	
B.3	REACTION FURNACE PACKAGE				
S.No	ITEM DESCRIPTION	Dimensions	Qty	Weight (KG)	
1	Reaction Furnace Burner	Dia - 1.5m , Length - 4m		10000	
2	Reaction Furnace	Dia - 3.76m , Length - 14m		250000	Assy. weight
3	Waste Heat Exchanger Steam Drum	Dia - 2.10m, Length - 6m		45000	
4	Waste Heat Exchanger 1st Pass	Dia - 3.70m, Length - 6m		120000	Assy. weight
5	Waste Heat Exchanger 2nd Pass	Dia - 3.40m, Length - 9m		130000	Assy. weight
6	TSP Dosing Package (Skid Mounted)	L-3m, W-3m, H-5m		5000	
	Total Weight B.2 (MT)			560	
C	Balance of plant (BOP)				
S.No	ITEM DESCRIPTION	Dimensions	Qty	Weight (MT)	
1	Mech			710	
2	Electrical			383	
3	C&I			155	
4	Non IBR Piping			1300	
5	IBR Piping (CS)			350	
6	Valves, etc.			19	

7	Structural steel			1500	
8	Reinforcement Steel			750	
	Total Weight C (MT)			7079	

Note 1. The above list contains total material list of the project. For material handling contract, approximately 5750MT of material shall be considered.

Note 2. No material shall be treated as excess material; Bidder shall unload & store all materials pertaining to the project.

The contractor shall be responsible for the quality of workmanship and shall guarantee the work done, shall rectify/replace at no extra cost, all defects due to faulty/ Mishandling.

In the event of contractor failing to replace/repair the defective works within the time, required BHEL may proceed to undertake the replacement/repairs of such defective supplies/works at the contractor's risk and cost without prejudice to any other points/right

Chapter VII- DG Specification

Technical Spec for DG Set-Silent DG for BHEL site office power back up

Diesel Engine

New Kirloskar /CUMMINS/or any other reputed brands with silent version, cabling to the load to be included. 3 cylinder, inline, 4 stroke cycle, water cooled natural aspirated, developing rated power at 1500 RPM under NTP condition of BS:5514. The engine shall be provided with electrical starting arrangement & shall give the rated electrical output at 0.8 pf, 415V at the alternator terminal.

Alternator

Single bearing alternator suitable for operation generating on required KVA rating at 1500 RPM,415 Volts, 0.8 pf(lag) suitable for 50 Hz ,3 phase, 4 wired system, confirming to BS5000/IS 4722. The Alternator is brushless type, screen protected, revolving field, self-excited, self-generated through an AVR. The alternator should have the following feature

±1.0% Voltage regulation (max) in static conditions

IP: 23 protections with insulation class H

Permissible overload of 10% for one Hr in 12 Hours of operation

Chapter VIII- Schedule of items for site establishment services

Site office services		
Sl No	Item Description	UOM
1	Providing material management supervisory services -2 Nos	Man Months
2	Providing unskilled manpower services for miscellaneous site office works-total 7 nos	Man Months
3	Supplying & providing Packaged drinking water in 20L =5 bottle per day for 22 months=100L*24m*30days=72000	Liter
4	Supplying & establishing Water distribution system for service water from customer point to BHEL site office (Including supply and installation of pump, motor, pipes, cabling all inclusive)	LS
5	Providing installing Operation & Maintenance of 1 No. 25 KVA DG Set (Kirloskar/cummins silent version) & its complete cabling up to load points. To be used as Power back-up and average daily operation of 2 Hrs. Note: Diesel cost shall be paid extra based on actual usage as certified by BHEL engineer.	DG Months
6	Supplying & installation of Sintex Tank-5000 liters including plumbing work	Nos
7	Supplying and Establishing Electricity connection from customer Point including input cable laying & Electricity meter installations, Electricity distribution cabling to porta cabins- Split ACs, illumination points, store area illumination etc.. Including its service/ maintenance to ensure uninterrupted power.	LS
8	Supplying and maintaining portable Chemical Toilet with both septic and overhead tank (20ft. x 10ft. x 8.5t. with all fittings) (Chemical toilet shall contain min 5 nos urinals, 1 No Indian commode, 1 no western commode, 2 no. wash basins, all fitting inclusive)	Months
9	Providing general services of Electrical maintenance (Including Plumbing) for office and site establishment to complete satisfaction of BHEL Engineer and as per direction of BHEL Engineer	Months
10	Providing services of site office(Site office + Chemical toilet + pantry etc.) cleaning including consumables like liquid surface cleaner, dish cleaning bar, broom, mop etc. all inclusive	Months
11	Supply and maintenance of PC for site office (Hire basis)-5 Nos: Minimum Specification: 17" LED Monitor/ Intel Pentium Gold 5405U processor/ 4GBRAM /1TB HDD/Windows 10 /MS Office 2019 /Integrated Intel UHD Graphics, Software installed: AutoCAD 2019, PDF reader Make: Acer/ Lenovo/ HP/ or similar kind	Nos/Month
12	Supply and maintenance of Xerox cum scanner cum printer (Hiring basis) including consumables like Cartridge -Reputed Make (like Xerox, Canon, HP, Samsung, Panasonic, Epson, Dell, Toshiba) Multifunction Laser printer for Size-A3-A5:2 Nos	Months

13	Providing consumables for multifunctional printer, item no 12: 2 nos A4 size 75 GSM paper ream, 1 no A3 size 75 GSM paper ream	Months
14	Providing and maintenance of A0 size B/W wide format printer plotter including consumables like ink tank/ Cartridge Make: HP/ Epson/ Canon or similar make	Months
15	Providing consumables for A0 size plotter, item no 14: Paper rolls, ink cartridges: 2 nos paper rolls	Months
16	Providing, establishing and maintaining services of two landline broadband telephone connections with following minimum requirement: 1. Internet speed: 8Mbps till 2GB per day and 2Mbps beyond 2GB per day with unlimited data download 2. Local+STD calls: Unlimited on any network for unlimited 24 Hours	Months
17	Providing induction cooktop, cooking wares for snacks, serving wares on hiring basis for preparing and serving snacks at site office	Months
18	Providing and maintaining license free analog trans receiver hand held communication device (walkie talkie)-5 Nos: Min Specification: Range 5-6KM, Battery min 2500mAh, Channel capacity min 16 nos	Months

Note:

1. The facilities and services mentioned above are of utmost importance to BHEL for seamless site operation at project site, and contractor shall provide these services without any delay as per the instruction of BHEL site engineer.
2. These items from sl. No 1 to 18 (except item no. 4, 6 & 7 which shall be completed within 21 days from date of start of contract) shall be made available by contractor within 15 days from the start of the contract.
3. However, if contractor fails to provide services of above-mentioned items from sl no 1 to 18 (except item no. 4, 6 & 7) , BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 10% of applicable amount for period of services not provided for respective items on monthly billing.

For item no. 4, 6 & 7 the bidder is required to complete the activity within 21 days from the date of commencement of contract. If the bidder is delaying the completion beyond 21 days for reasons solely attributable to the contractor, BHEL will impose penalty @ 10% of the respective item rate.

Further on failure of the contractor to provide the services/execute the work within the specified time limit as mentioned above in this clause, BHEL reserve the right to get the above work done at the risk & cost of the contractor as per contract conditions by giving a notice of 02 (Two) days.

Chapter X- General

1.0 GENERAL

- 1.1 All the work shall be carried out as per the instructions of BHEL engineer. BHEL engineer's decision regarding the correctness of the work and method of working shall be final and binding on the Bidder.
- 1.2 The Bidder shall at his cost perform any services, tests etc, although not specified but nevertheless required for the completion of work.
- 1.3 If any portion of the work is found to be defective in workmanship or not conforming to BHEL requirements ,the Contractor shall re-do the work at his cost failing which the work will be got done by BHEL at the cost and risk of the contractor.
- 1.3 The terminal points as decided by BHEL shall be final and binding on the Contractor.
- 1.5 The contractor shall make adequate security arrangements including employment of security personnel and ensure protection from theft, fire, pilferage, damage and loss of materials/equipment kept under bidder custody.
- 1.6 All equipment shall be handled very carefully to prevent any damage or loss. No bare wire ropes, slings etc, shall be used for handling of the equipment without the specific permission of the engineer.
- 1.7 Contractor shall ensure proper housekeeping and remove all scrap materials periodically from various work area covered in the scope and deposit the same at the place earmarked for this purpose. In case of contractor's failure to do the same, BHEL reserves the right to remove scrap at contractor's cost and risk.
- 1.8 Access to site for inspection by BHEL and customer engineers shall be made available by the contractor at all times.
- 1.9 Contractor shall mobilize sufficient quantity of sleepers for stacking of materials in his custody.
- 1.10 Site Inspection: The owner/employer / BHEL or his authorized agents may inspect various stages of work during the period of contract awarded to him. The contractor shall make necessary arrangements for such inspection and carryout the rectification pointed out by the owner/employer without any extra cost. No cost whatsoever for such duplication of inspection/work will be entertained.
- 1.11 Filed Quality Assurance Formats: It is the responsibility of the contractor to collect and fill up relevant FQA Log sheets and present the same to BHEL after carrying out the necessary checks as per the log sheets and obtaining the signature of BHEL/Customer in token of their acceptance. Monthly Running Bill Payment to the contractor will be linked with the submission of these log sheets.

1.12 The contractor agrees to indemnify the company against all claims and losses arising as a liability under the Payment of Wages Act, Employees Provident Fund & Miscellaneous Provisions Act, Industrial Disputes Act, Employees State Insurance Act, Contract Labour (Regulation and Abolition) Act, Workmen's Compensation Act, Arbitration Act, Minimum Wages Act, Inter State Migration Act, etc. or criminal law in force so far as they relate to security personnel employed by the contractor for the company.

1.13 Income Tax or any other statutory dues liable to be paid by the contractor shall be recovered from the bills of the contractor for which TDS certificate will be issued by BHEL.

1.14 With regard to the interpretation of the terms and conditions of this contract, the decision of the Head of the Region/BHEL PE&SD shall be final.

1.15 Any dispute arising out of this contract shall be within the jurisdiction of the Court of Hyderabad only.

1.16 Any addition/ deletion on the scope of work and terms and conditions under this contract shall be implemented based on mutual discussions between the "company" and the "contractor".

1.17 Letter of Award No ----- issued by BHEL/PE&SD, Hyderabad (including the enclosures) shall form the integral part of this agreement.

1.18 In witness hereof the parties have respectively set their signature in the presence of:

2.0 COLLECTION AND RETURN OF EQUIPMENT, MATERIALS & CONSUMABLES

2.1 The Contractor should note that the transport of equipment to erection site, assembly yards etc should be done by the prescribed route, without disturbing the other works and contractors and in the most professional manner.

2.2 The contractor shall return all parts, materials & consumables of BHEL remaining unused & extra material in their custody. In case of any misuse or use over actual requirement, BHEL reserves the right to recover the cost of parts/materials used in excess or misused, with departmental charges.

2.3 All packing and forwarding material shall be returned as soon as the material is unpacked. The location for storage of such materials shall be as indicated by BHEL Engineer.

2.4 The terminal points decided by BHEL should be final and binding on the contractor for deciding the scope of work and effecting payment for the work done.

- 2.5 The contractor shall perform any services, tests etc. Which may not be specified but nevertheless required for the completion of work within quoted rates.
- 2.6 All cranes, transport equipment, handling equipment, tools, tackles, fixtures, equipment, materials, manpower, supervisors/ engineers, consumables etc required for this scope of work shall be provided by the contractor. All expenditure including taxes and incidentals in this connection will have to be borne by him unless otherwise specified in the relevant clauses. The contractor's quoted rates should be inclusive of all such contingencies.
- 2.7 All the materials during storing shall be stored well above ground level as necessary to avoid water ingress etc, by use of wooden/ concrete blocks/ sleepers. No material shall be stored directly on the ground at any time.
- 2.8 No BHEL crane will be available under this tender specification for handling of equipment. Contractor shall take specific note of this aspect and shall arrange all necessary T&P and lifting/handling/transportation arrangements..
- 2.9 For any class of work for which no specifications have been laid down in these specifications, work shall be executed as per the instructions of BHEL & suit the site requirement.
- 2.10 The contractor shall perform all required services which may not be specified herein but nevertheless required for the completion of work within quoted rates.
- 2.11 All cranes, transport equipment, handling equipment, tools, tackles, fixtures, equipment, manpower, supervisors/engineers, consumables (excluding those indicated as BHEL scope), etc required for this scope of work shall be provided by the contractor and shall conform to Safety Requirements/ Load Testing etc. as per BHEL/IOCL rules & Regulations at site.
- 2.12 All expenditure including taxes and incidentals in this connection will have to be borne by the contractor unless otherwise specified in the relevant clauses elsewhere here. The contractor's quoted rates shall include of all such contingencies. In this connection refer relevant clause of general conditions of contract.
- 2.13 The contractor shall take due precaution during Materials Handling of equipment/works under these specifications to avoid deface, injure, damages, destruction by contractor or his workmen or servants to any pipelines, railway lines, roads, canals, cables, culverts, drains, sewer, telephone lines, water mains, dykes, poles, pillars, fences, wires, supports and embedment's and other underground or over ground works, Structural or constructions whatsoever and shall at his own cost and initiative forthwith restore and repair any damage thereto the entire satisfaction of customer/BHEL at his own expense or in default, the customer/ BHEL site engineer may cause the same to be made good by other agency or by other means and deduct

the expense with BHEL overhead (of which the site engineer's decision is final) from any sums that may be then or at any time thereafter become due to the contractor or from his security deposit or any other money due.

2.14 As such, the marine cover and erection all risk cover insurance for the project for permanent incorporation of materials and services at site lies with customer. The contractor shall have to take necessary all risk insurance policy (motor vehicles act, worker's compensation act, fatal accidents act, personal injuries insurance act, emergency risk insurance act and/or other industrial legislation from time to time with Indian insurance company(ies) approved by owner **for his manpower and his employees deployed at site under work compensation act including but not limited to third party insurance at the project along with his T&Ps before starting of the work and shall submit the necessary document/policy in support of above to BHEL/customer at site. The insurance policy taken shall be kept in-force till completion of contract. The workmen's compensation insurance and third party insurance liability limits shall be as customer specification. Contractor shall indemnify the customer CORE / BHEL harmless against such losses, which are on account of contractor.**

2.15 Recoveries will be made from contractor's bills for any liability accrued to BHEL/ CORE for the accidents and refund of the same shall be considered later, after the claim is fully settled by insurance authorities.

2.16 Customer has taken the marine cover and all risk cover insurance for the project for permanent incorporation of materials and services at site. However contractor shall take all due precautions, arrange & follow the safety & security requirements/regulations for materials issued to him & works under his execution and shall be responsible for safety & security of these materials & works for any loss or damages. For any damage / loss to the material during inland transportation, storage etc., contractor shall intimate promptly to BHEL/customer and shall prepare & submit the necessary detailed report / documents / information, facilitating inspection / discussions by the officials / surveyors deputed by insurer with all expenditure on contractor's account. Contractor shall take care for timely information for conducting survey, submission of monetary estimate & furnish the requisite documents to surveyors/insurer, taking necessary precautions so that the loss/damage is not aggravated further, protecting damaged goods etc. As part of scope of work.

Contractor shall promptly make repair / rectify/replace and make good any damage or loss to CORE /BHEL materials and works on above account as per instructions of BHEL engineer in charge at site without any delay & waiting for settlement of insurance claim from insurer. Contractor's claim (if any) for such works will be settled as per applicable item rate of contract after settlement of claim from insurer / customer & after ascertaining / establishing that contractor is not responsible for such loss or damages. The contractor's claim for such repair / replacement shall not be more than the payment settled by insurer / customer and in such case the

contractor's payment will be limited to seventy percent of settled amount by insurer/customer against claim amount.

- 2.17 The contractor shall submit survey report/performance report of the tools and plants deployed by him and being utilized on the work under the scope. These survey reports/performance reports are to be obtained by contractor from the customer of BHEL/insurance authorities and submitted to BHEL at no extra cost.
- 2.18 Contractor shall deploy & maintain, the separate exclusive workforce / manpower arrangements and T&Ps resources including the heavy lift equipment /arrangements for Material Handling scope of works.
- 2.19 All vehicles/ electrical motors devices shall have to be provision of fire extinguisher/muffler facilities etc.
- 2.20 Contractor shall provide FIRST AID / emergency medical facilities and maintain these facilities throughout the contract period & extension period (if any) as scope of work.
- 2.21 For any items or class of work not specified herein but required for total completion of work, the same shall be carried out as per BHEL requirement. However, payment of these items/class of work shall be regulated on the basis of rate arrived by the following method:
 - 2.21.1 Based on unit rate of items in the rate schedule.
 - 2.21.2 Wherever any item rate for similar type of work or nearby item rate does not exist in the rate schedule, rate will be worked out on the basis of work element or from fundamentals of estimation.
- 2.22 Dewatering inside material storing area for equipment is contractor scope.

Chapter XI- Storage

1.0 STORAGE

- 1.1 The equipment should be preferably in its original package and should not be unpacked until it is absolutely necessary for its installation. The equipment should be best protected in its cases. It should be arranged away from walls.
- 1.2 The wooden pallet provided for packing itself can be retained for raised platform to protect equipment from ground damps, sinking into around and to circulate air under the stored equipment. This shall also help in lifting the packing with forklift truck.
- 1.3 Periodic inspection of silica gel placed inside the equipment is necessary. It has to be replaced when decolorization takes place or regenerated.
- 1.4 Due care should be taken to ensure that the equipment is not exposed to fumes, gases etc. which can affect electrical contacts of relays and terminal boards.
- 1.5 The storage room and the equipment should be checked at regular interval of every week to ensure protection from termites, mold growth, condensation of water etc. which can damage the equipment.
- 1.6 All panels, electrical equipment's, and other materials kept in the store room should be identified and registered in a book. Inspection report should be recorded. Any discrepancy observed should be communicated to Site In-charge.
- 1.7 Packing material shall be retained if the cubicle to be repacked after inspection.
- 1.8 Cables shall be stored separately and preserved above the wooden supports.

3.0 Sub-Assemblies

- 1.39.4 All sub-assemblies should be kept in a separate place where it is easily accessible.
- 1.39.5 Sub-assemblies should have a protective cover in case it is stored without wooden packing/case to prevent accumulation of dust. Silica gel packets should also be kept along with it.
- 1.39.6 Sub-assemblies should not be stacked one above the other.

4.0 Loose items (wherever applicable)

- 4.1 The loose items supplied for the main equipment falling into various categories like tools, cables, recorders and display units, cable glands, frames etc. are to be categorized and stored separately.

5.0 PRESERVATION OF COMPONENTS

- 5.1 Contractor shall arrange for preservation of components/ materials as per BHEL's storage and preservation manual and/or as per instructions of BHEL Manager.

Chapter XII- Manpower Requirement

1.39.6.1.1.1 MANPOWER REQUIREMENT FOR MATERIAL HANDLING SHALL AS FOLLOWS:

- 1.1 The Site in charge of contractor shall be provided with PCs and good communication facilities like telephone, fax, email etc. at the cost and expense of the contractor. Lack of communication facilities shall not be an excuse for extension of completion date.
- 1.2 All instructions from BHEL/Customer shall be directed to the contractor through the Site in-charge and he shall be responsible for all the contractor's activities at site. The contractor shall name his authorized representative prior to or immediately on commencement of operations at site
- 1.3 The Site In charge shall be present at site during all normal working hours and his contact address after normal working hours shall be made available to BHEL so that if any emergency arises, the presence of the contractor's site Representative at site can be called for.
- 1.4 The contractor shall not change the site Representative without the consent of BHEL. Should BHEL require the replacement of the contractor's site Representative for justifiable reasons (including inadequate progress of work) the contractor shall ensure that replacement is made as soon as possible and work is not allowed to suffer delay on this account.
- 1.5 The contractor shall provide to the satisfaction of BHEL sufficient and qualified staff for the execution of works. If and whenever any of the contractor's staff is found guilty of any misconduct or be incompetent or insufficiently qualified in the performance of his duties the contractor shall remove them from site as directed by Site Engineer.
- 1.6 The contractor shall ensure that all his supervisor's staff and workmen conduct themselves in a proper manner. They shall all be persons who are familiar with and skilled at the jobs allocated to them. Any misconduct / inefficiency noted on the part of the contractor's personnel shall be brought to the attention of the contractor's site representative who shall immediately take such action as necessary including the removal of such misconducting / inefficient persons, if so required by the Engineer-in-Charge.
- 1.7 The contractor shall ensure that replacement for such persons removed from site is provided immediately and the work is not allowed to suffer delay on that account.

Chapter XIII- Documentation

1.39.6.1.1.1.1 DOCUMENTATION

1.1 The following information shall be furnished within one weeks of award of contract for purchaser's approval

- a) Mobilization Plan
- b) Detailed organization chart
- c) Details of T&P available with contractors with document proofs.

1.2 The following information shall be furnished after testing and inspection:

- d) Revalidation of Test certificates of various T&P's, if certificates are found to be invalid or any discrepancies/abnormalities observed in T&P's during execution.

Chapter XIV- Progress and Monitoring of Work

1 PROGRESS AND MONITORING OF WORK.

- 1.1 It is the responsibility of the contractor to provide all relevant information on a regular basis regarding progress, labour availability, equipment deployment, testing, etc.
- 1.2 The contractor shall submit daily, weekly and monthly progress reports, manpower reports, material reports, and equipment reports etc. as per formats specified by BHEL. The progress reports shall indicate the progress achieved against plan, indicating reasons for delays, if any. The report shall also give remedial actions which the contractor intends to make good the slippage or lost time so that further works can proceed as per the original plan the slippages do not accumulate and affect the overall Programme.
- 1.3 The contractor to reflect actual progress achieved during the month and shall be submitted to BHEL, so that slippages can be observed and necessary action taken in order to ensure that the situation does not get out of control shall update the construction schedule forming part of this contract each month.
- 1.4 If required by BHEL, the contractor shall change the sequence of his operation so that work on priority sectors can be completed within the projects schedule. The contractor shall afford maximum assistance to BHEL in this connection without causing delay to agreed completion date
- 1.5 In addition a weekly / fortnightly progress meeting shall be held at BHEL site office for coordinating job progress and all agreements reached there at shall be maintained.
- 1.6 Wherever sequences are furnished by BHEL, the contractor shall follow the same sequence.
- 1.7 The manpower reports shall clearly indicate the manpower deployed, category wise specifying also the activities in which they are engaged.
- 1.8 During the course of Material handling, if the progress is found unsatisfactory, or if the target dates fixed from time to time for every milestone are to be advanced, or in the opinion of BHEL, if it is found that the skilled workmen like fitters, operators, technicians employed are not sufficient BHEL may induct required additional workmen to improve the progress and recover all charges incurred on this account including all expenses together with BHEL overheads from contractor's bill.

Chapter XV- Termination

5 **TERMINATION:**

Notwithstanding anything contained herein the contract may be terminated with due notice of one month on either side.

WITNESS

(with full address)

1.

2.

Signature of the Contractor

(To be signed by a person holding valid
Power of Attorney of the Company)

WITNESS

1.

2.

For and on behalf of
BHARAT HEAVY ELECTRICALS LIMITED

Chapter XVI: Obligations of the Contractors

1.1 The contractor shall fully comply with the following enactments:

- (a) Contract Labour (R & A) Act, 1970 and rules formed therein under Central Rules.
- (b) Minimum Wages Act 1948 (Wage Rates not less than that notified by State Labour Department / Central Labour Dept., / BHEL whichever is higher from time to time).
- (c) Payment of Wages Act.
- (d) ESI Act, 1948
- (e) EPF Act, 1952
- (f) Employees' Compensation Act, 1923.
- (g) Provisions of Factories Act 1948 & Rules thereof
- (h) The inter-state migrant workmen (regulation of employment and conditions of service) Act, 1979
- (i) Payment of Bonus Act, 1965
- (j) Payment of Gratuity Act, 1972

1.2 The contractor shall obtain License from the Assistant Labour Commissioner (Central), or appropriate government if he engages twenty or more workmen.

1.3 The Contractor shall produce the following Registers and forms before commencement of work, for verification by the Executing Officer.

- (a) Form XII - Register of contractors
- (b) Form XIII - Register of workmen employed by contractor (Rule 75)
- (c) Form XIV - Employment card issued by contractor (Rule 76)
- (d) Form XVI - Muster Roll (Rule 78(1)(a)(i))
- (e) Form XVII - Register of wages (Rule 78(1)(a)(i))
- (f) Form XVIII - Register of wages-cum Muster Roll (in case of weekly payment)
- (g) Form XIX - Wage Slip (Rule 78(b))
- (h) Form XX - Register of deduction for damages or loss (Rule 78(1)(a)(ii))
- (i) Form XXI - Register of files(Rule 78(1)(a)(ii))
- (j) Form XXII - Register of advances(Rule 78(1)(a)(ii))
- (k) Form XXIII - Register of overtime(Rule 78(1)(a)(iii))
- (l) Form XXIV - Return to be sent by the contractor to licensing officer (Rule 82(1))

1.4 The contractor shall make himself or his representative (supervisor) available at the work spot every day during execution of work, for effective supervision.

1.5 The contractor shall attend to all inspections notified/conducted by the Human Resource department, Labour department, P.F. authorities, Inspector of Factories, ESI inspectors, or any other such authorities.

1.6 Non-compliance of any provisions under the act/rule/instructions/guidelines shall make the contractor liable for penal action including termination of contract.

1.7 Contractor shall furnish in a separate letter his place of residence and postal address. The delivery at the above named place or posting in a Post Box regularly maintained by the Post and Telegraph Department or sending letters registered for acknowledgement of any notice, letter or other communication to the contractor shall be deemed sufficient service there upon he contractor. Change in address shall come into force at any time by an instrument executed by the contractor and delivered to the BHEL official who has signed the contract.

1.8 The contractor must satisfy himself by personal study thoroughly the scope of proposed work in detail and all conditions affecting the work before entering into the contract. There shall not be at any time, dispute/complaint of any nature regarding scope of work and interpretation of specifications or any misunderstanding with regard to nature or omission of the work to be done nor shall any application for compensation in terms of time and money shall be accepted by BHEL regarding the above.

1.9 Contractor shall in his absence keep competent agent constantly on the works and any directions or explanations given by the "Contract Executing Officer" or his representative to such agent shall be held to have been given to the contractor himself.

1.10 Contractor on the advice of BHEL officials shall immediately remove any person employed by him, who may in the opinion of the BHEL official, is incompetent or involves himself in misconduct. Such persons shall not be again employed on the works without written permission of the BHEL official.

1.11 The contractor shall give all notices required by the Acts, regulation, bye laws, Legal Acts and pay all fees in connection therewith unless and otherwise arranged and decided in writing with BHEL. He shall also ensure that no attachments are made against materials or work forming part of or for the use of the contractor. In all such cases, contractor shall protect and indemnify BHEL against any claim or liability arising from or based on the violation of any such laws, ordinances, regulations, orders, decrees or attachment either by himself or by his employees.

1.12 It shall be contractor's sole responsibility to protect the public and his employees against accident from any cause and provide required safety equipment and shall indemnify BHEL against any claims for damages for injury to the person or property resulting from any such accidents and shall, where the provisions of the Employees Compensation Act and Public Liability Act as applicable, take steps to properly insure against any claims thereunder.

1.13 In the event of any accident in respect of which compensation may become payable under the Employees Compensation Act, VIII of 1923 whether by the contractor or by BHEL as Principal Employer, it

shall be lawful for BHEL to retain out of monies due and payable to the contractor such sum or sums of money as may, in the opinion of BHEL shall be final in regard to all matter arising in this clause.

1.14 No work shall be done on Sundays or on other declared Holidays of BHEL without the written permission of BHEL officer in charge of the work. The contractor shall comply with the provisions of the Factories Act 1948 if the same are applicable. No contract labour shall be engaged on any National Holidays.

1.15 The contractor shall keep his work place clean and safe to avoid injuries to men and damage to finished products / equipment.

1.16 On the occurrence of an accident, which results in the death of any of the workmen employed by the contractor or which is so serious as to be likely to result in the death of any such workmen, the contractor shall within 24 hours of the happening of such an accident intimate in writing to the BHEL official in charge of the work.

1.17 The contractor shall indemnify BHEL against all losses or damages sustained by BHEL resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or dues if any and become payable by BHEL, as a consequence of failure, BHEL to give notice under the Employees Compensation Act 1923 or otherwise confirm to the provisions of the said Act in regard to such accident.

1.18 The contractor shall ensure adherence to all statutory requirements applicable to BHEL.

1.19 The contractor shall ensure abidance by all the labour laws especially including Contract labour (R&A) Act 1970, Payment of Wages Act 1936, Employees Compensation Act 1923, Minimum Wages Act 1948, ESI Act 1948, Payment of Bonus Act 1965, and Provident Fund Misc. Prov. Act 1952, as amended from time to time.

1.20 The contractor shall comply with provisions of Provident Fund Misc. Prov. Act 1952 through PF code allotted to him / her.

1.21 Notwithstanding the above clause, in case of any financial loss incurred by company on account of contravention of the Provident Fund regulations or any regulations of rule touching the same by the contractor, the contractor shall submit an undertaking to indemnify the company to the extent of the loss incurred by the company.

1.22 The contractor should engage only those laborers whose age is 18 (eighteen) years or more.

1.23 The contractor shall not resort to subcontracting under any circumstances without prior permission of BHEL. If found sub-contracting at a later date, BHEL reserves the right to take whatever action it deems fit, including cancellation of the Contract.

1.24 The contractor shall provide the required safety equipment to the labors engaged by him / her.

1.25 Contractor shall issue "Employment Card" as per statute to all labour and supervisors covered under the job work contract.

1.26 The contractor shall be responsible to settle any grievances of the labour deployed by him / her within two weeks.

**Chapter XVII: HSE (Health, Safety, Environment) and PPE (personal Protective Equipment)
Guidelines**

1. Contractor shall follow all the HSE guidelines as mentioned chapter IX off SCC and IOCL (Annexure-I).
2. In case of any dispute/ contradiction, IOCL HSE rules and guidelines shall prevail.