



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 02

Ref: PSER: SCT:KLN-C-1960:19:TCN-02

Date: 8-05-2019

Sub	Tender Change Notice (TCN)- 02.	
Job	PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.	
Ref	1.0	Tender no: PSER:SCT:KLN- C1960:19.
	2.0	BHEL's NIT, vide reference no: PSER:SCT:KLN-C1960:7533, Date: 20-04-2019
	3.0	BHEL's TCN-01, vide reference no: PSER: SCT:KLN-C-1960:19:TCN-01, Date: 03-05-2019.
	4.0	Other References, if any.

With reference to above, following points/documents, relevant to tender, may please be noted and complied with while submitting the offer.

1. Clarification to bidder's queries as per attached Annexure-A.
2. Annexure-A of NIT i.e. Amendment to GCC/SCC (Vol-IB/Vol-ID) shall be superseded by enclosed Annexure-B.
3. Revised **PRICE SCHEDULE VOLUME-III, R-1** is attached **superseding VOLUME-III PRICE SCHEDULE, REV-0** issued earlier along with NIT. Bidder shall quote as per this revised Volume-III, Rev-1 only
4. Revised FILE-6.1-SCT-KLN-M1960-VOL-IB-GCC-SERVICE-rev01 is attached superseding FILE-6.1-SCT-KLN-M1960-VOL-IB-GCC-SERVICE issued earlier along with NIT.
5. Revised "FILE-2.0-SCT-KLN-C1960-VOL-1C-SCC-R1" superseding earlier FILE-2.0-SCT-KLN-C1960-VOL-1C-SCC-R-0 is issued along with TCN-02.
6. Revised "FILE-3.0.0-SCT-KLN-C1960-VOLUME-ID-SCC PART-A-R-1" superseding earlier FILE-3.0-SCT-KLN-C1960-VOLUME-ID-SCC-R-0 is issued along with TCN-02.
7. Introduction of FILE-3.0.1-SCT-KLN-C1960-VOLUME-ID-SCC-PART-B-R-1 as part of tender document being issued along with TCN-02.
8. Clause no. 35 of NIT Order of precedence shall be read as under
In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:
 - a. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
 - b. Notice Inviting Tender (NIT)
 - c. Price Bid-Volume-III
 - d. Technical Specification (TS) – Volume-II
 - e. Special Conditions of Contract (SCC) —Volume- IC& ID(PART-A)
 - f. Special Conditions of Contract (SCC) —Volume- ID(PART-B)
 - g. General Conditions of Contract (GCC) —Volume- IA & IB
 - h. Forms and Procedures —Volume-IE
9. Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.
10. All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

Dy. Manager (SCT)

Encl: As Above.

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This volume shall be construed as part of tender document and shall be read along-with other volumes of tender. Unless otherwise specified, in case of any confusion of any clause/ provision of this volume or any conflict/ inconsistency of any clause/ provision of this volume with that of other volumes, the same shall be brought out by the Successful bidder in writing to BHEL for clarification or during pre-bid discussions, if applicable, failing which most stringent interpretation in favour of BHEL shall be adopted and the same shall be binding to the Successful bidder. Unless otherwise specified, all terms & conditions shall be applicable for entire scope and for each part/ package of tender.

CLAUSE NO	DESCRIPTION
1.0	NAME OF JOB
	The scope of Supply for Structural works for Maitree STPP Unit-1 & 2 of Coal, Ash, Lime and Gypsum handling plant,. The scope of work is indicative but not limited to the given below.
	<ul style="list-style-type: none"> • Metal deck Sheet • Cladding Internal Sheet • Cladding External Sheet • Bolts • Gratings • PTFE type Sliding Bearing • Other products for completion of Project and as directed by engineering in-charge, BHEL.
2.0	BROAD SCOPE OF WORK
2.1	The work to be done under this specification comprises of design, engineering, manufacturing, assembly, inspection, testing at manufacturer's/ sub-vendor's works, painting, proper packing, transportation, delivery, handing over at site of equipment as stated above & detailed in the specification & elsewhere in tender documents.
2.2	Splitting up of supply contract into two supply contracts one for Local supply and other for the foreign supply would not be entertained.
2.3	The scope of work broadly covers as per specification & elsewhere in the document but shall not be limited to the following.
2.3.1	Detail design of Cladding sheet as per specification.
2.3.2	Preparing the manufacturing quality plan.
2.3.3	Deleted
2.3.4	Providing requisite sets (both hard & soft copy) of engineering drawings, as-built drawing, plant handbook, storage, preservation & painting manual, erection manual, etc as specified elsewhere in the tender.
2.3.5	Arranging inspection of equipment and accessories etc at manufacturer's/ sub vendor's premises.
2.3.6	Packing & transportation of goods from manufacturer's works/ sub vendor's works.
2.3.7	Any equipment not specified here but required to make the equipment complete shall be under the scope of the successful bidder.
2.3.9	Transportation of materials on FOR destination/ site basis and door delivery of materials at site.
2.3.10	The Bidder shall continue to act as custodian of the materials and in case of any loss in transit, appropriate recovery shall be made from the Bidder.
2.3.11	The bidder shall provide a copy of the Purchase Order issued their C&F Agent before commencement of transportation of goods from the registered place. The C&F agent shall maintain close liaison with BHEL officials in Bangladesh with respect to the compliance of Export formalities from India/overseas and Import formalities in Bangladesh.
2.3.12	Preparing schedules and furnishing progress report in requisite mode & number.
2.4	Drawings/ documents submitted along with tender are for guidance purpose only and no claim/ compensation, whatsoever, shall be entertained by BHEL on this

	account.
2.5	All other points shall be as per the terms & conditions and specification along with aforesaid references together with amendments incorporated thereto.
3.0	SITE VISIT Successful bidder should visit site and acquire full knowledge & information about site conditions prevailing at site and in & around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the offer.
4.0	PROJECT MANAGEMENT To meet the need of project management, successful bidder shall provide the following services within quoted/ accepted prices.
4.1	PLANNING & MONITORING
4.1.1	The Successful bidder shall prepare L1 schedule/ network of engineering, manufacturing, testing, and procurement of sub-vendor items, as per completion schedule given in this document. This network must conform to the overall project schedule.
4.1.2	Based on L1 network the successful bidder will prepare L2 network which will indicate exhaustive list of activities of engineering, procurement of raw materials, manufacturing, testing, procurement of sub-vendor items, and dispatch as per completion schedule given in this document. This network must include all milestone and key activities for each subsystems/ components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), dispatch, erection/ commissioning.
4.1.3	Based on L2 network The successful bidder will develop L3 network, which will indicate micro details of each activity of L2 network and also show customer/ BHEL hold points, responsibility of the customers/ BHEL and Successful bidder.
4.1.4	Above schedules are to be preferably made in Microsoft Project, so that the same is compatible with BHEL's project management software.
4.1.5	Above schedules/ networks would be submitted to BHEL sequentially by the successful bidder within 15 days from date of LOI and finalized within a month.
4.2	PROGRESS REPORTING
4.2.1	The successful bidder shall prepare and submit to BHEL monthly progress report indicating progress on key activities, management summary for critical activities, list of actions requiring attention of BHEL in CD (compatible to BHEL software) and also in requisite number of hard copies. The input & output data for all such schedule shall be furnished to BHEL in a manner compatible with BHEL software available at site. A copy of progress report must be submitted to Construction Manager/ BHEL/ site and Project Manager/ BHEL/ Kolkata latest by 7 th of every month covering the detailed progress achieved in the previous month.
4.2.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which The successful bidder intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippage's do not accumulate and effect the overall program.
4.2.3	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving target. The program of subsequent week shall also be presented by Successful bidder for discussions. The Successful bidder shall constantly update/revise his work program to meet the overall requirement.
4.2.4	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of Successful bidder will be held once in a month at Kolkata/site. These meetings will be attended by reasonably higher officials of the Successful bidder and will be used as a forum for discussing all areas where progress needs to be speeded up. The Successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
4.2.5	Still colour photography (matt paper, post card size, max 10 nos per month for the entire contract execution period) depicting progress of the work, damage to the

	machine parts, if any, as directed by BHEL site engineer is to be arranged by The successful bidder at his own cost.
4.2.6	Successful bidder have to provide electronic/ computerized storing & reproduction/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in virus free CD & handed over to BHEL as per requirement.
4.2.7	Other provisions of Volume-IA of this tender would be applicable.
5.0	SERVICES TO BE RENDERED BY THE SUCCESSFUL BIDDER
5.1	Services for complete engineering, coordination and project management as detailed elsewhere in this tender.
5.2	Services for shop test, quality assurance, as detailed elsewhere in this tender.
5.3	Supply of main equipment along with other items as per specification maintaining sequential dispatch.
5.4	Supply of first fill of lubricants for all equipment including second fill/ replenishment as necessary after commissioning till handing over of the plant/ equipment
5.5	Furnishing of all document, drawing, design basis, reports, instruction manuals, etc including "As Built Drawing".
5.6	Furnishing preservation schedule with all details of preservation method and preservatives required storing.
5.7	DOCUMENTS
5.7.1	The successful bidder shall furnish 6(Six) sets of approved drawing & documents before start of fabrication work.
5.7.2	The successful bidder shall furnish 6 (Six) sets of as-built drawing along with 4 copies of CD ROM.
5.7.3	The successful bidder shall furnish 6 (Six) sets of 'Storage, preservation & painting manual'.
6.0	COMMUNICATION
	The successful bidder shall be responsible for arranging all communication facilities at office. The successful bidder has to establish independent internet/ e-mail facilities with mobile connection for all key site personnel and same shall be integrated with BHEL's voice/ data network & database systems at site. The successful bidder's office must have facilities of communications like Fax, E-mail, and telephone with STD facility etc.
7.0	GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS)
7.1	The work must be performed according to the most recent relevant codes, standards, accident prevention regulations and local rules and legal regulations.
7.2	All materials and equipment supplied and all work carried out as well as calculation sheets, drawings, quality and class of goods, methods of inspection, specific design features of equipment and parts and acceptances of partial plants shall comply in every respect with the applicable standards, codes and regulations to be chosen from the following:
7.2.1	American Association of State Highway and transportation Officials AASHTO American Concrete Institute ACI American Gear Manufacturers Association AGMA American Institute of Steel Construction AISC American Iron & Steel Institute AISI American Moving and Conditioning Association AMCA American National Standards Institute ANSI American Petroleum Institute API American Public Health Association APHA American Society for Testing and Materials ASTM American Society of Civil Engineers ASCE American Society of Heating, Refrigeration & Air Conditioning Engineers ASHRAE American Society of Mechanical Engineers ASME American Water Works Association AWWA American Welding Society AWS American Wire Gauge AWG Anti-Friction Bearing Manufactures Association AFBMA

	<p>Architectural Institute of Japan AIJ Association Francaise de Normalisation AFNOR British Standards Institute BS Chlorine Institute CI Crane Manufacturers Association of America CMAA Deutsches Institut für Normung DIN Diesel Engine Manufacturers Association DEMA European Norm EN Expansion Joint Manufacturer Association EJMA Fédération Européene de Manutention FEM Heat Exchanger Institute HEI Hydraulic Institute HI Illuminated Engineers Society IES Institute of Electrical and Electronics Engineers IEEE Instrument Society of America ISA Insulated Power Cable Engineers Association IPCEA International Electrotechnical Commission IEC International Standards Organization ISO Japanese Architectural Standard Specification JASS Japanese Electrical Manufacturers Association JEMA Japanese Electrotechnical Institute JEC Japanese Industrial Standards JIS Manufacturers Standardization Society MSS National Association of Corrosion Engineers NACE National Electrical Code (USA) NEC National Electrical Manufacturer Association (USA) NEMA National Electrical Safety Code NESC National Fire Protection Association NFPA National Structural Code for Building NSCB Occupation Safety and Health Administration OSHA Portland Cement Association PCA Properties of Water and Steam IFC Scientific Apparatus Manufacturers Association SAMA Society of Automotive Engineers ASE Standards of Japanese Electrotechnical Committee JEC Steel Structures Painting Council SSPC Technische Vereinigung der Grosskraftwerksbetreiber VGB Tubular Exchanger Manufacturers Association TEMA Underwriters Laboratory UL Uniform Building Code UBC Verband Deutscher Elektrotechniker VDE Verein Deutscher Ingenieure VDI Vereinigung Deutscher Elektrizitätswerke (Association of German Power Plants) VDEW Water Pollution Control Federation WPCF</p>
7.3	Generally, all internationally and nationally recognized standards as above will be applied, except if specific standards called for by:
7.3.1	<p>a) Occupational Safety Board of Bangladesh b) Department of Inspection for Factories and Establishments, Bangladesh c) Department of Environment, Bangladesh d) Bangladesh Power Development Board e) Bangladesh Energy Regulatory Commission f) Ministry of Power, Energy and Mineral Resources g) Bangladesh Fire Service and Civil Defence Ministry h) All relevant Bangladesh National Statutory Regulations i) Bangladesh National Building Code j) Bangladesh Standards k) Local Authorities.</p>
7.4	All steam boilers and unfired pressure vessels together with associated pipework

	and fittings shall comply with the Bangladesh Boiler Act, 1923 with amendments.
7.5	All pressure parts shall be designed in accordance with applicable ASME codes.
7.6	All services, supplies and works shall comply with the requirements of the relevant laws of Bangladesh and the IFC/World Bank Group Standards and Guidelines in their latest edition, including but not limited to:
7.6.1	Environmental Conservation Rules Bangladesh Energy Regulatory Commission Act; BERC Licensing Regulation BERC Technical Quality Standards; Bangladesh National Building Code; other applicable laws in Bangladesh; IFC Performance Standards on Environmental and Social Sustainability; IFC / World Bank Group Environmental, Health and Safety (EHS) General Guidelines; IFC / World Bank Group EHS Guidelines for Thermal Power Plants; IFC / World Bank Group EHS Guidelines for Electric Power Transmission and Distribution.
7.7	It is contractor's responsibility to provide sufficient evidence that any national or other standard the Contractor proposes (other than those mentioned above) will ensure an equivalent or higher standard.
7.8	Except where otherwise specified, the plant/equipment shall comply with the appropriate agreed internationally accepted Standard Specification as mentioned elsewhere in contract specifications, each incorporating the latest revisions at the time of tendering. Where no internationally accepted standard is applicable, the Successful bidder shall give all particulars and details as necessary; to enable BHEL to identify all of the plant/equipment in the same detail as would be possible had there been a Standard Specification.
7.9	Where the Successful bidder proposes alternative codes or standards he shall include in his tender one copy (in English) of each Standard Specification to which materials offered shall comply. In such case, the adopted alternative standard shall be equivalent or superior to the standards mentioned in the specification.
7.10	In case bidder proposes any IS code, it shall be verified by reputed institutions like IIT that the proposed code is equivalent or superior to the codes mentioned above. Comparison report shall be established and provided to BHEL/Owner for information. Such report shall highlight the main items of the code, including material composition, material properties, design clauses and others as required. Report shall identify deviations of both codes and give justification for this deviation.
7.11	The bidder shall ensure that design will consider material properties as per approved code.
7.12	In the event of any conflict between the codes & standards referred above, and requirements of this specification, the requirements which are more stringent shall govern.
7.13	Wherever specified or required the plant/equipment shall conform to various applicable statutory regulations at Bangladesh. Wherever required, obtaining approval for plant/ equipment supplied under the specification from statutory authorities shall be the responsibility of the successful bidder.
7.14	Below mentioned IS codes have been approved/accepted by BIFPCL:
7.14.1	IS 2061 for Structural Steel
8.0	ENGINEERING SERVICES As part of the overall project management activity, the successful bidder shall be responsible for proper engineering and coordination activities during various phases of execution of the contract. The successful bidder shall identify one Engineering Manager with whom BHEL will interact on all matters on coordination between BHEL and the contactors. The Engineering Manager shall be the single point contact person on behalf of the successful bidder and shall be responsible for all engineering co-ordination.
9.0	QUALITY PLAN The Successful bidder shall furnish the quality assurance plan which would be

	approved by BHEL/ owner.
10.0	QUALITY ASSURANCE PROGRAMME
	To ensure that the equipment & services under the scope of the contract whether manufactured/ performed at Successful bidder's works or at Successful bidder's premises or at any other place of work are in accordance with the specifications The successful bidder shall adopt suitable quality assurance programme to control activities as necessary. Such programme shall be outlined by the successful bidder and shall be finally accepted by BHEL/ owner/ authorised representative. A quality assurance programme of the successful bidder shall generally cover the following.
10.1	The organization structure and qualification data of key personnel for the management and implementation of the proposed quality assurance program.
10.2	System for site erection control including process controls and fabrication and assembly controls.
10.3	The procedure for purchase of materials, parts, components and selection of sub-Successful bidder's service including Successful bidder analysis, source inspection, incoming raw material inspection, verification of materials purchased, etc.
10.4	System for shop manufacturing and site erection control including process control, fabrication and assembly controls.
10.5	Control of non-conforming items and system for corrective actions.
10.6	Inspection and test procedure for all site related works.
10.7	Control of calibration and testing of measuring and testing equipment.
10.8	System for quality audit.
10.9	System for indication and appraisal of inspection status.
10.10	System for authorizing release of manufactured product to BHEL.
10.11	System for handling storage and delivery.
10.12	System for maintenance of records.
10.13	Furnishing of Quality Plan for manufacturing and Field activities detailing out the specific quality control procedures adopted for controlling the quality characteristics relevant to each item of equipment/ component.
11.0	GENERAL REQUIREMENTS - QUALITY ASSURANCE
11.1	All materials, components and equipment covered under this specification shall be procured, manufactured, and tested at all the stages, as per a comprehensive Quality Assurance Program. An indicative program of inspection/tests to be carried out by the successful bidder for some of the major items is given in the respective technical specification. This is however not intended to form a comprehensive program as it is the responsibility of the successful bidder to draw up and implement such program duly approved by BHEL The detailed quality plan for manufacturing should be drawn up by the Successful bidder and will be submitted to BHEL for approval.
11.2	Manufacturing Quality Plans will detail out all the equipment & components, various tests/ inspection to be carried out as per requirement of specification & standards mentioned therein and the quality practices & procedures, etc to be followed by The successful bidder 's quality control organization during various stages of materials procurement, manufacturing, assembly and final testing/ performance testing.
11.3	The Successful bidder shall furnish copies of reference documents/ plant standards/ acceptance norms/ tests and inspection procedures etc. as referred in Quality Plans along with Quality Plan. These Quality Plans and reference documents/ standards etc. will be subject to BHEL/ owner's approval without which manufacturing will not proceed. These approved documents will form part of the contract. In these approved Quality Plans, BHEL/ authorized representative shall identify customer hold points, test/ checks which shall be carried out in presence of BHEL/ owner's representative and beyond which work will not proceed without consent of BHEL/ owner. All deviations to the specifications, approved Quality Plan and Applicable standards must be documented and referred to BHEL for approval & disposition.
11.4	Quality audit/ approval of the results of tests and inspection will not prejudice the right of BHEL to reject equipment not giving the desired performance after erection

	and shall not in no way limit the liabilities and responsibilities of the successful bidder in earning satisfactory performance of equipment as per specification.
11.5	Repair/ rectification procedures to be adopted to make any job acceptable shall be subject to the approval of BHEL/ owner.
11.6	The successful bidder shall ensure that only asbestos-free materials including consumables are used/supplied at the project. Any material having asbestos content is forbidden in the project.
12.0	QUALITY ASSURANCE DOCUMENT
12.1	The successful bidder shall be required to submit the following Quality Assurance Documents within 2 weeks after dispatch of the equipment.
12.1.1	Test report of components.
12.1.2	The inspection plan with verification, inspection plan check points, verification sketches, if used and methods used to verify that the inspection and testing points in the inspection plan were performed satisfactorily.
12.1.3	Non-destructive examination results/ reports including radiography interpretation reports.
12.1.4	Welder identification list listing welder's and welding operator's qualification procedures and welding identification symbols.
12.1.5	Sketches and drawings used for indicating methods of traceability of the radiographs to the location of the equipment.
12.1.6	Stress relief time temperature charts.
12.1.7	Factory test results for testing required as per applicable codes and standards referred to in the specification.
12.1.8	Inspection Report duly signed by QA Personnel of BHEL and successful bidder for the agreed inspection hold points. During course of inspection the following will also be recorded.
12.1.8.1	When some important work repair work is involved to make the job acceptable.
12.1.8.2	The repair work remain part of the accepted product quality.
12.1.8.3	Letter of conformity certifying that that requirement is in compliance with finalised specification requirements.
13.0	INSPECTION, TESTING AND INSPECTION CERTIFICATE
13.1	Inspection, Examination and Testing
13.1.1	All design, engineering, equipment, materials, Plant and workmanship supplied by Successful bidder or for which Successful bidder is responsible shall be subject to inspection, examination and testing by the BHEL/Employer's (BIFPCL) and/ or Engineer's (FICHTNER) designated consultants and/ or representatives at any and all times during design, engineering, manufacture, procurement, fabrication and construction and at any and all places where such design, engineering, manufacture, procurement, fabrication and construction are carried on. Provided such inspection, examination and testing shall to the extent possible be carried out in conjunction with Successful bidder's similar activities, and if not, upon prior consultation with Successful bidder in order to avoid any unnecessary delay in the performance of the Work.
13.1.2	In furtherance of the foregoing, Successful bidder shall arrange for the aforesaid consultants and representatives of the Employer and/ or Engineer to have access to all places where manufacture or preparation of equipment, materials and Plant or construction activities are being carried out.
13.1.3	In respect of the Work which the Employer and/ or Engineer are entitled to examine, inspect, measure and/or test, Successful bidder shall give notice (of not less than 20 working days) to the Employer and the Engineer whenever any such Work is ready and before it is covered up, put out of sight or packaged for storage or transport. The Employer and/or the Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or give notice to Successful bidder that Employer and/ or the Engineer (as applicable) does not require to do so after receipt of Successful bidder's notice for such examination, inspection, measurement or testing at Site.
13.1.4	If Successful bidder fails to give such notice, it shall, if and when required by the

	Employer and/or the Engineer, uncover the work and thereafter reinstate and make good, all at Successful bidder's cost and expense. The Employer and the Engineer shall be responsible for their respective expenses in connection with inspection, examination and testing.
13.1.5	The Successful bidder shall co-operate with and provide full opportunity to the Employer/Engineer to regularly monitor the progress of manufacture in the Works of the Successful bidder to the detailed extent necessary to establish that satisfactory progress relative to the Contract Schedule is being achieved.
13.1.6	All pertinent information such as shop loading, detailed manufacturing programs to enable the Employer and/ or Engineer to determine the adequacy of the advance planning for material procurement, machine and manpower resources to meet the Contract Schedule shall be made freely available to the Employer and/ or Employer 10 working days before visiting the manufacturing facilities.
13.2	Rejection and Replacement
13.2.1	The Employer and/ or the Engineer and their designated consultants and representatives shall have the right to reject any portion of the Work which is effective, deficient, not within specifications provided in the Contract or not according to Good Industry Practice or faulty workmanship and require its repair or replacement
13.2.2	Rejected and other defective equipment, materials and Plant shall be satisfactorily replaced with proper replacements. The costs and expenses associated with such repairs and replacements shall be to the account of Successful bidder and not reimbursable
13.2.3	After completion of the necessary repairs or replacements, the relevant equipment, materials and Plant, shall be subject to further inspection, examination and testing by the Employer and/ or Engineer and their designated consultants and representatives, all the costs and expenses of which shall be to the Successful bidder's account.
13.2.4	If Successful bidder fails to proceed promptly with the replacement of rejected equipment, materials and Plant and the correction of defective workmanship, Employer and/ or the Engineer may, by contract with third parties or otherwise, replace such equipment, materials and Plant or correct such workmanship and/or may terminate this Contract and Successful bidder shall be liable and reimburse Employer and/ or the Engineer (as applicable) upon demand for all costs, expenses and damages incurred by the Employer and/ or Engineer relating to such replacement or correction.
13.2.5	The Successful bidder shall be entitled to remove and retain all rejected components Work that the Employer and/ or may have replaced at the Successful bidder's cost.
13.3	The Successful bidder shall furnish; at each location where inspection, examination and testing is carried out; all reasonable facilities, assistance, labour, equipment, materials, utilities, apparatus and instruments necessary for the safe and convenient inspection and testing of material and workmanship that may be required pursuant to this Contract.
13.4	The right of inspection, examination and testing by Engineer or the Employer, their designated consultants and representatives provided herein is intended solely for the Engineer's and the Employer's benefit, it being understood that no exercise of or failure to exercise such right shall relieve Successful bidder of any of its obligations hereunder or prejudice any of the Engineer or Employer's rights under this Contract.
13.5	The Engineer, his duly authorized representative and/ or an outside inspection agency acting on behalf of BHEL/ owner shall have access at all reasonable times to inspect and examine the materials and workmanship of the works during its manufacture and if part of the works is being manufactured or assembled on other premises or works, The successful bidder shall obtain for the Engineer and for his duly authorized representative permission to inspect as if the works were manufactured or assembled on Successful bidder's own premises or works. Necessary arrangement for carrying out inspection including supply of labour,

	IMTEs, area illumination and scaffolding, if required will be Successful bidder's responsibility and same has to be carried out within the quoted price.
13.6	To facilitate advance planning of inspection in addition to giving inspection notice the successful bidder shall furnish quarterly inspection program indicating schedule dates of inspection at customer hold point and final inspection stages. Updated quarterly inspection plans will be made for each 3 consecutive months and shall be furnished before beginning of each calendar month.
13.7	Before any plant/equipment leaves the place of manufacture BHEL shall be given the option of witnessing inspections and tests for compliance with the specifications and related standards. The successful bidder shall give the engineer/ Inspector 15 days written notice of any material being ready for testing. Such test shall be to the successful bidder's account except for the expenses of the Inspector .The Engineer/ Inspector, unless the inspection is waived will attend such tests within 15 days of the date on which the equipment is notified as being ready for test/ inspection failing which The successful bidder may proceed with test which shall be deemed to have been made in the Inspector's presence and he shall forthwith forward to the Inspector duly certified copies of test reports.
13.8	The Engineer or Inspector shall within 15 days from the date of inspection as defined herein give notice to The successful bidder of any objection wrt drawing/ equipment/ workmanship which in his opinion not in accordance with the specification/ contract. The successful bidder shall either make modification as may be necessary to meet the said objection or explain to the engineer/ inspector giving reasons that no modifications are necessary to comply with the contract.
13.9	When the factory tests have been completed at The successful bidder's or successful bidder's works, the engineer or Inspector shall issue a certificate to this effect within reasonable time after completion of tests but if the tests are not witnessed by the engineer or Inspector the certificate shall be issued within 15 days of the receipt of Successful bidder's test certificate by the engineer Inspector. The completion of these tests or the issue of the certificates shall not bind BHEL to accept the equipment should it on further tests after erection be found not to comply with the contract.
13.10	In all cases where The successful bidder provides the tests at the premises of The successful bidder or any sub-vendor, The successful bidder except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the Engineer/ Inspector to carry out effectively such tests on the equipment in accordance with the contract and shall give facilities to the Engineer/Inspector to accomplish testing.
13.11	INSPECTION & JOINT VERIFICATION (AT SUCCESSFUL BIDDER'S WORKS)
13.11.1	Prior to dispatch, the materials would be offered by The successful bidder for joint inspection at The successful bidder's works as detailed in this tender specification for which The successful bidder would serve the advance notice of 15 days for inspection call to BHEL.
13.11.2	For further information, Successful bidder shall visit web site http://cgir.bhel.in to login & lodge inspection related calls.
13.12	INSPECTION & JOINT VERIFICATION (AT SITE)
	The successful bidder shall be intimated within 7 days from the date of receipt of each consignment at site to depute their representative for joint inspection and verification of the equipment/ materials received at site. The successful bidder shall depute their representative within 7 days from receipt of such intimation failing which BHEL shall proceed with the inspection and verification of equipment/materials and BHEL's decision in this regard shall be final and binding to The successful bidder.
14.0	OPERATING MANUAL AND MAINTENANCE INSTRUCTION
14.1	The successful bidder shall provide at least 6 months before the time of commissioning, all necessary operating & maintenance (O&M) manual. The O&M manual shall be submitted in the form of one reproducible original and 15 copies.
14.2	The information which shall be contained in loose stiff backed covers, shall include

	following in addition to whatever has been specified in Volume-II of this tender.
14.2.1	A complete inventory of all main items of plant/equipment with identification details.
14.2.2	A complete set of all drawings, schematics, data sheets, schedules etc.
14.2.3	Service Manuals for all plant and equipment giving full descriptions of the main items and auxiliary items.
14.2.4	Schedule of recommendations for routine maintenance of all equipment inspection point, information on detection, cause and rectification of troubles & faults.
14.2.5	A lubrication schedule with all necessary drawings.
14.2.6	Manufacturer's literature for all the self-manufactured and bought out items.
14.3	Acceptance of O&M manual is subject to approval of BHEL.
15.0	INSURANCE
15.1	It is the entire responsibility of the successful bidder to insure their workmen against accident and injury while at work as required by the relevant rules and to pay compensation, if any, to their workmen as per statutory act. The successful bidder shall also insure their staff against accident/ injury with Workmen's compensation policy, group personal insurance, etc., as may be applicable.
15.2	The successful bidder shall take insurance covering for all materials (excluding plant material), tools & plants, manpower, workers, etc., required to be provided & deployed for the job by the bidder.
15.3	These insurance covers have to be taken prior to start of work and they shall make available the policy to Construction Manager, BHEL for necessary verification before start of work. However, irrespective of such verification/ acceptance, sole responsibility to maintain adequate insurance cover at all times during the period of contract shall lie with The successful bidder. Regarding aforesaid insurance cover, The successful bidder shall directly deal with the insurance company for all matters regarding the insurance in his scope.
15.4	BHEL/ customer shall arrange comprehensive insurance policy for total supply & services for main equipment/ system covering transit risks & loss, destruction or damage during handling at site, storage, civil works, erection, testing and commissioning up to trial operation/ completion of unit(s) including theft, sabotage, fire, lightning and other natural calamities. The details of the underwriter shall be intimated to the successful bidder before commencement of dispatch of the materials from the registered place of the bidder.
15.5	Successful bidder shall timely intimate dispatches/ discrepancy during contract operation, to the underwriter. The name of the underwriter and Policy No shall be intimated in due course of time.
15.6	The successful bidder will take necessary precautions/ due care to protect the material at project site, while in their custody from any damage/ loss till the same is handed over to BHEL/ customer at project site. For lodging/ processing of insurance claim The successful bidder will submit necessary documents. BHEL reserve the right to recover the loss from The successful bidder in case the damage/ loss is due to negligence/ carelessness on the part of The successful bidder. In case of theft of material under Successful bidder's custody, the same shall be reported to police by The successful bidder immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL/ customer for taking up with insurance. However this will not relieve The successful bidder of their contractual obligation for the materials in his custody.
15.7	In case the damage/ loss/ theft of materials are attributable to negligence/ failure in discharging the duties and obligations of The successful bidder, the expenses incurred for repair/ replacement of such components in excess of the amount realized from the underwriters, limited to Normal Excess (Deductible Franchise) shall be recovered from The successful bidder.
15.8	In case the claim is summarily rejected by the underwriters due to WILFUL NEGLIGENCE of The successful bidder, the entire cost of repair/replacement will be recovered from The successful bidder.
15.9	It will be responsibility of The successful bidder to replenish the items lost/ damaged in time without hampering the schedule of work and without waiting for settlement of insurance claim. Amount received from the underwriters on settlement

	of insurance claim shall be passed on to The successful bidder as and when available.
15.10	Other conditions of Insurance shall be as per relevant clause of GCC.
16.0	MATERIAL DESPATCH CLEARANCE CERIFICATE (MDCC) AND MATERIAL RECEIPT CERTIFICATE (MRC)
16.1	MDCC shall be issued by BHEL/ owner or their authorized representative prior to dispatch. In case the tests are not witnessed by BHEL/ owner's representative, the test certificates shall be submitted to owner through BHEL and MDCC will be issued thereafter.
16.2	Copy of MDCC and other dispatch document shall accompany with every dispatch, failing which the consignment shall not be allowed to enter the project premises.
16.3	MRC shall be issued by BHEL/ owner or their authorized representative after the material is received at site in good condition.
17.0	REPORTING, CLEARING & SHIPPING DOCUMENTS
	The Successful bidder shall provide all official forms and documentary information as shall be necessary to fulfill the requirement of Bangladesh customs and the employer/BHEL. Following are the list of tentative documents as may be required during execution of the job:
17.1	<p>Reporting Documents</p> <ol style="list-style-type: none"> 1) Bill of lading – 1 copy 2) Shipping specification – 2 copies 3) Quality certificate – 2 copies 4) Packing lists (one copy should be submitted along with the consignment, 2 copies in a special packet) 5) Marine Insurance Certificate – 2 copies (by BHEL) 6) Transit insurance Intimation to the underwriter. 7) Invoice in three (three) originals. 8) Full set of Bill of Lading/Airway Bill/Truck Receipt/ Railway Receipt in one(one) original and 3(three) copies marked freight prepaid. 9) Warranty Certificate in one (one) original as per contract. 10) Manufacturer's Factory Test Certificate in one (one) original. 11) Quality and Quantity Certificate of the materials and equipment shipped in one (one) original. 12) Factory Test Witnessing Certificate or waiver certificate in one (one) original as applicable. 13) Certificate of Origin Issued by the Manufacturer of the materials shipped in one(one) original mentioning merchandise to be of anywhere except Israel. 14) Material Despatch Clearance Certificate issued by the purchaser for goods supplied issued prior to the shipment date of goods as applicable. 15) Copy of the Charter Party Approved by the employer.
17.2	<p>Clearing Documents</p> <p>The Successful bidder shall forward to the Employer/BHEL through their bankers not later than seven (7) days from the date of sailing for the purpose of clearing the cargo at the point of destination the following documents required:</p> <ol style="list-style-type: none"> a) Negotiable copy of bill of lading – 1 copy b) Invoice with item wise prices – 3 copies c) Shipping Specification – 3 copies d) Copy of Charter Party Approved by Employer/BHEL
17.3	Shipping Documents
17.3.1	<p>Simultaneously with the dispatch of the negotiable documents as listed in above the Successful bidder shall also send by air mail eleven (11) sets of non-negotiable shipping documents to the employer/BHEL. The invoices and shipping specification shall bear the insurance cover note number. Each set will comprise the following documents:</p> <ol style="list-style-type: none"> a) The name of the vessel b) Port of destination

	<ul style="list-style-type: none"> c) Description of the cargo (grouped) d) Number of cases and/or weight of cargo e) Number of cases weighing above 20 tons and their individual weights f) Number of bills of lading g) Expected date of arrival at the port of destination
17.3.2	The Successful bidder shall so arrange that the master of the vessel will inform the employer/BHEL by cable of the date and time of arrival of the vessel at the port of destination seventy two (72) hours in advance.
17.4	<p>The supplier shall furnish the following documents in addition to the above:</p> <ul style="list-style-type: none"> a) Invoice addressing BHEL to the consignee in duplicate b) LR / RR with material description (original) c) Tax / Excise Invoice in duplicate d) Material Test Reports for Chemical Composition. e) Material Test Reports for Mechanical Properties. f) Shipping bill & Custom endorsed proof of exports g) Other Certificate and Reports if any.
18.0	CONSIGNEE AND OTHER DETAILS
18.1	<p>Consignee for material shall be as mentioned below.</p> <p>Managing Director, Bangladesh-India Friendship Power Company (Pvt.) Limited, Level-17, Borak Unique Height, 117, Kazi Nazrul Islam Avenue, Eskaton Garden, Dhaka-1217, Bangladesh</p>
18.2.0.	Notify Party shall be as mentioned below.
18.2.1	<p>BHEL</p> <p>It shall be intimated later.</p>
18.2.2	<p>BIFPCL (OWNER)</p> <p>DGM (C&M) Bangladesh-India Friendship Power Company (Pvt.) Limited, Level-17, Borak Unique Height, 117, Kazi Nazrul Islam Avenue, Eskaton Garden, Dhaka-1217, Bangladesh Contact No.: +8801678582730 E-Mail ID: epcmainplant@bifpcl.com</p>
18.2.3	The Successful bidder shall notify owner / BHEL at the abovementioned mail IDs before dispatch of any consignment. All correspondence with regard to dispatch of the material shall be done with the “Notify Party”.
18.3	<p>Delivery Address for material shall be as mentioned below.</p> <p>Site In-charge, Bangladesh-India Friendship Power Company (Pvt.) Limited, 2x660 MW Maitree Super Thermal Power Project, PO-Kalekharber, Union-Rajnagar, Upajila-Rampal, Dist: Bagerhat-9333, Bangladesh Contact No.: +8801678582723</p>
18.4.1	PAYING AUTHORITY FOR INDIAN BIDDER
	<p>All issues related to invoicing, payment shall be addressed to following</p> <p>Bharat Heavy Electricals Ltd. Power Sector Eastern region, BHEL Bhawan, Plot No. DJ – 9/1, Sec-II, Karunamoyee, Salt Lake, Kolkata, West Bengal-700091, India.</p> <p>Any change of above shall be intimated to the successful bidder accordingly.</p>

18.4.2	<p>PAYING AUTHORITY FOR OVERSEAS AND BANGLADESH BIDDER</p> <p>All issues related to invoicing, payment shall be addressed to following</p> <p>Construction Manager, BHEL site office, 2x660 MW Maitree Super Thermal Power Project, Bagerhat, Rampal, Bangladesh.</p> <p>Any change of above shall be intimated to the successful bidder accordingly.</p>
19.0	DISPATCH
19.1	All materials/ plants/ equipment shall be transported through roadways/waterways including ODC consignment. Dispatch shall only be made after inspection and issue of MDCC by BHEL/ owner. Advance information by fax/ courier of dispatch details shall be sent to Construction Manager, BHEL.
19.2	No consignment shall be dispatched on SELF basis. Material shall be dispatched prepaid, door delivery basis, else ensure the clearance and collection of goods from lorry go down and arrangement to transport the same to Site store shall be in the scope of successful bidder.
19.3	Each package should carry the packing slip/ details of contents and should be put inside a metal enclosure, properly fixed to the packing from outside. The packing shall be such as to ensure prevention of damage, corrosion, pilferage, deterioration, loss in transit or storage and road-worthy.
19.4	The title of the ownership of goods to be supplied shall pass on to the owner on dispatch ex works/ FOR destination. However till the scope is completed in all respect and the plant/ equipment is taken over by the owner the goods shall remain with the custody of the Successful bidder.
20.00	PACKAGING
20.01	All equipment and materials and other Plant shall be suitably coated wrapped, or covered and boxed or crated for export shipment and to prevent damage during handling and storage at the Site. Cardboard containers shall be enclosed in a solid wooden container.
20.02	Equipment and process materials shall be packed and semi-knocked down, to the extent possible, to facilitate handling and storage and to protect bearings and other machine surfaces from oxidation. Each container, box, crate or bundle shall be reinforced with steel strapping in such a manner that breaking of one strap will not cause complete failure of the packaging. The packing shall be of best standard to withstand rough handling and to provide suitable protection from tropical weather while in transit and while awaiting erection at the Site.
20.03	Equipment and materials in wooden cases or crates shall be properly cushioned to withstand the abuse of handling, transportation and storage. Packing shall include preservatives suitable to tropical conditions. All machine surfaces and bearings shall be coated with oxidation preventative compounds. All parts subject to damage when in contact with water shall be coated with suitable grease and wrapped in heavy asphalt or tar impregnate paper.
20.04	Crates and packing material used for shipping will become the property of Employer, but the Successful bidder will be allowed to use the same for the Work as needed, but the remaining material shall be turned over to Employer upon completion of the Project.
20.05	Provided however, shippers container used for transportation of material shall be returned to the Successful bidder.
20.06	Packaging or shipping units shall be designed within the limitations of the unloading facilities of the receiving ports and the ship which will be used. Ships with special heavy capacity unloading rigging may be required for large units of equipment. It shall be the Successful bidder's responsibility to investigate these limitations and to provide suitable packaging and shipping to permit transportation to the Site.
20.07	Each package or shipping unit shall be clearly marked or stenciled on at least two sides as follows:

	<p>BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (Pvt.) LIMITED 2X660 MW MAITREE SUPER THERMAL POWER PROJECT BANGLADESH (Name of the Successful bidder)</p> <p>In addition, each package or shipping unit shall have the symbol painted in red on at least two sides of the package, covering one fourth of the area of the side.</p>
20.08	Each part of the equipment which is to be shipped as a separate piece or smaller parts packed within the same case shall be legibly marked to show the unit of which it is part, and match marked to show its relative position in the unit, to facilitate assembly in the field. Unit marks and match marks shall be made with steel stamps and with paint.
20.09	Each case shall contain a packing list showing the detailed contents of the package. When any technical documents are supplied together with the shipment of materials no single package shall contain more than one set of such documents. Shipping papers shall clearly indicate in which packages the technical documents are contained.
20.10	The case number shall be written in the form of a fraction, the numerator of which is the serial number of the case and the denominator the total number of case in which a complete unit of equipment is packed.
20.11	Wherever necessary besides usual inscriptions the cases shall bear special indication such as "Top", "Do not turn over", "Care", "Keep dry", etc., as well as indication of the centre of gravity (with red vertical lines) and places for attaching slings (with chain marks).
20.12	Cases which cannot be marked as above shall have metal tags with the necessary markings on them. The metal tags shall be securely attached to the packages with strong steel binding wire.
20.13	Each piece, skid, case or package shipped separately shall be labelled or tagged properly.
20.14	The Successful bidder shall be solely responsible for packing and marking of cargo with respect to handling, transport. Successful bidder shall be fully liable for proper, sufficient and adequate packing, completeness of contents, protection of contents for a storage time of at least twelve months, and correct preparation of the packing list. All damage and costs whatsoever resulting from inadequate or insufficient packing shall be fully charged to the Successful bidder.
20.15	Packing and conservation of goods shall be sufficient to protect them from damage during transit from point of manufacturer up to unloading and storage at site under conditions which may involve multiple handling, extended storage, exposure to moisture and the possibility of pilferage.
20.16	Materials shall be suitably packed in weather proof, seaworthy packing for ocean transport under tropical conditions. The packing shall be strong and sufficient enough to ensure safe preservation of the materials up to the final point of destination.
20.17	SPECIAL PACKING INSTRUCTIONS PRIOR TO DISPATCH
20.17.1	Packing (tare) shall be part of the equipment cost and shall not be subject to return. The packaging should ensure integrity and cohesiveness of each delivery batch of equipment during transportation. In case of equipment assemblies in the packing of glass, plastics, or paper, the specification of the packaging with the material and weight characteristic are to be indicated.
20.17.2	All packages to be wrapped in transparent polythene inside the crates for effective weather proofing.
20.17.3	Each package should have the following inscriptions legibly and clearly: Destination: MSTPP/ Bangladesh Package number: BHEL/MTR/BD/PSE/YYY/ZZZZZ Where: YYY stands for vendor name/code and ZZZZZ stands for package sl. no. (to be intimated by BHEL before dispatch)

	<p>Handling marks and the following Delivery marking:</p> <p>Gross and Net weight: Dimension: Lifting Places: CONTRACT NO.: BIFPCL/EPC/-MAIN PLANT/2016/01 PURCHASER: BIFPCL, Bangladesh</p>
20.17.4	Packing commensurate with international standards and accepted norms will be ensured by CQA/ Unit QC/Third Party Inspection Agency.
20.17.5	The packing list has to be checked and certified by the Inspection agency/agencies with due signatures.
20.17.6	As far as possible, the packing has to be rectangular in shape for optimum space utilization in the ship and economize on shipping cost. Projections on packages are prohibited.
20.17.7	All packages shall be enclosed in suitable GI sheets on all sides.
20.17.8	No loose items or Gunny bags packing are allowed for shipment.
20.17.9	Routing of Packing Lists: Packing list is an extremely important document, which forms a part of export documentation in connection with the processing of custom formalities.
20.17.10	Excise Attestation at Works: To avoid opening of big cases, if applicable, for examination by customs at port of shipment, the supplying unit may arrange to get the packing cases sealed by local excise authorities/ self-certification and the relevant invoices and packing lists to be endorsed from Superintendent, Central Excise. Successful bidder to provide "specification of packing with the indication of the number of cargo packages, type of packing and weight of packing in English" along with the packing list.
20.17.11	<p>Marking on the consignment</p> <p>For each invoice, item wise Mark No. has to be allotted as per guidelines mentioned above. This mark no. shall be put on all the packages of that particular item. However, there can be multiple items in one invoice.</p> <p>For example, if one invoice contains 4 items and each item contains 250, 100, 125 & 75 no. of packages, then for 1st item, Mark number for all packages shall be: BHEL/MTR/BD/PSE/YYYY/00001 and for 2nd item, Mark number for all packages shall be: BHEL/MTR/BD/PSER/YYYY/00002 and so on.</p>
20.17.12	Marking for safe handling
20.17.12.1	To ensure safe handling, packing case shall be marked to show the following: Upright position, Sling position and Centre of Gravity position, Storage category. Fragile components (to be marked properly with a clear warning for safe handling.)
21.0	CUSTOM CLEARANCE
21.1	The successful bidder shall be responsible for Bangladesh customs clearance of all materials, supplies, equipment, tools and other articles shipped into Bangladesh by him for the implementation of his works, including the food and the personal effects of the Successful bidder's personnel.
21.2	All payment for clearance charge, storage charge, etc. which are imposed by the relevant agencies of the Government of Bangladesh, relating to the clearance of equipment, materials and Plant that will be incorporated in the Permanent Works or relating to the Temporary Works shall be borne by the Successful bidder. Further, if the Successful bidder is delayed in submitting necessary shipping documents to the Employer, the demurrage charges by the Port Authority will be borne by the Successful bidder.
21.3	Tools and equipment and other equipment of the Successful bidder for use during construction but which are to remain the property of the Successful bidder and which are to be exported by the successful bidder from Bangladesh at the completion of the Work shall be carefully documented and specially listed to facilitate both import and export. The Successful bidder shall determine prior to

	shipment the customs regulations applicable to this special case as well as normal import rules and regulations applicable. The Successful bidder shall also be responsible for inland transport by barge/ truck/train to the Site.
22.0	LAWS AND REGULATIONS
22.1	The Successful bidder agrees and acknowledges that:
22.1.1	He and their respective employees, servants, consultants and agents abide by all Applicable Law, (i) relating to the performance of the Work; (ii) by all rules and regulations of those Governmental Authorities who have control or jurisdiction over the Site or the countries where the Successful bidder may reside or perform work, directly or indirectly under this Contract (including the timely payment of any and all fees, assessments, or other governmental charges and registrations with relevant agencies or other Governmental Authorities required in connection therewith) and; (iii) with the terms and conditions of any Authorizations.
22.1.2	Successful bidder represents that it is fully aware of all of the Applicable Laws, terms and conditions of any Authorizations, business practices and plant rules and regulations which must be complied with when performing the Work.
22.1.3	Successful bidder shall furnish to Employer and Engineer, promptly upon request, such information concerning Successful bidder, their respective employees, consultants, servants and agents as the Employer or Engineer may be required to furnish to any applicable Governmental Authority.
22.2	Without prejudice to the generality of the foregoing:
22.2.1	The Successful bidder shall observe, comply with and respect Bangladesh laws, rules and regulations and shall not interfere with Bangladesh political or religious affairs either directly or indirectly.
22.2.2	The Successful bidder shall comply with such other rules and regulations as Employer and the Engineer may establish from time to time with respect to the construction work and personnel employed by the Successful bidders provided such rules and regulations shall not modify any of the Contract.
22.2.3	The Successful bidder shall, in all dealings with its labor, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labor.
22.2.4	The Successful bidder shall not give or barter or otherwise dispose of, to any person or persons, any arms or ammunition of any kind, or permit the same as aforesaid.
22.2.5	In the event of any outbreak of illness of an epidemic nature the Successful bidder shall comply with and carry out such regulations, orders and requirements as may be made by the Government of the People's Republic of Bangladesh or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same.
23.0	COMPLIANCE WITH APPLICABLE LAWS
23.1	Compliance
23.1.1	Successful bidder shall ensure that its employees, servants, consultants and agents abide by all Applicable Law, relating to the performance of the Work and by all rules and regulations of those Governmental Authorities and persons who have control or jurisdiction over the Site (including the timely payment of any and all fees, assessments, or other governmental charges and registrations with relevant agencies or other Governmental Authorities required in connection therewith) and with the terms and conditions of any Authorizations.
23.1.2	Successful bidder represents that it is fully aware of all of the Applicable Laws, terms and conditions of the Authorizations, consents, business practices and plant rules and regulations which must be complied with when performing the Work.
23.1.3	Successful bidder shall furnish to the BHEL / Employer, promptly upon request, such information concerning its employees, consultants, servants and agents as BHEL / Employer may be required to furnish to any applicable Governmental

	Authorities.
23.2	Related Compliance Obligations
23.2.1	The Successful bidder shall Take all reasonable care that the Work is performed with the minimum possible impact on the environment and local community in respect of land and occupants affected by or adjacent to the Work.
23.2.2	The Successful bidder shall have responsibility prior to Provisional Acceptance Certificate for administration and co-ordination with the Governmental Authorities, as necessary, of any testing or the taking of any other action necessary to demonstrate the Work's compliance with all Applicable Laws, as well as the Authorizations, Consents, as maybe required for or issued in connection with the development, construction, erection and operation of the Works.
23.2.3	The Successful bidder shall provide BHEL / Employer with a copy of all communications with any such authorities and at least five (5) days prior written notice to BHEL / Employer in respect of any meeting with any such authorities (with Successful bidder responsible for obtaining all necessary permissions for the attendance of a representative of BHEL / Employer at any such meeting).
23.2.4	The Successful bidder shall carry out its obligations under this Contract so as not to cause or contribute to any breach by, or violation of, Employer of any Applicable Law, consent or Authorization.
23.3	Permits and Licenses
23.3.1	Successful bidder shall obtain and maintain all consents, permits and licenses (" Consent ") which are required by Applicable Law for the performance of the Work and to allow Successful bidder to perform and complete the Work in accordance with the Contract Schedule (irrespective of whether the same are required to be procured in the name of Successful bidder or Employer), other than the Authorizations.
23.3.2	Specifically, where an Consent by its very nature can only be procured by the Employer (BIFPCL), the Employer shall at the Successful bidder's request, execute such documents and complete such formalities as are necessary for presentment of the application or other Consent related documents to the relevant Governmental Authority or other person. However, the foregoing shall in no circumstances be construed as (i) relieving the Successful bidder from his obligations under Clause 23.3.1 for which he shall remain primarily and fully responsible, or (ii) as imposing any responsibility on the Employer in respect of procurement of consents/ licenses/ approvals/ permits other than the Authorizations.
23.3.3	If requested by Successful bidder, BHEL / Employer shall provide reasonable assistance to Successful bidder in obtaining and maintaining such Consents. Successful bidder shall not be entitled to any adjustment to the Contract Schedule or the Contract Price or any other terms of this Contract relating to any delay or failure to obtain or maintain any such Consents. Employer /BHEL will provide reasonable assistance to the Successful bidder for obtaining any required authorization and export licenses for exporting tolls, equipment, test equipment, and other Successful bidder's Equipment, all of which are and remain the property of the Successful bidder, from Bangladesh at the conclusion of the Work.
23.4	SUCCESSFUL BIDDER'S RESPONSIBILITY TO GET ACQUAINTED WITH BANGLADESH LAWS, IMPORT POLICY, ETC. The Successful bidder shall get himself acquainted with the relevant Bangladesh Laws as well as the import policy of the Government of People's Republic of Bangladesh remaining in force regarding import of banned items, if any, during the execution of the Contract. In case of import of any banned items and/or contraband item, the consequential liability shall rest with the Successful bidder. Similarly the Successful bidder shall be responsible for any non-conformance of Bangladesh Laws either by its own employees during execution of the Contract.
24.0	APPROVED MANUFACTURER/ SUB-VENDOR For other bought out items, Successful bidder have to adhere to the list of sub-vendors, indicated elsewhere in the technical specification, Volume-II/ approved

	sub-vendor.
25.0	CONTRACT RATE/ PRICE
25.1	Successful bidder shall quote their price in USD as per the format of Volume-III, price schedule (Latest revision) only.
25.2	While, total price will be considered for evaluation, as per provision of tender, separate orders will be placed for (i) Supply, and (ii) Service, as per price component in price schedule.
26.0	BANK DETAILS
26.1	<p>EMD, Tender cost, & Security Deposit amount, as applicable, can also be submitted directly by Foreign Bidders (other than Indian bidders) to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-</p> <p><u>SBI (Branch Address):</u></p> <p>Dr. Motiar Rahman Tower, 64 KDA Avenue, Tetultola Mor, Shibbari Khulna City Corporation, Khulna-9100. Phone: 88-040-721328 (Direct), 88-040-2730334 Ext. 102 Cell: 8801716-137626, Fax: 88-040-732339.</p> <p><u>A/C No (USD): 05620257520202</u> <u>A/C No (BDT): :05620257520201</u></p> <p><u>SWIFT: SBINBDDH056</u></p> <p><u>ROUTING NO: 220471543</u></p> <p>BHEL's address in Bank A/c- Bharat Heavy Electricals Ltd., Rampal, Bagerhat, Bangladesh.</p>
26.2	<p>EMD, Tender cost, & Security Deposit amount, as applicable, can also be submitted directly by Indian Bidders to the followings Bharat Heavy Electricals Limited bank account in India-</p> <p>1. SBI (Branch Address:-Commercial Branch, Salt Lake, Sector V, Kolkata, Branch Code SBIN0004279), A/C No. 11107800028, INR Account.</p>
27.0	EARNEST MONEY DEPOSIT (EMD) / SECURITY DEPOSIT (SD) / PERFORMANCE BOND (PB)
27.1	EARNEST MONEY DEPOSIT (EMD)
	Not applicable.
27.2	SECURITY DEPOSIT(SD) CUM PERFORMANCE BOND
	The contractor shall provide to BHEL guarantee of an approved nationalized bank for an amount equal to 5% of the awarded/executed contract price (as per LOI/RA bills) as Performance Bond (under the terms of a bond) within 30 days from the date of LOI (Letter of Intent) and terms of the said bond shall be such as shall be approved by BHEL. The bond shall remain valid until 6 (SIX) month after the expiry of warranty / guarantee period. The obtaining of such guarantee and the cost of bond to be so entered into shall be at the expense in all respects to the contractor.
	BHEL reserve the right of forfeiture of the above bond in addition to other claims and damages in the event of the contractor's failure to fulfil any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract. BHEL reserve the right to set off this bond against any claims of any other contract with BHEL.
28.0	TAXES, DUTIES, ETC
28.1	Indian GST: (For Indian Bidders)
28.1.1	All taxes including GST along with Cess (as applicable) but including, Charges, Royalties, any State or Central Levy and other taxes for materials if any obtained for the work and for execution of the contract shall be borne by successful bidder and shall not be payable extra by BHEL.

	Any increase of above at any stage during execution of contract, including extension of the contract, shall have to be borne by successful bidder contractor. Bidder's quoted/ accepted rates/ price shall be inclusive of all such requirements.
28.1.2	GST along with Cess (as applicable) legally leviable & payable by successful bidder as per GST Law.
28.1.3	Successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by successful bidder on BHEL for this project/ work.
28.1.4	Bidder's quoted rates/ price should be after considering the Input Credit under GST law at bidder's end.
28.1.5	Deleted
28.1.6	TDS under GST shall be deducted at applicable rates on gross invoice value (100 %) from the running bills (RA bills).
28.1.7	<p>Bidder shall note that GST Tax Invoice complying with GST Invoice Rules (Section 30 of GST Act & Rules referred thereunder) wherein the 'Bill To' details shall encompass following.</p> <p>BHEL GSTN- 19AAACB4046P1ZC Name- BHARAT HEAVY ELECTRICALS LIMITED Address- Power Sector Eastern Region, Plot No. 9/1, DJ- Block, Sector II Salt Lake City , Kolkata -700 091</p>
28.1.8	<p>Successful bidder to intimate immediately on the day of removal of goods (in case of any supply of goods) to BHEL along with all relevant details and send a scanned copy of Tax Invoice to BHEL through following communication mode for enabling BHEL to meet its GST related compliances.</p> <p>Portal address- Shall be intimated later and Email address – Shall be intimated later.</p> <p>Specific details of above shall be intimated to successful bidder by BHEL at appropriate juncture.</p>
28.1.09	Successful bidder shall comply with the Time Limit prescribed under the GST Law and rules thereof for raising of the Tax Invoice. If any supply of goods is applicable, successful bidder shall also ensure prompt delivery of goods after dispatch.
28.1.10	Successful bidder shall upload the invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act.
28.1.11	<p>Bidder, however, must ensure that the reduced/ concessional rate of GST as applicable for penultimate exporter vide Notification No. 40/2017-Integrated Tax (Rate) dtd. 23-10-2017, Notification No. 39/2017-Central Tax (Rate) dtd. 23-10-2017 or similar Notification issued by any State / Union Territory GST Authority is levied along with all the necessary compliances. The documents/ undertaking required for availing concessional rate of GST shall be made available by BHEL to the bidder before, during or after export of goods from India.</p> <p>The bidder shall also issue suitable instruction to their C&F agent to comply with relevant conditions for compliance of Notification as issued by the tax authorities from time to time.</p>
28.1.12	BHEL intends to claim rewards under 'Merchandise Exports from India Scheme

	(MEIS)' also intends to claim Duty Drawback under the Customs Act, 1962. The supplier should instruct their C&F agent to ensure availability of these benefits to BHEL.
28.1.13	The successful bidder shall instruct C&F agent engaged by them to ensure mentioning of GSTN of the Bidder in the "Shipping Bill" to be filed by them. Bharat Heavy Electricals Ltd is registered with "Engineering Export Promotion Council of India (EEPC India).The copy of valid Registration Cum Membership Certificate shall be provided to the successful bidder.
28.1.14	The C&F Agent engaged by the successful bidder shall be suitably instructed by the bidder to send a copy of the " Shipping Bill (which shall contain the GSTN of Bidder and Invoice No. of Bidder) and Export General Manifest(EGM)
28.1.15	Way Bill: Successful bidder to arrange for waybill/ e-waybill for any transfer of goods for the execution of the contract. Successful bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by successful bidder and BHEL will not supply any Road Permit/ Way Bill for this purpose.
28.1.16	Any new taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period (including extension, if the same is not attributable to you), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.
28.1.17	Benefits and/ or abolition of all existing taxes must be passed on to BHEL against new taxes, if any, proposed to be introduced at a later date.
28.2.0	BANGLADESH VAT (Applicable For Bidder From Bangladesh)
28.2.1	The Bidder shall submit copy of VAT registration Certificate (Musak-8), TIN Certificate, Trade License to the BHEL site office immediately after receiving the Order but before raising the first Tax Invoice against this tender.
28.2.2	The bidder shall raise Tax Invoice (Challan Patra) as per Rule 16(1) (Musak-11) of the Value Added Tax Rules, 1991 mentioning Name, Address and VAT Registration Number of BHEL site office. Bidder shall note that the Tax Invoice complying with Rule16(1) of the Value Added Tax Rules, 1991 must contain the 'Bill to' and 'Ship to' details as below: BHEL VAT Regn. No. To be intimated later. NAME Bharat Heavy Electricals Limited ADDRESS Power Sector Eastern Region, 2x660 MW Maitree Super Thermal Power Project Moidara Village, Rampal Upazila, Bagerhat District, Bangladesh
28.2.3	The bidder shall submit self-certified copy of the Treasury Challan and / or self-attested copy of the Current Account (Musak-18) along with the Tax Invoice as an evidence of payment of output tax claimed from BHEL.
28.2.4	Bidders shall quote price excluding Bangladesh VAT. VAT is separately payable for which the bidder shall submit self-certified copy of the Treasury Challan and / or self-attested copy of the Current Account (Musak-18) along with the Tax Invoice as an evidence of payment of output tax claimed from BHEL.
28.2.5	Value Added Tax Deduction at Source:
28.2.5.1	BHEL shall make deduction of VAT at source (VDS) , as / if applicable, from the Running Account Bills of the bidder depending upon the status of the bidder like "Manufacturer", "Trader" or "Procurement Provider" as per the extant provision of the Value Added Tax Act, 1991 read with the relevant Notification issued

	<p>thereunder.</p> <p>BHEL shall issue VAT Deduction Certificate in “Musak-12kha” to enable the service provider to take credit of the same while paying his Output VAT. Since VAT is separately payable by BHEL as mentioned in clause 28.2.3 & 28.2.4 and since VDS is adjustable by bidder against his output tax, hence Bidder shall quote price excluding Bangladesh VAT.</p>				
28.2.6	The bidder must consider the duty drawback / export incentives available in Bangladesh while giving quotations.				
28.3	Taxes (For Overseas Bidders other than Indian and Bangladesh)				
28.3.1	Any taxes, duties, Cess etc. in the source country of the bidder shall be on bidder’s account. However, the bidder must consider the duty drawback / export incentive in the source country while giving quotations.				
28.4	Import in Bangladesh (Applicable for Indian Bidder and Bidder other than Bidder from Bangladesh)				
28.4.1	<p>Bidder may please note that import for the project shall be in the name of our Employer / Owner of the Plant / Project and such import other than Office and Household Equipment shall be exempted from payment of Customs Duty, VAT & Supplementary Duty as per Special Order 373/655 Date: 13/12/2018 of National Board of Revenue, Govt. of Bangladesh. Also Regulatory Duty(RD), Advance Trade VAT(ATV) & AIT are exempted / not applicable.</p> <p>Further, any documentation needed for facilitating the Imports like Bill of Entry, Bill of Lading, Packing List, Certificate of Origin etc. will be submitted by the bidder in reasonable time having regard to the time for delivery of the work and the time for completion.</p>				
28.4.3	However, if any of the taxes as mentioned above are paid by the bidder as per the extant law in force in Bangladesh, the same shall be reimbursed at actuals subject to production of documentary evidence in support of such payment. However, the bidder shall obtain prior approval of BHEL before deposition of such taxes.				
28.4.3	<p>Bidder shall note that the Commercial Invoice must contain the ‘Bill to’; ‘Ship to’; ‘Consignee’; details as below:</p> <p>Bill to: -</p> <table border="0"> <tr> <td>NAME</td> <td>Bharat Heavy Electricals Limited</td> </tr> <tr> <td>ADDRESS</td> <td>Power Sector Eastern Region, 2x660 MW Maitree Super Thermal Power Project Moidara Village, Rampal Upazila, Bagerhat District, Bangladesh</td> </tr> </table> <p>Ship to / consignee Details:-</p> <p>Elsewhere mentioned in the Tender Document</p>	NAME	Bharat Heavy Electricals Limited	ADDRESS	Power Sector Eastern Region, 2x660 MW Maitree Super Thermal Power Project Moidara Village, Rampal Upazila, Bagerhat District, Bangladesh
NAME	Bharat Heavy Electricals Limited				
ADDRESS	Power Sector Eastern Region, 2x660 MW Maitree Super Thermal Power Project Moidara Village, Rampal Upazila, Bagerhat District, Bangladesh				
28.4.4	The bidder should correctly and accurately classify all the materials, supplies, equipment, tools and other articles to be shipped under the subject purchase order as per the Harmonized Commodity Description and Coding System. The bidder may refer the website of Bangladesh Customs Authority in this regard (http://www.bangladeshcustoms.gov.bd/trade_info/operating_center).				
28.4.5	The Bidder shall promptly unload the materials, supplies, equipment, tools and other articles.				
28.4.6	<p>The bidder shall be responsible for import of all permanent imported items including freight forwarding, custom clearance on both side at India & Bangladesh, port handling, port charges and C&F commission & their offer Price should consider Demurrage, Landing fee and Additional Border Charges, and various other charges / fees imposed by the Customs Authority, Port Authority or any other authority.</p> <p>No extra payment shall be paid by BHEL in this regard. The price shall be FO.R. Site as such and shall be inclusive of all such requirement.</p>				
29.0	COMPLETION PERIOD				

29.1	The successful bidder shall supply materials in such a manner that entire supply gets completed within 18 (Eighteen) months from the start of work as certified by the Construction Manager, BHEL Rampal Site	
	SI no.	Major Milestone
1	Cladding Sheet 30000sqm	6 Months
2	Cladding Sheet 30000sqm	10 Months
3	Cladding Sheet 30000sqm	12 Months
5	Cladding Sheet Balance project requirement Quantity	16 Months
6	Bolt, Gratings etc.	17 Months
7	Misc. items & completion of Supply	18 Months
30.0	DELIVERY/ SUPPLY SCHEDULE	
30.1	Upon receipt of order/ LOI from BHEL, successful bidder shall interact with BHEL for kick-off meeting to discuss & firm up schedule of design/ engineering, manufacturing/ procurement, supply/ delivery of various items so as to complete the entire job within the stipulated completion period, matching with project schedule.	
30.2	Intermediate Completion Schedule	
30.2.1	Supply of all Cladding sheets	Within 16 months from the start of work as certified by the Construction Manager, BHEL Rampal Site
30.2.2	Intermediate schedule for balance structure shall be finalized after award of contract.	
30.3	Based on the discussion of kick-off meeting or otherwise, master drawing/ document list (MDL) shall be drawn, which shall be subject to acceptance/ approval of BHEL.	
30.4	Based on progress of design/ engineering, successful bidder shall progressively submit quantified billing break-up of entire scope. On acceptance of BHEL, approved billing schedule will be issued by BHEL.	
30.5	Unless otherwise decided, broad schedule of supply for intermediate milestones/ activities shall be decided in kick-off meeting. Successful bidder shall note that departure from each milestone attracts penalty as per terms of tender.	
30.6	On every month, The successful bidder shall submit to Construction Manager, BHEL MDL-wise plan vs actual status of design/ engineering, billing schedule-wise plan vs actual status of design/ engineering, manufacturing/ procurement, supply/ delivery of items, along with action plan to make-up delay, if any.	
30.7	The project schedule might undergo revision/ modification periodically, for which The successful bidder may have to prepare/ modify schedule periodically in consultation with BHEL, so as to match with revised project milestones.	
30.8	Deferment of above schedule is not acceptable. Successful bidder will adhere to schedule and augment resource to ensure completion as per schedule.	
30.9	Progress reviews on entire activities will be held periodically as per direction of BHEL, at Kolkata/ site/ Bangalore. These meetings will be used as a forum for discussing all areas where progress needs to be expedited. The successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.	
31.0	EXTENSION OF TIME FOR COMPLETION	
31.1	If the completion of work as detailed in the scope of work gets delayed beyond the	

	contract/ completion period, The successful bidder shall request for an extension of the contract and BHEL at its discretion may extend the contract.
31.2	Based on the reviews jointly signed, the scope balance at the end of original contract period less the backlog attributable to The successful bidder shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', The successful bidder is bound to complete the portion of backlog attributable to The successful bidder. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly.
31.3	However if any 'Time extension' is granted to The successful bidder to facilitate continuation of work and completion of contract, due to backlog attributable to The successful bidder alone, then it shall be without prejudice to the rights of BHEL to impose penalty/ LD for the delays attributable to The successful bidder , in addition to any other actions BHEL may wish to take at the risk and cost of Successful bidder.
31.4	A joint program shall be drawn for the balance amount of work to be completed during the period of 'Time Extension'. Review of the program and record of shortfall shall be done.
31.5	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Successful bidder, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable to successful bidder and recoverable from the dues payable to The successful bidder.
32.0	TERMS OF PAYMENT
32.1	Indian Bidder
	<p>(a) 95% of the payment shall be released against receipt of material at site. This payment shall be released on submission of following documents:</p> <ol style="list-style-type: none"> 1. Indian GST complaint Invoice in original & duplicate 2. Test certificate in original 3. Copy of Inspection Report (if applicable) 4. MDCC 5. Store Receipt Voucher <p><u>(B) Balance 5% shall be paid after completion of erection work and handed over of the structure to BHEL/BIFPCL against submission of handing over certificate duly signed by BHEL/BIFPCL</u></p> <p><u>(d) No advance shall be paid.</u></p> <p><u>(d) Paying Authority: AGM Finance, BHEL-PSER Kolkata.</u></p> <p><u>(e) Payment shall be made from Kolkata/HQ in the equivalent amount of USD to INR on the date of conversion of technical bid opening with SBI TT Buying rate for Indian Bidder and payment shall be made in USD for Bangladesh bidder.</u></p>
32.2	Bangladesh Bidder

	<p>(a) 95% of the payment shall be released against receipt of material at site. This payment shall be released on submission of following documents:</p> <ol style="list-style-type: none"> 1. Bangladesh VAT complaint Invoice in original & duplicate 2. Test certificate in original 3. Copy of Inspection Report (if applicable) 4. MDCC 5. Store Receipt Voucher <p><u>(b) Balance 5% shall be paid after completion of erection work and handed over of the structure to BHEL/BIFPCL against submission of handing over certificate duly signed by BHEL/BIFPCL</u></p> <p><u>(d) No advance shall be paid.</u></p> <p><u>(d) Paying Authority: Construction Manager, BHEL-Rampal Site.</u></p>
32.3	Overseas Bidder (other than Indian and Bangladesh Bidder)
	<p>95% of the payment shall be released against receipt of material at site. This payment shall be released on submission of following documents:</p> <ol style="list-style-type: none"> 1. Commercial invoice in original & duplicate 2. Test certificate in original 3. Copy of Inspection Report (if applicable) 4. MDCC 5. Certificate of Origin 6. Store Receipt Voucher <p>(c) Balance 5% shall be paid after completion of erection work and handed over of the structure to BHEL/BIFPCL against submission of handing over certificate duly signed by BHEL/BIFPCL against LC.</p> <p>(d) No advance shall be paid.</p> <p>(d) Paying Authority: <u>Construction Manager, BHEL-Rampal Site.</u></p>
32.4	The successful bidder shall submit their running bill (RA bill) once in a month, at the end of the month, as per billing schedule of this tender
32.5	Along with every RA bill, The successful bidder shall submit item-wise plan (w.r.t. L2 Schedule) vs actual status of supply, as applicable.
32.6	Progressive payment shall be made by BHEL against Successful bidder's RA bill, complete & correct in all respects accompanied by BHEL engineer's certified/ measurement sheet, jointly signed; requisite statutory certificates, certified by BHEL; after 30 days of submission of the bill.
32.7	Measurement will be taken as specified in terms & conditions of the contract and certified by the BHEL engineer of actual work.
32.8	Subject to any deduction which BHEL may be authorized to make under the contract, The successful bidder shall on the certification of BHEL engineer at site, be entitled to payment as per billing schedule.
32.9	However no extra payment shall be made in the event of deferment in payment.
32.10	All admissible recovery/ adjustment, etc. shall be made from interim payment.
33.0	BILLING BREAK-UP
33.1	Successful bidder shall submit detail billing schedule to BHEL for review & approval.
33.2	Progressive payment shall be made as per following billing break-up, in conjunction

	with terms of payment provision of the tender.
33.4.4	BHEL/ customer material dispatch clearance certificate (MDCC) enclosing QS note, inspection & test certificate, wherever applicable.
33.4.5	Copy of letter, addressed to insurance company intimating dispatch.
33.8	BHEL site, at discretion, may further split up the above percentages billing break-up and affect payment to suit the site condition, cash flow requirement, according to the progress.
33.9	The billing break-up is drawn for progressive payment and shall not be construed as the value/ price of corresponding item, unless otherwise decided by BHEL.
34.0	MOBILISATION ADVANCE/ INTEREST BEARING RECOVERABLE ADVANCE
	Not applicable for this tender.
35.0	ESCALATION (PVC)
	Not applicable for this tender.
36.0	OVER RUN COMPENSATION (ORC)/ RATE REVISION
	Not applicable for this tender.
37.0	LIQUIDATED DAMAGE AND OTHER PENALTIES
37.1	<p>If The successful bidder fails to complete entire scope of work within completion period, as mentioned in the clause no. 10.1 of volume 1d (SCC-Service) of the tender, for reasons attributable to them, BHEL shall have the right to recover, as liquidated damages (LD), a sum equivalent to 0.5% of contract price (supply part), including taxes, duties, etc. for delay of each week or part thereof.</p> <p>NOTE: SINCE, IT IS A TURNKEY PACKAGE; LD SHALL BE LEVIABLE ONLY IN CASE OF DELAY IN COMPLETION OF ENTIRE SCOPE OF WORK (MAIN SUPPLY & MAIN SERVICE). NO LD SHALL BE WITHHELD, IF THERE IS DELAY ONLY IN SUPPLY, BUT THE ENTIRE SCOPE OF WORK IS COMPLETED ON TIME, INCLUDING TIME EXTENTIONS FOR WHICH DELAY IS NOT ATTRIBUTABLE TO BIDDER AS PER VOLUME ID.</p>
37.2	The liability for delay shall not in any case exceed 10 % (Ten percent) of the contract price (Supply part), including taxes, duties, etc.
37.4	BHEL shall deduct aforesaid amounts from any money due or which may become due to The successful bidder and/ or recover from the bank guarantees/ security deposit of The successful bidder. To be entitled to impose such compensation/ penalty/ recovery, BHEL will not be required to prove that they have incurred such amount as actual damage.
37.5	BHEL reserve the right to complete the job through other resource on account of and at the risk & cost of Successful bidder without notice to Successful bidder of the work not so executed, without cancelling the order/ contract in respect of the work not yet due for completion.
37.6	BHEL reserve the right to cancel the order/ contract or a portion thereof for the work not so completed at the risk & cost of The successful bidder and The successful bidder shall be liable to BHEL for any excess costs thereof.
37.7	The successful bidder shall continue with performance of the order/ contract under all circumstances, to the extent not cancelled.
37.8	Where action is taken as per above, The successful bidder shall be liable for any loss, which BHEL may sustain on that account. The successful bidder shall not be entitled to any gain on such action and the manner & the method of such purchase shall be at the discretion of BHEL. It shall not be obligatory on the part of BHEL to serve a notice of such completion, through other resource, on successful bidder.
37.9	Liquidated damages (LD) shall be applicable for each contract as per the corresponding completion periods as well as contract prices, indicated elsewhere in the tender.
37.10	All other terms & conditions of GCC shall be applicable.
38.0	GUARANTEE / WARRANTY
38.1	Successful bidder shall warrant that the equipment will be new & in accordance with the contract documents and free from defects arising due to deficiencies in design & engineering and from defects in material & workmanship for the period commencing immediately upon the satisfactory completion of trial operations and

	handing over of individual unit. Performance guarantee shall stand valid till 24 months completion of scope or as per commercial terms & conditions, whichever is later. The equipment shall operate satisfactorily and reliably and the performance & efficiency of the equipment (s) shall not be less than respective guaranteed values.
38.2	Successful bidder shall be liable to repair or replace/ upgrade with specific consent of owner, any defective parts that may develop in the plant of their own manufacture or those their sub-suppliers under the conditions provided for by the contract and under proper use and arising solely from faulty design, materials and/ or workmanship. Any defect removal at site by repair/ up-gradation of the installed equipment/ component/ material will be permitted by the owner only when such repair/ up-gradation in the meantime, is not detrimental to commercial use of the plant. All replaced defective parts shall be returned to the successful bidder unless otherwise arranged. No repairs or replacement shall normally be carried out by the engineer when the plant is under the supervision of the successful bidder's supervisory engineers.
38.3	Successful bidder's obligations against above clause shall be limited to repairing or replacing with all incidental charges from site to successful bidder's work and/ or their sub-supplier's works and back to site. In case of defective parts not repairable at site but, essential in the meantime for the commercial operation of equipment, successful bidder and the purchaser/ owner shall mutually agree to a program of replacement or renewal which will minimize to the maximum extent interruption in the operation of the equipment.
38.4	Acceptance of the equipment by BHEL shall in no way relieve successful bidder of their obligation under this clause.
38.5	In the event of any emergency where, in the judgment of the engineer, delay would cause serious loss or damages, repairs or adjustment may be made by the engineer or a third party chosen by the engineer without advance notice to successful bidder and the cost of such work shall be paid by successful bidder. In the event such action is taken by BHEL, successful bidder will be notified promptly and he shall assist wherever possible in making necessary corrections. This shall not relieve successful bidder's liability under the terms & conditions of the contract.
38.6	If it becomes necessary for successful bidder to replace or renew any defective portions of the plant, the provision of this clause shall apply to portion of the plant so replaced or renewed until the expiration of six months from the date of such replacement or renewal or until the end of the warranty period as specified in clause whichever may be later. If any defects are not remedied within 29 days, the engineer may proceed to do the work at successful bidder's risk & cost, but without prejudice to any other rights which BHEL may have against successful bidder in respect of such defects.
38.7	If the replacement or renewals are of such character as may affect the efficiency of the plant, the purchaser/ owner shall have the right to give to successful bidder within one month of such replacement or renewal, notice in writing that 'acceptance tests on completion' be made, in which case such tests shall be carried out as per approved QAP/ BHEL guidelines.
38.8	The repaired or new parts will be furnished & erected free of cost by successful bidder. If any repair is carried out on their behalf at the site, successful bidder shall bear the cost of such repairs.
38.9	The cost of any special or general overhaul rendered necessary during the maintenance period due to defects in the plant or defective work carried out by successful bidder shall be borne by successful bidder.
38.10	In respect of goods supplied by sub-vendors to successful bidder where a longer guarantee (more than 24 months) is provided by such sub-vendor, the owner shall be entitled to the benefit of such longer guarantee.
38.11	Other provision shall be as per the GCC.
39.0	BANK CHARGE No interest, whatsoever, shall be payable by purchaser on the security deposit, any bank guarantee submitted or any amount due to the seller/ Successful bidder.
40.0	OTHER TERMS

	All other term & conditions of this specification shall be governed by the pertinent provisions of GCC & other volumes of this tender, as applicable.
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FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
Power Sector - Eastern Region,
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	<i>PACKAGE 14A: CIVIL & ARCHITECTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH..</i>	
Ref	1.0	Tender no: PSER:SCT:KLN-C1954:19.
	2.0	BHEL's NIT, vide reference no: PSER:SCT:KLN-C1954:7523, Date: 12-04-2019.
	3.0	BHEL's TCN-01, vide reference no: PSER: SCT:KLN-C-1954:19:TCN-01, Date: 03-05-2019.
	4.0	BHEL's TCN-02, vide reference no: PSER: SCT:KLN-C-1960:19:TCN-02, Date: 08-05-2019.
	5.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized
representative of the bidder)

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35.0	TOOLS & PLANTS (TO BE PROVIDED BY BHEL)
36.0	OTHER TERMS

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1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
1.1	<p>The 2 x 660 MW MAITREE SUPER THERMAL POWER PROJECT is located in Moithara Village, Rampal Upazila, Bagerhat District, Bangladesh.</p> <p>The Bidder shall acquaint himself by a visit to the site, with the conditions prevailing at site before submission of the bid. The information given here in under is for general guidance and shall not be contractually binding on the Owner. All relevant site data / information as may be necessary shall have to be obtained / collected by the Bidder.</p>
1.2	APPROACH TO SITE
	<p>The nearest town Khulna is at a distance of 23 km from project site. The site is Connected by road from Mangla- Khulna Highway.</p> <p>Nearest Domestic airport is Jessor, Bangladesh at a distance of about 93 KM and international airport is Dhaka at a distance of 263 KM, Bangladesh</p>
1.3	Owner: BIFPCL (BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LIMITED)
2.0	SCOPE OF THE CONTRACT
2.1	<p>The scope of works covers of Structural works for Maitree STPP Unit-1 & 2 of Coal, Ash, Lime and Gypsum handling plant, including supply of materials, labour, tools and plants. The scope of work is indicative but not limited to the given below.</p> <p><u>SCOPE OF WORK</u> STRUCUTRAL WORKS OF COAL, ASH, LIME AND GYPSUM HANDLING PLANT.</p> <ul style="list-style-type: none"> • Transfer Points • Belt Conveyor • Pipe Conveyor • Crusher House • Drive House • Tail Pulley House • Sacker Rail • Portal Scrapper Reclaimer • Coal & Lime Cover Shed (Except super structure Structural work) • Coal Blending Silo Complex • Pump House • Electrical Buildings • Dozer Shed • Coal Slurry Settling Pond • Strom Water Retention Pond • Work Shop Building • Limestone Underground Hopper with Tunnel • Intermediate Silo • Bottom Ash Hopper • Fly Ash Silo • Bottom Ash Silo • Gypsum Silo • Buildings near Silo Complex(Jetty area)

	<ul style="list-style-type: none"> • Compressor House • Pipe Rack • Cable Rack • Ash Dyke Area • Equipment Foundations • Any others structures in Coal, Ash, Lime and Gypsum Handling Plant
2.2	The works to be performed under this contract consist of providing all labour, supervision, material, scaffolding, construction equipments, tools and plants, temporary works, supplies including POL, transportation and all incidental items not shown or specified but reasonably implied or necessary for the proper completion of work in all respects. Testing of all materials, concrete, earthwork other allied works, preparation of bar bending schedules on the basis of construction drawings, preparation of fabrication drawings etc. are included on the rates of items of work. Works shall only be carried out with approved structural fabrication drawings.
2.3	The area of work shall be cleared of all vegetation, rubbish and other objectionable matter and materials remove shall be burnt or otherwise disposed of as directed by the Engineer-in-Charge. No separate payment for these operations shall be made. The cost of all these operations shall be deemed to have been included in the unit rates rendered for the different items under bill of quantities.
2.4	All the works areas shall be adequately flood lighted to the satisfaction of the Engineer-in-Charge when the work is in progress during the night shifts.
2.5	The unit rates shall include all material equipment, fixtures, labour construction plant, temporary works and everything whether of permanent or temporary nature necessary for the completion of job in all respects.
2.6	The unit rates for various items of B.O.Q shall include all the stipulations mentioned in Section C and technical specifications under Section D and nothing extra over B.O.Q rates shall be payable.
2.7	Drawings showing enough details for the construction as per the specification shall be furnished to the contractor in a phased manner as far as possible.
2.8	The bidder should fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, local conditions, soil strata and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may have not been specifically brought out in the specifications.
3.0	SITE VISIT
3.1	Contractor should visit site and acquire full knowledge & information about site conditions prevailing at site and in and around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid. In line with the above, site visit confirmation will be required to be submitted by the bidder with the technical bid.
3.1	OPEN SPACE FOR OFFICE & STORAGE
3.1.1	Open spaces for material storage yard & construction of temporary site office may be allocated as made available by the customer / BHEL free / hire charges. Contractor has to make his own arrangements for labour colony including Electricity and water for the labour colony.

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3.1.2	Construction of necessary stores and storage of materials shall be in contractor's scope. BHEL shall provide available space as received from customer on mutually agreed basis. Security of stores & work place shall be in Contractor's scope.	
3.1.3	REMOVAL OF TEMPORARY FACILITIES	
	When the Work is completed all such temporary structures and facilities shall be removed from the Site and the area shall be restored to its original condition	
3.2	WATER	
3.2.1	BHEL will provide construction water at one point at mutually agreed point or within 500 m from work premises, free of cost to the contractor . Bidder to note that no ground water is allowed for construction purpose by the project authority.	
3.2.2	Further necessary network for construction water system shall be done by the bidder at his own cost.	
3.2.3	Contractor should arrange on their own drinking water in their labour colony.	
3.2.4	BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water for which no separate payment shall be made by BHEL.	
3.2.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement.	
3.2.6	The availability of water (construction as well as drinking) in Maitree project may be limited. Contractor shall ensure that no water is wasted. In this regard the contractor shall take all necessary measure towards preservation of water.	
3.3	ELECTRICITY	
3.3.1	<p>CONSTRUCTION POWER & GENERAL ILLUMINATION NETWORK:-</p> <p>BHEL Shall Provide Construction Power free of charge at 415V level at one point (within 500 M from his workplace / batching plant), bidder has to make his own distribution arrangement to draw electricity.</p> <p>The bidder will have to procure & install adequate area illumination system during construction right from start of his work. This system will include temporary pole lighting, portable lighting towers with sufficient DG back-up for area lighting at different working areas for execution of the work & safety of workmen within the quoted rate.</p> <p>The illumination should be such that minimum illumination requirement as specified in specification or any-where for general illumination is maintained.</p> <p>GENERAL:- If any other voltage level (other than normally available) is required, the same shall be arranged by the contractor from power supply as above. Contractor will have to provide at his own cost necessary calibrated energy meters (tamper proof, suitably housed in a weather proof box with lock & key arrangement) at point of power supply along with calibration certificate from authorized / accredited agency for working out the power consumption. In case of recalibration required for any reason the necessary charges including replacement by calibrated meters is to be borne by the contractor. Supply of electricity shall be governed by Electricity Act and Installation Rules and other Rules and Regulation as applicable. The contractor shall ensure usage of electricity in an efficient manner and the same may be audited by BHEL time to time. In case of any major</p>	

	deviation from normally accepted norms is observed, BHEL will reserve the right to impose penalty as deemed fit for such cases.
3.3.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives / T&Ps are deployed.
3.3.3	The power supply will be from the available source of customer. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply / variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.
3.3.4	Bidder will have to arrange sufficient illumination at their own work areas.
3.3.5	The contractor should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the contractor to step up the progress of work after restoration of electric supply so that overall progress of work is not affected.
3.3.6	The contractor shall have to make arrangement at their own cost for illumination that will be required in the working area for execution of the work & safety of workmen.
3.3.7	The contractor shall have to make arrangement at their own cost for illumination etc. in labor colony. However there may be provision of Chargeable Power for labor colony for which contractor has to install meters and necessary accessories
4.0	TOOLS & PLANTS
4.1	All the tools and plants required for execution of the above work are in contractor's scope except item as mentioned in CL 35.1 below
5.0	MATERIAL HANDLING (BHEL ISSUED MATERIAL)
5.1.1	Earthing Strip/Bar, structural steel (MS plate/ ISMB/ channel/ angle/chequered plate/ stainless steel plate/liner) & Fabricated Structure only will be issued free of cost by BHEL for use in the work covered in this contract. All other materials required for proper completion of job shall be provided by contractor and quoted rates shall be inclusive of this. Please note that BHEL will only issue the above free materials if has written in the description of the BOQ.
5.1.2	Consignment steel will be directly issued to the contractor as received by BHEL, on weight basis from its supplier, as per delivery challan of supplier.
5.1.3	Handling of steel of total project including its unloading will be in vendor's scope for which no separate payment will be given by BHEL.
5.1.4	It would be the responsibility of the contractor to keep in constant contact with BHEL/ site to find out the delivery status, arrival of the consignments and arrange for escort to accompany the truck/ trailer for transportation of above materials by BHEL'S supplier, as necessary. The lorry, truck way bill for the consignment as shall be received by BHEL would be handed over to the contractor immediately for unloading of materials including all arrangement for necessary gate passes etc. All arrangement for necessary gate passes etc shall be the responsibility of contractor.
5.1.5	Payment of all demurrages that may result due to contractor's fault/ delay would be the responsibility of the contractor. If BHEL have to make payment of demurrage together with freight, the amount so paid as demurrages for the reasons stated above, shall be recovered from the bills of the contractor. The decision of BHEL's engineer in this regard will be final and binding on the contractor. However the contractor has to clear all such charges, if any in this regard and complete the job without waiting for BHEL's decision.
5.1.6	It would be the responsibility of the contractor to sign on the delivery book acknowledgement slip of supplier/ transport authorities etc.

5.1.7	Consignments coming on Sundays and holidays are also required to be handled/unloaded by the contractor. Since the offices and stores will probably remain closed on such days, it will be the responsibility of the contractor to contact BHEL engineers at their residence and obtain instructions.
5.1.8	Since the consignments are expected to arrive during any time of the day or night, contractor shall have, his workmen round the clock at site as well as other places as required to unload the materials immediately on arrival.
5.1.9	Unloading of materials at the storage yard or at places designated by BHEL, stacking & restacking, shifting & reshifting, using contractor's own cranes, trailers and other equipments with the valid road permit for their operation, unloading and stacking etc shall be responsibility of the contractor under this contract. All materials/equipments shall be stacked, stored above ground level by use of concrete or wooden sleepers No materials shall remain on ground at any time. All concrete sleepers required for stacking the materials shall be arranged by contractor (successful bidder of this package). All other material handling equipments like winches, d-shackles, slings of various sizes, max puller, pulley blocks, jacks, trucks, tailors etc required for such material handling of steel etc. shall be arranged by contractor within quoted/accepted rates.
5.1.10	It will be the responsibility of the contractor to submit computerized account of all such consignments of materials received by them, daily to BHEL.
5.1.11	BHEL reserve the right to recover from the contractor any loss arising out of damage/theft or any other causes of the materials issued to him at any point.
5.1.12	<p>Open land (very limited space) for storage shall be provided by BHEL on free of cost basis as per availability.</p> <p>You shall maintain one centralized fenced store cum bar bending yard (Area Approx. 50mx50m). Hard surfacing of this yard and all round drain shall be carried out by you at your own cost within the accepted rate.</p> <p>Batching plant area shall be provided within plant premises and you shall make use of the area for installation and operation of the Batching Plant at your own cost.</p> <p>You shall make complete arrangement of necessary security personnel, to safeguard all such materials in your custody. Materials issued will be used only for construction of permanent work. You shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering.</p> <p>Barbed wire fencing of the steel storage yard, batching plant area, reinforcement bending yard area etc. are to be done by the contractor at his own cost. Contractor shall also remove grass, bushes, trees etc. wherever required off the land provided to him and shall make proper continuous up-keepment of the open yard/ land by removing grass, bushes trees etc and same is included under the scope of his work & no extra payment shall be made to the contractor in this regard.</p>
5.1.13	The contractor shall construct waterproof cement store (capacity up to 300 MT) for storing and stacking of cement, CGI / asbestos roofing (slope) with brick masonry wall, PCC flooring or container. Materials required for the same shall be provided by contractor at his own cost. Cement has to be kept over wooden raised platform. Stacking of cement is to be done as per BS codes with proper illumination and locking arrangements.
5.1.14	The contractor shall in no case be entitled for any compensation or damages on account of any delay in supply or non-supply thereof for all or any such material.
5.1.15	Excessive rusting of steel must be avoided. In case, due to any cause attributable to the contractor, such clotting of and/ or rusting of steel occur rendering the same unusable,

	then such quantity of steel shall be recovered from the interim payment at the penal rate specified in the tender.
5.1.16	No material shall be issued to the contractor except as those indicated above, i.e. steel unless otherwise expressly provided for in the contract. Contractor will have to make his own arrangement at his own cost for procurement of any other material as required for the works and of such quality as acceptable to BHEL.
5.1.17	The contractor shall maintain proper store account for all the BHEL issued materials and shall give three copies of monthly computerised reconciliation statement of such account to the BHEL.
5.1.18	Contractor shall carry out in complete association with BHEL, material management functions and execution like day to day update of materials, issued to contractor, accounting for surplus/ scrap material returned etc. These functions shall also be carried out through computerised system utilizing suitable software. Contractor shall provide experienced software personnel to associate on dedicated basis for efficient discharge of the same.
5.1.19	The contractor shall solely be responsible for the safety & quality of material after it is handed over and issued to contractor by BHEL.
5.1.20	BHEL issued materials shall not under any circumstances be taken out of the project site unless otherwise permitted by BHEL.
5.1.21	All the necessary lifting tackles, cranes, hydra, tools & plants including tractors, trailers, trucks, pulley blocks, jacks, winches, wire ropes etc, of suitable capacities and other equipments incidental to carry out this work shall have to be arranged by the contractor at his cost. BHEL engineer reserves the right to inspect lifting tackles and equipment before allowing their use. Such approval however shall not relieve the responsibility of the contractor to ensure safe handling of equipment taking the precautions to avoid any accident and damage to other equipment and personnel.
5.1.22	No separate rate will be applicable for the above job. The contractor will quote the rate for the items inclusive of all charges for the above job.
5.1.23	Bidder's scope of handling of steel under the scope of this tender includes stacking/ storing of materials over concrete sleepers Bidder scope shall include provision of concrete sleepers for this purpose and no separate payment against the same will be made by BHEL. After completion of the job bidder shall take back the sleepers Bidder's quoted rate/ price shall be in consideration to this.
5.2	ISSUE OF STEEL (Steel shall be provided against respective items of the BOQ where mentioned that Steel shall be supplied by BHEL as free of cost)
5.2.1	The steel shall be issued to the contractor free of cost on the following basis.
5.2.1.1	Structural steel (MS plate, angle, channel, ISMB, Stainless steel plate/Liner, chequered plate and EOT crane rails) – Weighment basis (unit – MT).
5.2.1.2	Reinforcement steel(TMT) and earthing rod (MS round) – Weighment basis (unit – MT).
5.2.2	All the steel (structural steel, reinforcement, earthing strip/bar) issued by BHEL shall be properly accounted for. The total quantity of steel required for the work will be calculated from the approved Bar Bending schedule, fabrication drawings, approved laps, chairs and lugs. The measurement for payment as well as for accounting shall be based on the sectional weights
5.2.3	In case any such sectional weights are not available in the above documents, the manufacturer recommendation shall be binding.
5.2.4	The steel issued to the contractor shall be mainly in standard length and sections as received from the supplier. However, the contractor shall be bound to accept the steel in

	length as available in the project stores no claims for extra payment because of issue of non-standard length will be entertained.		
5.2.5	In case MS flats as required in the fabrication of structures are not available, you shall cut such width out of the available MS plates to make flats at no extra cost till such material is available and procured by BHEL.		
5.2.3	The contractor shall satisfy himself of the quality and quantity of the materials at the time of taking delivery from BHEL stores. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by contractor from BHEL stores.		
5.3	RETURN OF MATERIALS		
5.3.1	RETURN OF STEEL INCLUDING SCRAP		
5.3.1.1	All surplus steel and all wastage materials will be taken back on weightment basis.		
5.3.1.2	Surplus, unused and un-tampered steel shall be sorted section-wise and returned separately for a place directed by BHEL/ engineer within the project area. Return of such materials will not be entitled to any handling and incidental charges.		
5.3.1.3	All wastage/ scrap (including wastage, unusable scrap) shall be returned to the stores on weightment basis and a receipt obtained for material accounting purposes. Return of such material will not be entitled to any additional cost due to handling and transportation and incidental charge.		
5.3.1.4	Scrap of structural steel shall be returned separately		
5.4	STRUCTURAL STEEL CONSUMPTION		
5.4.1	The theoretical consumption of various sections shall be based on approved drawings. Weights shall be calculated considering the sectional weights as per Indian standard as mentioned in relevant clause. No extra shall be payable to the contractor for any deviation in weights for the two different procedures adopted for issue and calculation of the theoretical consumption including rolling tolerances.		
5.4.2	Actual consumption = Issue – Surplus.		
5.4.3	Surplus = Untempered, unused, uncut quantity of steel returned by the contractor to BHEL store.		
5.4.4	Wastage = Actual consumption – Theoretical consumption.		
5.5	STRUCTURAL STEEL WASTAGE (Except Fabricated Structural Steel as supplied by BHEL as free of cost, NO wastage will be permitted for fabricated structural steel)		
5.5.1	Allowable wastage – 4 % (four percent) of the theoretical consumption shall be considered. Wastage is further classified as cut pieces and scrap measured as per actual weightment basis. Invisible wastage (loss of materials due to gas cutting, straightening of edges etc) shall be limited to 0.5 % (zero point five percent) of theoretical consumption and shall be considered for reconciliation purposes only. But this invisible wastage shall be considered to be included in allowable wastage (i.e. four percent).		
	Sl no	Structural steel materials	Basis of issue & penal recovery
	S-1	Theoretical consumption (without considering any wastage, scrap or loss) as per specification & drg.	Free
	S-2	Wastage limited to plus four percent (+4%) of the aforesaid theoretical consumption (S-1) towards allowable wastage.	Free
	S-3	Wastage beyond four percent (4%) of the aforesaid theoretical consumption (S-1).	Penal rate
5.6	COPPER STRIP/BAR/CONDUCTOR CONSUMPTION		

5.6.1	The theoretical consumption of various sections shall be based on approved drawings. Weights shall be calculated considering the sectional weights as per Indian standard as mentioned in relevant clause. No extra shall be payable to the contractor for any deviation in weights for the two different procedures adopted for issue and calculation of the theoretical consumption including rolling tolerances.	
5.6.2	Actual consumption = Issue – Surplus.	
5.6.3	Surplus = Un-tempered, unused, uncut quantity of steel returned by the contractor to BHEL store.	
5.6.4	Wastage = Actual consumption – Theoretical consumption.	
5.7	COPPER STRIP/BAR/CONDUCTOR - WASTAGE	
5.7.1	Allowable wastage – 0.5% (Half percent) of the theoretical consumption shall be considered.	
5.8	All wastage reinforcement, MS round/Copper Strip/Copper bar, structural steel shall be returned to BHEL.	
5.9	RECONCILIATION OF BHEL ISSUED MATERIALS	
5.9.1	The contractor shall submit a reconciliation statement of RMC and steel issued to him once in two months. The same may be submitted along with each RA bill.	
5.9.2	At the time of submission of bills, the contractor shall properly account for the material issued to him as specified herein to the satisfaction of BHEL certifying that the balance material are available with contractor's custody at site.	
5.9.3	If it is noticed by BHEL that the wastage is high and calls recovery at the penal rate, then BHEL will proceed for recovery for the excess wastage as per penal recovery rates as specified.	
5.9.4	The approved drawings/ bar bending schedules are to be considered for the purpose of reconciliation of materials.	
5.10.0	RECOVERY OF MATERIAL	
5.10.1	If wastage exceeds the specified limit, the recovery of excess wastage shall be made from monthly RA bill at the penal rate stipulated below.	
5.10.2	PENAL RATE OF MATERIALS	
	Item	Penal rate (USD)
	Structural steel/GI Flat	1560/- per MT.
	Tined Copper Strip/Bar/Conductor/SS Plate	9000/- per MT.
6.0	INSPECTION, TESTING AND INSPECTION CERTIFICATES	
6.1	The engineer, his duly authorized representative and / or an outside inspection agency acting on behalf of BHEL / owner shall have access at all reasonable times to inspect & examine the materials & workmanship of the works during its manufacture and if part of the works is being manufactured or assembled on other premises or works, the vendor shall obtain for the engineer and for their duly authorized representative permission to inspect as if the works were manufactured or assembled on vendor's own premises or works. Necessary arrangement for carrying out inspection including supply of labour, IMTEs, area illumination and scaffolding, if required will be vendor's responsibility and same has to be carried out within the quoted price.	
6.2	To facilitate advance planning of inspection in addition to giving inspection notice the vendor shall furnish quarterly inspection program indicating schedule dates of inspection at customer hold point and final inspection stages. Updated quarterly inspection plans will be made for each 3 consecutive months and shall be furnished before beginning of each calendar month.	

6.3	Before any plant / equipment leaves the place of manufacture, BHEL shall be given the option of witnessing inspections & tests for compliance with specifications & related standards. The vendor shall give the engineer/ inspector 15 days written notice of any material being ready for testing. Such test shall be to the vendor's account except for the expenses of the inspector. The engineer / inspector, unless the inspection is waived will attend such tests within 15 days of the date on which the equipment is notified as being ready for test / inspection, failing which the vendor may proceed with test which shall be deemed to have been made in the inspector's presence and he shall forthwith forward to the Inspector duly certified copies of test reports.
6.4	The engineer or inspector shall within 15 days from the date of inspection as defined herein give notice to the vendor of any objection w.r.t. drawing / equipment / workmanship which in his opinion not in accordance with the specification / contract. The vendor shall either make modification as may be necessary to meet the said objection or explain to the engineer/ inspector giving reasons that no modifications are necessary to comply with the contract.
6.5	When the factory tests have been completed at the vendor's or sub-vendor's works, the engineer or inspector shall issue a certificate to this effect within reasonable time after completion of tests but if the tests are not witnessed by the engineer or Inspector the certificate shall be issued within 15 days of the receipt of vendor's test certificate by the engineer inspector. Completion of these tests or the issue of the certificates shall not bind BHEL to accept the equipment should it on further tests after erection be found not to comply with the contract.
6.6	In all cases where the vendor provides the tests at the premises of the vendor or any sub-vendor, the vendor except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the engineer/ inspector to carry out effectively such tests on the equipment in accordance with the contract and shall give facilities to the engineer/ inspector to accomplish testing.
7.0	INSURANCE
	The contractor shall make available the original insurance cover(s) taken by him, against his T&P, assets and workmen compensation and any other cover as may be pertinent to his works and obligatory in terms of law, to BHEL for necessary verification in regard to their adequacy, before commencement of work. However, irrespective of such verification/ acceptance, the responsibility to maintain adequate insurance coverage at all times during the period of the contract shall be of the contractor alone. Such insurance covers to be taken shall be in the joint names of the owner and the contractor. The contractor shall however be authorised to deal directly with the Insurance company(s) and shall be responsible in regard to maintenance of such insurance covers Insurance covers to be taken by BHEL / Customer shall be as stipulated under relevant clause of Volume-IB.
8.0	DEVIATIONS/ CLARIFICATIONS
8.1	Normally no deviation with respect to tender is acceptable to BHEL. However, in case of unavoidable circumstances, the bidder may submit their query for seeking clarifications of BHEL as per modality stipulated in NIT or may submit the same along with his offer as per prescribed schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration/ offer. In the absence of such filled-up schedule/ format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no

negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.

9.0 DEWATERING

9.1 Contractor shall ensure at all times that his work area & approach / access roads are free from accumulation of water, so that the materials are safe and the erection / progress schedule are not affected. No separate claim in this regard shall be admitted by BHEL. No separate payments for dewatering of subsoil, surface water or catchments water, if required, at any time during execution of the work including monsoon period shall be considered by BHEL.

10.0 TIME SCHEDULE/ COMPLETION PERIOD

10.1 The entire work under the scope of work shall be successfully completed in all respect within 21 (**Twenty One**) months from date of start of work, as certified by Construction Manager, BHEL.

Mobilization at site shall be done within 20 days from date of written intimation from BHEL. The exact date of start of work shall be reckoned based on certificate of Construction Manager, BHEL.

SI no.	Major Milestone	Months from Date of start of work
1	Fly Ash handling and other Ash Handling Structure like Ash Water Pump House, AHP Control Room etc.	7 Months
2	Limestone Handling Package(Limestone yard, Travelling Stacker, Belt Conveyor, Limestone Intermediate Silo, Crusher, Pipe Conveyor)	8 Months
3	CHP Structural Works (Stock Pile & Stacker reclaimers, Crusher House ,Conveyor, Transfer Point, CHP Control Room, Stacker, Conveyor, Grab unloader etc.)	10 Months
5	Readiness of all complete facilities required for Coal Synchronization #1	14 Months
6	Readiness of all complete facilities required for Coal Synchronization #2	19 Months
7	Completion of Balance Structure and Handing over to BHEL/BIFPCL	21 Months

The above milestones have been prepared in line with L2 schedule of BHEL & BIFPCL. A major milestone of different activities in L2 schedule for Unit #1 & Unit #2 with BIFPCL is given below. Contractor shall also responsible to complete the foundations/structures in their scope of contract within schedule time frame of project Milestone as given below.

11.0	PRICE BID & EVALUATION OF PRE-QUALIFICATION CRITERIA
11.1	Bidders should quote prices in USD as per format, Volume-III-Price Schedule provided in the tender. Bids shall be evaluated based on total price quoted.
12.0	TERMS OF PAYMENT
12.1	<p>The contractor shall submit his running bill (RA bill) once in a month at the end of each month in line with payment terms/ billing schedule indicated below. The RA bill complete in all respects accompanied by BHEL engineers certified/ measurement sheet, jointly signed, will be paid after passing of the bill subject to completeness & correctness. The measurement will be taken as specified in terms & conditions of contract and certified by the BHEL engineer of actual work. However, no extra payment shall be made in the event of delay in release of payment.</p> <p>95% pro-rata monthly RA payment shall be considered for payment based on monthly work completion certificate to be issued by BHEL engineer as per approved BBU/Price Schedule.</p> <p>The payment shall be released after 30 days from the date of receipt of complete invoice along with all necessary documents including Engineering Certificate.</p>
12.2	Out of above 95%, 1.5 % of gross bill amount shall be paid in the following manner on certification by BHEL engineer after compliance of each of following activity in each month. In case of non-fulfilment of respective activity by contractor in each month, no payment shall be made by BHEL against corresponding activity and no claim of bidder at a later date, whatsoever, in this regard shall be entertained by BHEL.
12.2.1	0.7 % shall be paid on compliance of housekeeping of contractor's working area and store/ office areas.
12.2.2	0.3 % shall be paid on compliance of general illumination of contractor's working area and stores, office area.
12.2.3	0.2 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL/ PSER and as specified in the tender.
12.2.4	0.3 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.
12.3	Balance 5% of contract value shall be paid against FAC (Final Acceptance Certificate) to be issued by BHEL / BIFPCL after completion of warranty period. However, if desired by vendor, this 5% may be released by BHEL against submission of equivalent amount bank guarantee as per Performance Bank Guarantee format, to be kept valid till warranty period, subject to the followings:
12.3.1	(i) Receipt of certificate that all works are completed in all respects;
12.3.2	(ii) Reconciliation of materials / T&P / MMD;
12.3.3	(iii) Completion of final bill formalities and
12.3.4	(iv) Handing over to BHEL.
12.4	Contractor shall make their own arrangement for making payment of impending labour wages and other dues in the meanwhile.
12.5	Contractor have to submit BHEL entry gate pass of steel, and other materials required for the work, in absence of which their corresponding RA bills shall not be processed.
12.6	Subject to any deduction which BHEL may be authorized to make under the contract, the contractor shall on the certification of the BHEL engineer at site, be entitled to payment explained hereunder.
12.7	The bills will be sent to BHEL, Site Finance for scrutiny and payment will be made after processing / verification only.

12.8	The measurement will be taken by BHEL engineer as per relevant clause of GCC and certify regarding actual work executed in measurement book and bills for work. However no additional payment shall be made in the event of delay in release of payment beyond the stated period.
12.9	All admissible recovery / adjustment, etc. shall be made from interim payable amount.
12.10	BHEL site at its discretion may split up percentage break up and effect payment to suit the site condition, cash flow requirement, according to the progress of work.
12.11	Payment shall be made in USD as per order. However for reasons, solely at the discretion of BHEL, if USD amount is not possible to be paid then BDT equivalent of USD will be paid as per of our currency Matrix. The quoted / accepted rate shall remain Firm throughout the contract period including extension period, if any, without any escalation till handing over.
13.0	DELETED
14.0	TAXES, DUTIES ETC
14.1.0	IMPORT DUTIES:
14.1	Bidder may please note that import for the project shall be in the name of our Employer / Owner of the Plant / Project and such import other than Office and Household Equipment shall be exempted from payment of Customs Duty, VAT & Supplementary Duty as per Special Order 373/655 Date: 13/12/2018 of National Board of Revenue, Govt. of Bangladesh. Also Regulatory Duty(RD), Advance Trade VAT(ATV) & AIT are exempted / not applicable. Any documentation needed for availing of Duty Free Imports will be submitted by the bidder in reasonable time having regard to the time for delivery of the work and the time for completion.
14.1.2	However, if any of the taxes as mentioned above are paid by the bidder as per the extant law in force in Bangladesh, the same shall be reimbursed at actuals subject to production of documentary evidence in support of such payment. However, the bidder shall obtain prior approval of BHEL before deposition of such taxes.
14.1.3	Temporarily imported erection materials, machineries and spare parts during construction period of Project are exempted from payment of Customs Duty and VAT. Such items shall be exported within six months from the commercial operation date. Documentation for the same to be submitted / maintained by the bidder.
14.1.4	Any Taxes for exporting material from source country & as applicable in the source country shall be on bidder's account. However, bidder to take into consideration Duty Free Export Provisions in source country, as applicable, including that in GST in case of exports from India. As such, while offering the rates, the bidder may take into account the benefit of above provisions, as the cost of input to the bidder will be net of such taxes and adjust their offer price accordingly to make it more competitive.
14.2.0	BANGLADESH VAT
14.2.1	The Bidder shall submit copy of VAT registration Certificate (Musak-8), TIN Certificate, Trade License to the BHEL site office immediately after receiving the Order but before raising the first Tax Invoice against this tender.
14.2.2	The subject job shall be a Construction Job. As per Section 6(4aa) of The Bangladesh Value Added Tax Act, 1991, VAT shall not be collected by the bidder from BHEL as the Employer (i.e. Customer of BHEL) shall make deduction of VAT from BHEL's invoice and deposit the same to the Government Treasury. Documentary evidence shall be provided to the bidder

14.2.3	Adequate documents for not charging/ claiming VAT from BHEL shall be made available to the Bidder.
14.2.4	The bidder shall raise Tax Invoice (Challan Patra) as per Rule 16(1) (Musak-11) of the Value Added Tax Rules, 1991 mentioning Name, Address and VAT Registration Number of BHEL site office.
14.2.5	Bidder shall note that the Tax Invoice complying with Rule 16(1) of the Value Added Tax Rules, 1991 must contain the 'Bill to' and 'Ship to' details as below: BHEL Bangladesh VAT Regn. No. 00761853 Bharat Heavy Electricals Limited Power Sector Eastern Region, 2x660 MW Maitree Super Thermal Power Project, Moidara Village, Rampal Upazila, Bagerhat District, Bangladesh
14.2.6	Bidders shall quote price excluding Bangladesh VAT envisaging VAT exemption on the same. In this connection please note that VAT, if and as applicable, on Bidders Quoted Price and in case BHEL is unable to provide exemption documents shall be payable extra. In such case bidder shall submit self-certified copy of the Treasury Challan and / or self-attested copy of the Current Account (Musak-18) along with the Tax Invoice as an evidence of payment of output tax claimed from BHEL.
14.2.7	Value Added Tax Deduction at Source:
14.2.7.1	BHEL will not deduct any VAT from Bidder's Gross Bill and such bidder need not to load any Output VAT in Bidder's quoted price
14.3.0	INCOME TAX DEDUCTION AT SOURCE:
14.3.1	Bidder should have valid 12-digit TIN number in Bangladesh prior to start of work. Advance Income Tax (AIT) under the Income Tax Ordinance,1984(and rules made thereunder) shall be deducted at prevailing rates on Gross Invoice value from the bills unless Exemption Certificate from the appropriate authority/ authorities is/ are furnished under Income Tax Laws of Bangladesh
14.3.2	Since payment shall be made in Bangladesh. Bangladesh Income Tax (AIT) shall be deducted, if applicable.
14.4.0	The Bidder shall carry out their own tax diligence to get acquainted with the relevant rules and regulations of Bangladesh pertaining to the subject job.
14.5.0	Except otherwise mentioned above bidder shall quote their rates/ price inclusive of all taxes, duties, cess, any State or Central Levy, social security contribution and other Taxes in or outside Bangladesh (but excluding Bangladesh VAT & Import Duties) in line with provisions as mentioned above etc. together with variation thereto during contract period including extension, if any. BHEL shall not release any additional payment in this regard.
14.6.0	The bidder is responsible for compliance of all relevant Tax Laws of Bangladesh and all other related places outside Bangladesh in connection with this contract and BHEL will not bear any such liability.
14.7.0	New tax & duties, if imposed subsequent to latest due date of offer submission, as per NIT & TCN, as applicable, by statutory authority after due date of submission of latest price offer and within the contract period including extension, if any (provided reason for extension is not attributable to vendor), shall be reimbursed by BHEL at actual on production of relevant supporting document to the satisfaction of BHEL. However, the vendor shall obtain prior approval from BHEL before depositing new taxes & duties. Benefits and/or abolition of all existing taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced at a later date.
15.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT

	To meet the need of construction management at site, contractor shall provide the following services within quoted/ accepted rates.
15.1	CUSTOMS CLEARANCE
	<p>The Contractor shall be responsible for Bangladesh customs clearance of all materials, supplies, equipment, tools and other articles shipped into Bangladesh by him for the implementation of his works, including the food and the personal effects of the Contractor's personnel.</p> <p>All payment for clearance charge, storage charge, etc. which are imposed by the relevant agencies of the Government of Bangladesh, relating to the clearance of equipment, materials and Plant that will be incorporated in the Permanent Works or relating to the Temporary Works shall be borne by the Contractor. Further, if the Contractor is delayed in submitting necessary shipping documents to the Employer, the demurrage charges by the Port Authority will be borne by the Contractor.</p> <p>Tools and equipment and other equipment of the Contractor for use during construction but which are to remain the property of the Contractor and which are to be exported by the Contractor from Bangladesh at the completion of the Work shall be carefully documented and specially listed to facilitate both import and export. The Contractor shall determine prior to shipment the customs regulations applicable to this special case as well as normal import rules and regulations applicable. The Contractor shall also be responsible for inland transport by barge/ truck/train to the Site.</p>
15.2	RECEIVING, TRANSPORTING, HANDLING AND STORAGE
	<p>The Contractor shall receive, transport, handle, store and install all materials and equipment furnished under these specifications, or otherwise involved in the implementation of this Contract. It shall be the responsibility of the Contractor to determine the availability and capacity of transportation and unloading facilities (including for the transportation, delivery and receipt of all equipment, materials, Plant to the Site) and to make the required arrangements to secure the necessary facilities for the same.</p> <p>The Contractor shall be responsible for the prompt unloading of all equipment or materials. The Contractor shall pay any demurrage incurred due to delay in unloading and for any other reasons.</p> <p>The Contractor shall handle materials and equipment carefully to prevent damage or loss. The use of bare rope slings for handling will not be permitted unless specifically approved by the Engineer. Special handling devices shall be used when necessary to avoid damage.</p> <p>In addition the Contractor shall also comply with the requirements of Technical Specification with respect to the receipt, transportation, handling and storage.</p> <p>If BHEL has to unload of RS, SS, Copper or any other free issue materials before mobilization of the contractor for the interest of the project or If contractor fails to unload the BHEL free issue materials at site for any reason then BHEL shall be unloading the same and the cost of unloading with following rates shall be deducted from contractor RA Bill.</p> <p>i) For RS, SS, Copper or any other materials:- USD 4/MT or actual cost , whichever is higher.</p>
15.3	PLATFORMS

	Open platforms shall be constructed by the Contractor at least 50 cm above grade and shall have adequate flooring and base structure to support the stored materials and equipment.
15.4	INDOOR STORAGE Indoor storage sheds shall be constructed by the Contractor by suitable means for keeping materials and equipment from contact with the ground and to protect it from the environment and outside atmosphere. Sensitive equipment (including inter-alia, electrical, I&C and other equipment) must be kept in dust proof and ventilated rooms and means have to be provided to maintain the moisture content at required levels, in accordance with Good Industry Practices.
15.5	SHORING Shoring shall be provided by the Contractor to safely support materials and equipment not less than 30 cm above the ground. The ground shall be compacted and concreted or asphalted.
15.6	WEATHERPROOF COVERINGS Weatherproof and flame resistant sheeting of sufficient size for outdoor storage shall be provided by the Contractor. The sheeting shall be carefully placed and tied down to prevent moisture and wind from entering underneath the sheeting and to otherwise protect the equipment, materials and other Plant.
15.7	IDENTIFICATION OF CONTRACTOR'S EMPLOYEES, VEHICLES & BUILDINGS The Contractor shall provide each of his employees and his Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time. Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time. All vehicles and large equipment furnished and used by the Contractor or his Subcontractors on the Work shall be clearly marked with the Contractor's or Subcontractor's business name. The Contractor's offices, stores, depots and other facilities shall also be clearly identified. The detailed requirements are defined in the Health, Safety and Environment (HSE) Plan of BHEL. Around-the-clock security presence and operational routine shall be maintained throughout the year. Passes and temporary identification permits shall be issued and examined and access to any part of the Site, the site offices and living accommodation shall be controlled and limited to those who have an authorization.
15.4	EXPATRIATE PERSONNEL The Contractor shall submit to Employer data of all personnel he intends to bring into Bangladesh for the performance of the Work. This data shall include the name and present address of each person, his intended assignment and responsibility in connection with the Work and a concise resume of his experience in the type of work to which he will be assigned. This data shall be submitted to the Employer at least thirty

	<p>(30) days prior to their expected arrival in Bangladesh.</p> <p>Any expense associated with illness of the Contractor's personnel, including replacement thereof, shall be to the Contractor's account.</p> <p>Costs of passports, visas, travel documents, inoculations and other incidental expenses incurred by the Contractor's non-Bangladesh employees and their dependents occasioned by travel to and from Bangladesh shall be borne by the Contractor.</p> <p>All accommodations and amenities for the Contractor's personnel and families (including all staff and labour) must be provided by the Contractor, and the Employer shall not have any liability for the same.</p>
15.5	<p>SAFETY</p> <p>The Contractor shall comply with all ordinances and regulations including, but not limited to, National, State, Municipal laws and Department of Labour, Transmigration and Co-operation Regulations, and other Applicable Laws that are in force in the locality of the Works and shall comply with any instructions that may be from time to time issued by Employer. The safety rules and regulations laid down in the Health, Safety and Environment (HSE) Plan are to be strictly adhered to.</p>
15.10	<p>CONTRACT PLANNING AND CONTROL</p> <p>Before starting the Work at the Site, the Contractor shall submit the detail site management organization for approval by the Employer. Such proposals shall show clearly the Contractor's key personnel, classification and qualification with the detailed information and curriculum vitae for above key personnel.</p> <p>The Contractor's Representative, site manager and senior key personnel who will be responsible for working closely with the Employers staff to achieve efficient execution of the Contract shall be competent to conduct meetings and communications in the English language.</p> <p>The management organization shall include a planning and programming tools covering the Work, and shall apply the latest techniques in communication and analysis. The Contractor shall nominate a planning engineer to co-ordinate all planning activities.</p>
15.11	<p>RELEASE OF INFORMATION</p> <p>The Contractor shall not communicate or use in advertising, publicity, or sales release, photographs or other reproductions of the Work under this Contract, or descriptions of the size, dimensions, quantity, quality, or other information concerning the Work unless prior written permission has been obtained from the Employer.</p>
15.12	<p>SAFETY AND ACCIDENT PREVENTION</p> <p>It shall be the Contractor's responsibility to maintain throughout the construction period, a safety and accident prevention program satisfactory to the Employer which meets the requirements of Applicable Laws and of all other Governmental Authorities authority having jurisdiction over the Works. The rules and regulations laid down in the Health,</p>

	Safety and Environment (HSE) Plan must be adhered to at all times.
15.13	<p>SECURITY</p> <p>The Contractor shall be solely responsible for the security of all equipment and materials incorporated or to be incorporated in the Work by him and all equipment, materials, tools, supplies, structures, facilities and others properly used in the execution of the Work while in his care and custody.</p> <p>The Contractor shall conform also to any specific security requirements of Employer but such compliance shall not relieve the Contractor from the total responsibility for security.</p>
15.14	<p>HOUSING & TRANSPORT</p> <p>The Contractor shall arrange for suitable housing units together with furnishing and utilities in the close proximity of the construction Site for accommodation of all his expatriate personnel. If the services of any expatriate personnel of the Contractor or its Sub-contractors.</p> <p>If the Contractor decides in consultation with the Employer that the health or safety of any of his personnel is or might be jeopardized by political or health hazards in Bangladesh, the Contractor may, after forty eight (48) hours' notice, order its employees and the employees of its Subcontractors and suppliers to return to their headquarters or other safe location, in which case the Work will be deemed to be suspended for the duration. The Contractor shall provide to the extent agreed transport vehicles for use during construction period by the expatriate as well as local personnel.</p>
15.15	<p>PROPRIETARY NAMES</p> <p>Whenever a material or article is specified or described on the plants by using the name of a proprietary product or by using the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing the type, function and quantity desired. Unless otherwise specified, other manufacturers' products which in the opinion of the Employer are equivalent of those specified will be accepted. Such items shall be submitted for approval prior to their incorporation in the Works.</p>
15.16	<p>PERFORMANCE OF THE WORK</p> <p>The Contractor shall conduct all Works in such a manner as to cause the least possible disturbance or damage to the environment. In cases where some temporary disturbance or damage is unavoidably caused due to the nature of the work, the Contractor shall, as soon as possible, remove the cause of such temporary disturbance, repair the damage and, in general, restore the affected areas to their original condition to the extent possible, and in a manner satisfactory to the Employer, the landowner and any authorities.</p> <p>Prior to commencement of the Work, the Contractor shall provide details of its EMP specifically addressing the following: Environmental management system and manual – policies, standards and procedures, and programs; organization / responsibilities;</p> <p>Training Incident and accident investigation; Management support;</p>

Environmental protection, mitigation and restoration;
Emergency preparedness and response;

- Socio-economic plans, including historical and cultural resources;
- audit, monitoring and corrective action;
- information and records management; and,
- Integration of safety & health requirements with the EMP.

All aspects of the EMP and the environment work requirements are the Contractor's accountability and the Contractor, its management and its Site supervisory staff will be held responsible for its implementation.

All relevant Health, Safety and Environment (**HSE**) issues, results of audit and monitoring plans and programs, and HSE performance indicators will be communicated to the Contractor's management and the Employer through daily inspection meetings and reports, weekly construction meetings, monthly meetings, and in terms of the monthly project report.

The Contractor shall ensure that he has complete knowledge of all the laws, statutes, statutory instruments, regulations, rules, treaties and conventions (by whatever name or title), environmental protection regimes and other Applicable Laws, in each of the jurisdictions where he shall perform the Work. The Contractor shall also take all necessary measures to protect the atmosphere, ocean, rivers, groundwater, seaports and land from pollution. In any event the Contractor shall promptly use its best efforts to eliminate and clean up any pollution caused, directly or indirectly, by the Contractor or which occurs at the Site, or other sites associated with this Work.

The Contractor shall cooperate in all respects with any participant environmental representatives and with governmental persons, and allow them to inspect any and all equipment or operations that they wish to observe. The Contractor shall, at all times, be ready to discuss the implementation of the Contractor's safety, health and environmental protection program.

15.17 INSTRUCTION TO WORKERS (ORIENTATION / INDUCTION)

The Contractor shall ensure that all employees, subcontractors, servants and agents (and employees, servants and agents of all Subcontractors) participating in the Work, are advised about the strategy and plan for managing the environmental-social issues related to the work, and on their role and responsibility; instructed on the requirements of environmental laws, rules, regulations and specific permit conditions applicable to the area and the Work; instructed on the application and use of the required personal protective equipment (PPE) for their job duties and functions; and, have received the appropriate training in the use, application and maintenance of PPE.

15.18 RISK MANAGEMENT

The Contractor shall clearly state the management methods and techniques to be used

	<p>to identify potential hazards and risks at any stage prior to the execution of a particular activity. If required, specific procedures shall be developed by the Contractor to eliminate or mitigate the hazard to a safe level prior to the work being authorized. All requirements of the project's environmental impact assessments ("EIA") and other relevant assessments and conditions of approvals accorded by the relevant Governmental Authorities must be considered by the Contractor in the development of the Contractor's Health, Safety and Environment (HSE) Plan, EMP and other related/relevant plans. The Contractor is required to implement a system whereby all risks associated with hazardous substances, whether chemicals, by-products, effluents or waste materials, are minimized and/or eliminated. In conjunction with its emergency plans and procedures, the Contractor shall develop and submit to the Employer's Representative a "Safety Philosophy Document" that details the strategy to be adopted for control and shutdown systems, including alarms and programmable electronic control systems.</p>
15.19	<p>EMERGENCY PREPAREDNESS, RESPONSE & CONTINGENCY PLAN</p> <p>The Contractor shall prepare an Emergency Preparedness, Response and Contingency Plan (a detailed program of action to minimize the effects of an abnormal event requiring prompt actions beyond normal procedures to protect human life, minimize injury and safeguard the environment) for environmental and personal safety emergencies or incidents. This plan shall be found within the Contractor's Safety & Health and/or Environmental Programs. The purpose of the plan shall be to limit insurance and damage to people, property and the environment respectively. The plans, procedures, and trained personnel shall be in place for the duration of the Contract to manage and control emergency situations and incidents in a proper and expeditious manner.</p>
15.20	<p>SERVICING AND FUELLING</p> <p>To ensure adequate response capability in the event of a fuel, ground spill or other spill, all fuel transport vehicles and the Contractor's foreman vehicles shall carry a suitable amount of commercial absorbent material. In addition, floating absorbent pads and booms for spill clean- up on open water shall be kept accessible on the construction Site.</p> <p>All service vehicles and/or equipment utilized for re-fuelling must be equipped with automatic shut-off valves. All equipment or servicing activities with the potential for accidental spills (e.g., oil changes, hydraulic repair, coolants) will require appropriate containment methods to be in place (i.e., storage containers, impervious liners, absorbent materials, etc.) prior to the start of the activity.</p>
15.21	<p>SOIL AND GROUNDWATER PROTECTION</p> <p>The Contractor shall develop and implement soil and groundwater protection measures. Protection measures shall include building and impervious floors, where appropriate. The Contractor shall make an assessment of groundwater quality prior to the start of construction and prior to commissioning to demonstrate to Employer's Representative that construction activities have not adversely affected the environment. Groundwater quality shall be monitored throughout the construction phase.</p>
15.22	<p>HEALTH HAZARDS</p>

Worker and public health is a critical part of any HSE management program. The Contractor shall control substances and materials that may be a hazard to worker's health. These controls shall be a combination of hazard communication, safe work systems and the controlled handling and disposal of hazardous materials. The Contractor's controls shall commence at contract preparations and procurement stages, where all vendors and subcontractors shall be required to submit Material Safety Data Sheets ("MSDS") for all hazardous materials that will be supplied, provided or brought onto the Site. These MSDSs shall be forwarded to Contractor's HSE Manager for review and records management.

In the event hazardous materials are to be used, the Contractor shall carry out assessments according to recognized international standards, to determine if there are any more suitable or less hazardous materials that could be substituted for the original materials. Only when the Project Manager, Employer and his Engineer and the Contractor are satisfied that assessments have been completed, and control measures are adequate to protect worker health, the materials shall be allowed on the project worksite. The Contractor's control measures shall include:

- Material transport, storage, labelling, packaging, and disposal,
- Personnel protective equipment (PPE),
- Health surveillance and monitoring, and
- Emergency procedures and training.

All explosive materials to be used for blasting during Site preparation shall only be handled by approved and qualified personnel. All explosive materials shall be stored in a secure, limited access sites, protected from workers and the public, and removed from the site every day and immediately after use.

All radioactive equipment and materials shall only be used by qualified, approved and permitted personnel. Radioactive materials must be stored in approved and protected containers. Radioactive materials and waste products shall not be disposed of on-site but removed in protective containers and disposed at government approved storage and disposal sites.

15.23**WASTE MATERIAL MANAGEMENT**

The Contractor shall ensure that waste management identification, handling, transport and disposal are addressed in the development of their HSE management plans.

The Contractor's employees responsible for handling hazardous materials (including wastes) shall receive training and certification in the handling, transport, storage and disposal of chemicals and regulated or hazardous materials. Where applicable, Workplace Hazardous Materials Information System ("WHMIS") certification and training, or its equivalent, shall be made available to employees. Regular written updates shall be included for continued employee awareness.

The Contractor shall ensure proper segregation and isolation for wastes that could react

together in the event of a leak or other incident. These facilities shall include lockable, fire proof cabinets or storage in shelving units separated by fireproof barriers or walls.

The Contractor shall dedicate a space for waste and drum storage. The storage area must be easily accessible for spill containment and emergency response and not be susceptible to flooding.

For any waste storage area which could accumulate hazardous gases, vapors, or dust due to the nature of the wastes stored, the Contractor must supply suitable ventilation or other controls to ensure exposure by employees is kept below required minimum standards. Storage areas for hazardous wastes shall be designated as restricted areas and shall be suitably equipped to control an incident involving a leak or spill.

The Contractor shall make available suitable fire extinguishing equipment and proper electrical bonding equipment in all areas involving the handling and storage of flammable and reactive wastes.

Disposal of wastes by burning will not be allowed on the construction site.

Sumps and waste pits shall not be used for waste storage at the work site. Sumps should only be used for temporary control and containment of spills, equipment leaks, etc. If the Contractor encounters former sump sites or waste pits during ground surveys, the Contractor shall identify and investigate the same. If any contamination is suspected, the Contractor shall excavate, remove and where required replace with an approved sump container system.

The Contractor shall develop and implement a waste disposal control system. This system shall control every load of waste leaving the worksite, detailing the type of waste disposal, waste origin and destination, approximate weight, date and transport details on a waste manifest/document. These documents shall be audited.

15.24**SPILL RESPONSE AND CONTROL**

All spills shall be stopped and cleaned up immediately to avoid potential impact to water and soil quality. All spills shall be reported using the Incident Management Process. Under no circumstance contaminated material may be "stored" on the work site.

All spills shall be rapidly stopped and appropriately eliminated as defined in the Contractor's Emergency Preparedness, Response and Contingency Plan. Spills shall be contained in a way that will prevent their redistribution. All ground spills shall be contained as quickly as possible through diking, suction methods, excavation and the use of absorbents or other appropriate recovery techniques.

A list including the type, quantity and location of the storage of retaining and clean up equipment to be used during construction shall be prepared. The list shall include the procedures and mitigation measures to be used in case of a spill. A written inventory will also be prepared, before starting construction works, including lubricants, fuels, solvents, chemicals and other materials that might be accidentally discharged during construction.

	<p>All on-site fuel storage tanks shall be located in an impermeable secondary containment area with a holding capacity equal to 110% of the largest tank within the berm. For above ground tanks, the tanks shall be surrounded by a berm, the entire area covered with a suitable commercial absorbent material and with a sealed plastic liner to form an area that can be pumped out in the event of a leak in the tank. A waste handling plan shall be made with the purpose of identifying the procedures necessary for cleaning and disposing of residues from a major spill. In the event of a spill, the Contractor shall make all resources available to contain and clean up the spill. Traffic shall be minimized in and around the spill site.</p>
15.25	<p>NOISE CONTROL</p> <p>Noise level specifications to be followed by the Contractor in design, assessment and monitoring activities are based upon the maximum (acceptable) levels which plant personnel may be exposed during their normal working duties. The Contractor shall be familiar with and comply with the environmental guidelines as issued by the relevant Governmental Authorities in Bangladesh, including the Department of Environment, Government of Bangladesh and other relevant Applicable Laws.</p> <p>All internal combustion motors of vehicles, machinery and equipment used during the construction phase, shall have adequate noise silencers, and shall be kept in good operating conditions, during the entire construction period. Where temporary noise pollution of greater than 85 dBA will occur, temporary silencers shall be used. Equipment noise should not exceed the specified limits at accessible locations.</p>
15.26	<p>CONSTRUCTION TRAFFIC PLANNING</p> <p>The Contractor shall ensure that the construction Site is organized in such a way that pedestrians can move safely and without risk. The Contractor shall firstly select the lowest period of traffic flow for equipment crossings; and secondly, ensure that traffic patterns and entrances to private and public roads for access are not obstructed during construction activities. All site entry will be controlled by vehicular passes. Road closures, on-site and off-site, shall be with the approval of the Contractor's site manager and/or road closure permit. Site traffic shall be minimized and speed limits posted and enforced.</p>
15.27	<p>HOUSEKEEPING</p> <p>All construction debris and other garbage shall be continuously collected and disposed at an approved facility. At the end of each day, all waste material shall be removed from the construction Site and deposited at the approved allocated area. The approved procedures to manage waste shall be specified in the Contractor's waste management plan. All empty hazardous material containers shall be removed from the work area as soon as is practicable. All empty gas containers and bottles shall be returned to their storage area and secured properly.</p> <p>The Contractor's shall prepare a pest and vector control program to address specific site conditions, including a mosquito control program.</p>
15.28	<p>CONSTRUCTION CAMPS</p> <p>The location of work places, camps, areas of storage and installation of works, compression, regulation and communication stations shall be located on levelled land, avoiding areas with non-cohesive soils to avoid erosive processes.</p>

	<p>Health conditions in the camp shall be controlled in order to prevent contamination of adjacent groundwater or surface water resources. Domestic sewage generated at the construction sites shall be eliminated by two systems of septic/absorption tanks or chemical toilets located on the sites.</p> <p>Solid combustible garbage shall be collected and secured daily, until disposal, to prevent the attraction of livestock, vermins and wild animals. Residue shall be disposed of, along with non-combustible garbage, in a disposal location approved by the Authorities.</p> <p>Upon abandonment, the camp site area shall be cleared of all trailers, piping, cable, insulation, lumber, blockage, metal wastes, etc., and re-graded according to the landscaping concept. These guidelines and procedures for the management of domestic and other waste shall be specified in a plan.</p>
15.29	<p>SITE REGULATION MANUAL</p> <p>The Contractor shall thirty (30) days prior starting any Work at the Site furnish a detailed and comprehensive site regulation manual for its proposed operation and works on the Site, which shall be based on the site related regulations and requirements in the Contract and which shall be subject to Employer's approval. All work on the Site, shall be carried out in compliance with the so approved site regulation manual.</p>
15.30	<p>PLANNING & MONITORING</p>
15.30.1	<p>The bidder shall prepare detail construction schedule (L-3) as per completion dates given in this document. This schedule must include all milestone and key activities for each subsystems / components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), excavation / construction / erection. This network must conform to the overall project schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL.</p>
15.30.2	<p>The bidder shall also prepare progress report indicating progress on key activities, management summary for critical activities and list of actions requiring attention of BHEL. This schedule is to be preferably made in PRIMAVERA / MS PROJECTS, so that the same is compatible with BHEL's project management software.</p>
15.30.3	<p>The bidder will have to Supply & install of 1 No. PCs (multimedia PC work station Pentium-Core-i5-650, 3.2 GHZ or above, 500 GB HDD, 4 GB RAM, 100 /1000 MBPS LAN card) of HP / HCL / COMPAQ/ ZENITH or equivalent make with window 10 or higher, 64 bit (with roll back to 32 bit O/S and required software like MS Office 2010 or higher, AutoCAD 2014 or higher, PageMaker (7.0 etc.), ADOBE PDF CREATOR with two nos. Multifunction (scanner/copy/print) as per instruction of BHEL for exclusive use of BHEL.</p> <p>These computers / printer/Multifunction shall remain BHEL's property and they will be not allowed to take out the same after completion of contract period. The contractor shall provide data / information etc. in prescribed formats for periodical updating of the progress reports, material management reports, updating of network pertaining to the contractor's scope of work etc.</p> <p>The contractor shall also provide 1 (One) Number computer operators and 1 (One) number service staff for miscellaneous service for BHEL's use at site / Kolkata for reconciliation, progress review & day-to-day planning purpose, documentation etc. These facilities are to be provided within 30 days from LOI date till completion of scheduled contract period.</p>

	If BHEL do not availed the service of computer / printer / personnel as per requirement, BHEL shall have the right to deduct the amount as per following rates on prorated basis, from contractor's RA bill or any other dues.
15.30.3.1	@ USD 300 / month for each computer operator.
15.30.3.2	@ USD 250 / month for each service staff.
15.30.3.3	@ USD 40 / month for each set of computer & printer.
15.30.3.4	In the event of the contract period getting extended beyond the stipulated time for reasons not attributable to you, above services may either be withdrawn or retained as per instruction of BHEL. If services are retained, you will be reimbursed at the above 70% of the mentioned rate or (actual +15%), whichever is lower, if the services of operator / service staff are being used by BHEL.
15.30.3.5	The contractor's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from LOI.
15.30.2	PROGRESS REPORTING
15.30.2.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (steel / gases / electrodes) report and other reports as per pro-forma considered necessary by BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.
15.30.2.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the contractor intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippages do not accumulate and effect the overall program.
15.30.2.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.
15.30.2.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update/revise his work program to meet the overall requirement.
15.30.2.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
15.30.2.6	During construction contractor shall take an average twenty colour digital photograph / slides each month (not less than four per week) of the works during progress. In case of failure in providing such photograph in each month, an amount of USD 260 per month shall be deducted from contractor's RA bill.
15.30.2.7	Successful bidder has to provide for electronic/ computerized storing and re-production / printing / plotting of various data, log sheets, protocols, measurements etc. These may be stored in CD (as per requirement) and handed over to BHEL as per requirement.
15.30.2.8	PHOTOGRAPHS
	The Contractor shall furnish to the Employer three (3) hard copies (and three (3) soft copies in .jpeg or .pdf format on separate CDs/DVDs) of each photograph taken to show shop assembly of equipment and the monthly stages of equipment installation. Each photograph shall show upon its face, the date, the Contractor's name, and description of

	the view taken. Photographs shall be taken of each assembly or sub- assembly to indicate the progress of the Work. Additional photographs shall be taken when and where required as directed by Employer and/or the Engineer. Shop photograph shall be not smaller than 120 mm by 150 mm in size.	
15.30.3	SITE ORGANIZATION	
15.30.3.1	The contractor shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all time for smooth execution of the contract headed by a competent construction manager for site operations with sufficient level of authority to take site decisions. The vendor will submit organization chart (showing the name of SITE-IN-CHARGE) with individual bio-data indicating various levels of experts to be posted for supervision in the fields of supervision and execution, quality, material management, planning, safety, etc. The organization shall be reinforced from time to time, as required to make up slippage (if any) from the schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from the date from start of work.	
15.30.3.2	Following (minimum) engineering manpower with power plant construction background to be deployed at site by the successful vendor for their day to day supervision etc.	
15.30.3.2.1	Qualified safety officers with assistants (exclusive for safety supervision for project jobs).	Officer – Minimum One No. Assistant – Minimum Two Nos. Manpower and Infrastructure details available in Annexure B. Contractor shall be implemented / deployed of Manpower at site as mentioned in Annexure B.
15.30.3.2.2	Engineer & Supervisors for quality inspection.	Engineer-One Number Two supervisor
15.30.3.2.3	Site supervising engineer and supervisors for civil works	As per requirement
15.30.3.2.5	Chemist/Quality engineer for Civil Laboratory	One no. Assistant – One No.
15.30.3.2.6	Planning Engineer (exclusively for planning)	One no. Engineer Assistant - One Nos.
15.30.3.3	Deputation of above man-power shall be jointly decided at site in line with construction schedule.	
15.30.3.4	Engineer / supervisor for other functions like store & purchase, material management, fin, administration etc. are to be provided as per site requirement and not considered above.	
15.30.3.5	In the event of non-deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct USD 1050 per man-month for engineer, USD 650 per man-month for the supervisor / safety officer / chemist and USD 650 per man-month for safety supervisor from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication.	
15.30.3.6	BHEL reserves the right to reject or approve the list of personnel proposed by the contractor. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.	
15.30.3.7	In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-coordinator', shall be deployed by the contractor. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc. to contractor's own team during the complete execution period of contract.	

15.30.3.8	The contractor should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.
15.30.3.9	The contractor should also submit network programs for the erection of various items. These networks shall show the BIFCL/ BHEL hold points, which have to be cleared by BIFCL/ BHEL, or their authorized representatives before further erection can take place. These programs for the erection would clearly identify responsibilities of the contractor and BIFCL/ BHEL. It is the responsibility of the contractor to get the Networks approved by BHEL within four weeks of the date of finalization of award of work/ placement from start of work.
16.0	QUALITY CONTROL & QUALITY ASSURANCE
16.1	Contractor's engineers & supervisors shall be adequately qualified and also inclined to do a quality job. The quality assurance engineer shall co-ordinate all aspects of quality control, inspection, implementation of quality assurance procedures laid down in Quality Plan and technical specification by BHEL. He shall fill up quality assurance log sheets / formats and submit to BHEL for joint inspection and acceptance. The contractor shall fill up, maintain & preserve the quality records in computerized media. BHEL's authorized representative shall be given free access at all time to such quality related records etc. for inspection, review etc.
17.0	QUALITY ASSURANCE PROGRAMME
17.1	The contractor shall arrange for suitable quality assurance programme to control all activities pertaining to the scope of work, as necessary. Such programs shall be outlined by the contractor & shall be finally accepted by BHEL. A quality assurance programme of the contractor shall generally cover the following
17.2	Organization structure and qualification data for key personnel of the contractor for the management and implementation of proposed quality assurance programme
17.3	The procedure for source inspection, incoming raw material inspection, verification of material purchased etc.
17.4	System for maintenance of records.
18.0	GENERAL REQUIREMENTS – QUALITY ASSURANCE
18.1	All materials, components and equipment covered under the specification shall be procured, manufactured, erected, commissioned and tested, as applicable, at all stages as per comprehensive quality assurance program. An indicative program for inspection / test, to be carried out by the contractor, for some of the major items is given in the respective technical specification.
18.2	Field quality plan will detail out the quality practices and procedures etc. to be followed by the contractor's site quality control organization, during various stages of site activities from receipt of material / equipment at site.
18.3	BHEL reserves the right to carry out quality audit and quality surveillance of the systems and procedures of contractor's quality management. Contractor shall provide all necessary assistance to enable BHEL to carry out such audit.
18.4	Quality audit / approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in any way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment/ service as per specification.
18.5	Repair / rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.
18.6	All the latest relevant codes as per technical specification should be available with the contractor at site within 15 days from the date of placement from start of work or otherwise specified by Construction Manager/ Project Manager, BHEL.

19.0	HEALTH, SAFETY & ENVIRONMENT
19.1	REFER DOCUMENT NUMBER :-HSEP:14-MAITREE:VENDOR: DATE: 05.05.16
	DOCUMENT TITLE:-HEALTH, SAFETY AND ENVIRONMENT PLAN FOR 2X660MW MAITREE SUPER THERMAL POWER PROJECT
20.0	SPECIFIC REQUIREMENTS FOR ISO 9002
20.1	Contractors shall ensure that all their staff / employees are exposed to periodical training programs conducted by qualified agencies/ personnel on ISO 9002 Standards.
20.2	Contractor shall ensure that the quality is maintained in all the works connected with this contract at all stages of the requirement of BHEL.
20.3	Contractor shall ensure that all MMDs that are used, whether owned by the contractors or used on loan, are calibrated by the authorized agencies and the valid calibration certificate will be available with them for verification by BHEL. A list of such instruments possessed by the contractor at site with its calibration status is to be submitted to BHEL Engineer for control.
20.4	Contractor shall ensure that fitness certificate of the tools & plants, that are in use, whether owned by contractor or issued on loan, are tested by authorised agency and the valid fitness certificate is available for verification by BHEL.
20.5	Contractors shall arrange for the inspection of the works at various stages as required by BHEL. The contractors shall take immediate corrective action for the non-conformances if any, observed and pointed out by BHEL.
21.0	INTEREST BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE
21.1	Not applicable for this tender.
22.0	OVER RUN CHARGES
23.0	REVISION ON ACCEPTED CONTRACT RATE
23.1	Not applicable in this tender
24.0	PRICE VARIATION CLAUSE / ESCALATION
24.1	Not applicable for this tender.
25.0	LIQUIDATED DAMAGE
25.1	Intermediate Milestones
25.1.1	In case delay in achieving the Milestone as mentioned in Serial No. 5 of CL. No. 10.1 above, is solely attributable to the contractor, 0.5% per week of executable contact value*, limited to maximum 2% of executable contact value, will be withheld.
25.1.2	In case delay in achieving the Milestone as mentioned in Serial No. 6 of CL. No. 10.1 above, is solely attributable to the contractor, 0.5% per week of executable contact value*, limited to maximum 3% of executable contact value, will be withheld.
25.1.3	Amount already withheld, if any against slippage of Serial No. 5 of CL. No. 10.1 above, shall be released only if there is no delay attributable to contractor in achievement of Milestone as mentioned in Serial No. 6 of CL. No. 10.1 above.
25.1.4	Amount to be withheld on account of slippage of identified intermediate milestone(s) shall be withheld out of respective milestone payment and balance amount (if any) shall be withheld @10% of RA Bill amount from subsequent RA bills.
25.1.5	Final deduction towards LD (if applicable), on account of delay attributable to contractor shall be based on final delay analysis on completion/closure of contract. Withheld amount, if any due to slippage of identified intermediate milestone(s) shall be adjusted against LD or released as the case may be.
25.1.6	In case of termination of contract due to any reason attributable to contractor before completion of work, the amount already withheld against slippage of intermediate milestones shall not be released and be converted into recovery.
25.2	Overall Completion

25.2.1	If the contractor fails to maintain the required progress of work which results in delay in the completion of the works as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage / Penalty at the rate of 0.5% of the contract value, per week of delay or part thereof subject to a maximum of ceiling specified below. For this purpose, the period of delay shall be the delay attributable to the Contractor for the completion of work as per contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed, Supplementary / Additional Items and PVC.
25.2.2	If Completion of work goes beyond specified contract period of 21 (Twenty One) months from date of start of work, as certified by Construction Manager, BHEL, LD will be imposed with maximum LD amount shall be 10 % of total contract value.
25.2.3	BHEL shall deduct the amount of such compensation from any money due or which may become due to the contractor and/or recover such compensation from the bank guarantees / security deposit of the contractor. To be entitled to impose such compensation, BHEL will not be required to prove that he has incurred such amount as actual damage.
25.2.4	BHEL reserve the right to cancel the order/ contract or a portion thereof at the risk & cost of the contractor and the contractor shall be liable to BHEL for any excess costs thereof.
Note:-	*Executable Contract value- Value of work for which inputs/fronts were made available to contractor and were scheduled for execution till the date of achievement of that milestone.
26.0	GUARANTEE / WARRANTY
26.1	The contractor will be responsible for the quality of workmanship, quality of materials/ items and design for which the contractor is responsible.
26.2	Guarantee / warranty period shall be 24 months from the date of issue of PAC including dredging work till completion of the Guarantee/Warranty period as per relevant clause of GCC. Commencement of guarantee period shall be from the date completion of work under the contract as certified by BHEL.
27.0	EXTENSION OF TIME FOR COMPLETION
27.1	If the completion of work as detailed in the scope of work gets delayed beyond the contract/ completion period due to reasons not attributable to contractor, the contractor shall make request for an extension of the contract and BHEL at its discretion may extend the contract. However such extension shall not entitle the vendor for price revision or price compensation as this being FIRM price contract.
27.2	Based on review of agreed & jointly signed L-2 / construction schedule (as enumerated in the tender), the balance work at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to contractor. Further 'Time extension' or 'Time extensions' at the end of previous extension shall be worked out similarly.
27.3	However if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty / LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.
27.4	A joint program shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done.

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27.5	During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program	
27.6	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable solely to contractor after adjusting delay attributable to BHEL& Force majeure and recoverable from the dues payable to the contractor.	
28.0	EARNEST MONEY DEPOSIT (EMD / SECURITY DEPOSIT (SD) / PERFORMANCE BOND (PB)	
28.1	EARNEST MONEY DEPOSIT (EMD)	
28.1.1	Not Applicable for this Tender	
28.1.2	METHOD OF SUBMISSION OF TENDER COST	
28.1.2.1	<p>Tender cost amount can also be submitted directly by Foreign Bidders (other than Indian bidders) to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-</p> <p>Tender cost amount can also be submitted directly by Foreign Bidders (other than Indian bidders) to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-</p> <p>1. SBI (Branch Address:-Khulna, Bangladesh), A/C No. 05620257520201, BDT Account., SWIFT: SBINBDDH056, Routing number : 220471543</p> <p>2. SBI (Branch Address:- Khulna, Bangladesh), A/C No. 05620257520202, USD Account, SWIFT: SBINBDDH056, Routing number : 220471543</p>	
28.1.3	<p>Tender cost amount can also be submitted directly by Indian Bidders to the followings Bharat Heavy Electricals Limited bank account in India-</p> <p>1. SBI(Branch Address:-Commercial Branch, Saltlake, Sector V, Kolkata ,Branch Code SBIN0004289),A/C No. 11107800029,INR Account.</p>	
28.2	SECURITY DEPOSIT(SD)	
28.2.1	The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.	
28.2.2	<p>At least 50% of the required Security Deposit, including the EMD, shall be collected in before start of the work. Balance of the Security Deposit shall be collected by deducting 10% of the gross amount in USD progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.</p> <p>If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor.</p>	

	The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of the authority competent to award the work.
28.2.3	All other terms & conditions shall be as per GCC.
28.3	PERFORMANCE BOND
28.3.1	Performance bond is not applicable.
29.0	CERTIFICATE TOWARDS COMPLETION
29.1	The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by BHEL / owner. The decision of BHEL in this regard shall be final and binding on the contractor.
30.0	Deleted
31.0	CONSTRUCTION SCHEDULE
31.1	Entire work shall be carried out in accordance with the broad construction schedule given in CL No.10.1 above. Within 30 days from start of work, the contractor shall discuss with BHEL site engineer & furnish detail construction schedule (L-3/ L-4) indicating all milestones on the basis of major activities and get it approved from BHEL engineer. This schedule will undergo review and based on progress vis-à-vis project requirement, contractor shall have to submit revised schedule for approval of BHEL.
31.2	Deleted
31.3	The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/ BIFCL engineer.
31.4	Contractor shall submit daily work program based on above construction schedule. Deferment of above schedule is not acceptable. Contractor will adhere to schedule and resource planning to be augmented to ensure completion as per schedule.
31.5	Periodic progress reviews on the entire activities of execution in respect of supply & works in scope of contractor will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
31.6	Above schedule is indicative. The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/BIFCL Engineer.
32.0	PAYMENT FOR ADDITIONAL/EXTRA ITEMS FOR CIVIL FOUNDATION WORKS
32.1	It shall be as per relevant clause of the GCC. However, "BPWD Schedule of Rates 2014" as mentioned in the price schedule will be considered.
33.0	DELETED
34.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)
34.1	Tentative list of T&P to be deployed by contractor for successful completion of work is detailed below.
34.2	It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P (other than those specified to be provided by BHEL, if any) measuring (calibrated) instruments & handing equipments to maintain work progress for timely completion of total work as per contract. In case of project requirement, some activities may have to pre-pone. In such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such emerging requirements. However, contractor shall submit deployment plan of all T&P along with tender bid.

34.3	In the event of any failure on the part of the contractor to deploy T & P to sustain desired work progress , BHEL may at his discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of the contractor. In the event of failure of contractor to deploy necessary and sufficient T&P/ IMTEs to maintain work progress , BHEL will be at liberty to arrange the same at the risk & cost of contractor including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.	
34.4	Following Major T&Ps to be arranged by contractor within the indicated time	
	Major T&P items	Broad Mobilizing time from date of start of work
34.4.1	One no. 150 T Crawler crane for CHP & AHP structural erection.	As per site requirement / before start of structural erection
34.4.2	1 No. 75 T capacity crawler crane for pre-assembly.	within 60 days
34.4.3	1 no. crawler cranes 40/45 T capacity crawler/tyre mounted crane	within 50 days
34.4.4	2 nos. TRX of Escorts group or equivalent (12/ 14 T cap)	1st – within 25 days from start of work. Balance as per site requirement
34.4.5	2 nos. magnetic base drill machine (All Cut)	As per site requirement.
34.4.6	1 nos. submerged arch welding machine	As per site requirement.
34.4.7	Deleted	
34.4.8	20 nos. welding rectifier	As per site requirement.
34.4.9	2 no. trailer – 15T	1 st - Within 100 days. 2 nd – within 150 days
34.4.10	1 no. 30 T trailer	within 100 days
34.4.11	10 no. Hydraulic HSFG bolt torque tightening m/c	4 no. Within 140 to 160 days. Balance as per site requirement
34.4.12	Bolt Tension calibrator-1 No.	As per site requirement.
34.4.13	Sufficient quantity of steel ladders for approach up to the top of each erected column to be required during erection of columns.	As per site requirement.
34.4.14	1 No. jack hammers/pavement breakers	As per site requirement
34.4.15	Power winch – 3T - 3 nos for structural erection	Within 150 days
34.4.16	Power winch – 5T - 3 nos for structural erection	Within 150 days
34.4.17	1 no ultra-sonography testing machine for structural work(Recordable type)	Within 100 days.
34.4.18	1 nos. self priming dewatering pump 2 HP (diesel/ electric)	Within 30 days.
34.4.19	2 nos. electric winch with building hoist	As per requirement.
34.4.20	1 no total station with adequate arrangement for Surveyors	As per requirement.
34.4.21	1 no. auto level & staff	Within 15 days.
34.4.22	Adequate no. of small trucks 2T/5T for movement within site	As per requirement.

34.4.23	1 no. drinking water tank – 5000 lit.	Within 30 days.
34.4.24	1 No. 125KVA Electric Generator	Within 40 days.
34.4.25	Portable fire extinguishers as below: Soda acid – 10 sets. Dry chemical powder – 10 sets CO2 – 5 sets. Water & sand bucket (4 buckets in one stand) – 5 sets. Fire hose with nozzle (50 M length) – 4 sets.	Within 40 days
34.5	T&P shown in the above mentioned list are tentative based on planned progress requirement. Actual Mobilisation schedule, based on front availability, drawings, construction schedule and material availability at site is to be reviewed and mutually agreed with BHEL site periodically from time to time for mobilisation of major T&Ps, and the same have to be adhered to. No change will be permitted without written approval of Construction Manager, BHEL site. Further requirement will be reviewed time to time at site and contractor will provide additional T&P/equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. All other T&Ps shall be provided by the contractor without any extra cost to BHEL. Vendor will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipments.	
34.6	All T&P and all IMTEs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.	
34.7	In the event of non mobilisation of any T&P by the successful bidder and as a result progress of work suffered, BHEL reserves the right to deduct suitable amount from the dues of the bidder, with assigning reasons thereof at the following rates	
	Major T&P items	Recovery rates
34.7.1	150 T Crawler crane for power house structural erection with adequate plates for movement	USD 600/ per week or part thereof
34.7.2	75 T capacity crawler crane for pre-assembly with adequate plates for movement	USD 500 /- per week or part thereof
34.7.3	crawler cranes 40/45 T capacity crawler/tyre mounted crane	USD 350/- per week or part thereof
34.7.4	4 nos. TRX of Escorts group or equivalent (10/ 12 T cap	USD 200/- per week or part thereof
34.7.5	magnetic base drill machine (All Cut)	USD 70/- per week or part thereof
34.7.6	submerged arch welding machine	USD 70/- per week or part thereof
34.7.7	MIG machine	USD 50/- per week or part thereof
34.7.8	welding rectifier	USD 15/- per week or part thereof
34.7.9	Trailer – 15T	USD 150/- per week or part thereof
34.7.10	Trailer – 30T	USD 170/- per week or part thereof
34.7.11	Power driven HSFG bolt tightening m/c	USD 70/- per week or part thereof
34.7.12	Torque tightening m/c. (2 no. Capacity up to 30 dia HSFG bolt tightening)	USD 70/- per week or part thereof
34.7.13	Jack hammers/pavement breakers	USD 70/- per week or part thereof

34.7.14	Power winch – 3T	USD 30/- per week or part thereof
34.7.15	Power winch – 5T	USD 50/- per week or part thereof
34.7.16	ultra-sonography testing machine for structural work.	USD 50/- per week or part thereof
34.7.17	Hydraulic excavator / Poclain	USD 800/- per week or part thereof
34.7.18	JCB / Pay Loader	USD 800/- per week or part thereof
34.7.19	Transit mixer (4.5/5/6 M3 capacity), peak period 4 nos. transit mixer	USD 100/- per week or part thereof
34.7.20	Truck mounted concrete mixer cum pump along with placing boom minimum 40 m high	USD 300/- per week or part thereof
34.7.21	concrete pump (20 cum/ hr min capacity & lift 70M)	USD 300/- per week or part thereof
34.7.22	Concrete cutting power tools (DD2E of HILTI/BOSCH make)	USD 70/- per week or part thereof
34.7.23	Concrete core Cutting machine for drilling in concrete upto 75mm dia along with diamond bits	USD 70/- per week or part thereof
34.7.24	self-priming dewatering pump 5 HP (diesel/ electric)	USD 25/- per week or part thereof
34.7.25	10 HP submersible mono-block electric pump (KOS-1040+ of Kirloskar or equivalent),	USD 25/- per week or part thereof
34.7.26	self-priming dewatering pump 2 HP (diesel/ electric)	USD 25/- per week or part thereof
34.7.27	curing pump – 1.5 /2 HP (pump for curing at heights)	USD 25/- per week or part thereof
34.7.28	dozer	USD 625/- per week or part thereof
34.7.29	dumper	USD 70/- per week or part thereof
34.7.30	reinforcement bending machine	USD 70/- per week or part thereof
34.7.31	reinforcement cutting machine	USD 70/- per week or part thereof
34.7.32	power driven earth rammer	USD 10/- per week or part thereof
34.7.33	vibromax (earth compacter)	USD 625/- per week or part thereof
34.7.34	Vibro compactor/ plate compactor – drum width 750mm	USD 300/- per week or part thereof
34.7.35	compression testing machine (200 T cap)	USD 50/- per week or part thereof
34.7.36	Electric winch with building hoist	USD 25/- per week or part thereof
34.7.37	Total station with adequate arrangement for Surveyors	USD 70/- per week or part thereof
34.7.38	Auto level & staff + 1 nos if required	USD 70/- per week or part thereof
34.7.39	drinking water tank – 5000 lit.	USD 70/- per week or part thereof
34.7.40	truck mounted water tank (minimum 5000 lit) capacity with sprinkler arrangement.	USD 140/- per week or part thereof
34.7.41	Concrete vibrator with adequate needle (3 Nos. diesel driven + 6 Nos. electric driven)	USD 50/- per week or part thereof
34.7.42	Any other instrument	As per discretion of the BHEL engineer
35.0	T&P TO BE PROVIDED BY BHEL	
35.1	BHEL will provide following crane free of cost on sharing basis –	

	<ul style="list-style-type: none"> • Mid Range Crane(s) (Crawler crane(s) of capacity class 250 T and above) for structural work of CHP & AHP Areas, which cannot be done using 150T Crane, free of cost on sharing basis. BHEL decision in this regard will prevail. <p>The above crane to be provided by BHEL shall be shared by various other contractors and the contractor shall plan his activities accordingly in co-ordination with BHEL site engineer.</p> <p>For dismantling/ assembly and unloading/ loading of BHEL cranes during mobilization/ demobilization process, successful bidder shall render required assistance in the form of manpower with tools & tackles including cranes, etc. at no extra cost to BHEL.</p>
35.2	Crane returned in defective/damaged condition (defect/damage occurred during use due to negligence of contractor) shall be rectified by contractor promptly to the full satisfaction of BHEL engineer failing which suitable recovery along with BHEL overheads will be made from contractor's bills/ dues.
35.3	BHEL shall provide fuel, lubricants, mobil, cardium compound, hydraulic oil, air and fuel filter etc. on free of cost basis for this crane. Regular maintenance and Break down maintenance (not attributable to the contractor) of the BHEL crane is excluded from the scope of the contractor. However, necessary services as required for shortening/ extending of crane boom are included in the scope of contractor.
35.4	BHEL shall provide crane operator for this crane free of cost. However, the contractor shall bear only overtime charges, if any, for the operator provided by BHEL for services provided beyond the prescribed working hours of cranes. Such OT deployment shall be with prior intimation and consent of BHEL.
35.5	In case of exigency leading to crane operator not being available with BHEL, the contractor will have to deploy experienced crane operator after due permission of BHEL engineers. During such operation, the contractor shall have to take the full responsibility of safe operation of crane.
35.6	In case of non-availability of high capacity crane to be provided by BHEL due to break down, major overhauls distribution pattern or any other reason, the contractor shall plan/ augment/ alter his activities to meet erection/ commissioning targets in consultation with BHEL and no compensation will be admissible on above ground.
35.7	Consolidation of ground and arrangement of sleepers/sand bag filling etc. for safe operation/ Movement of equipment including cranes/trailers etc. shall be the responsibility of the contractor at his cost.
35.4	In the event of BHEL issued T&P, measuring instruments etc. the contractor and BHEL shall maintain joint protocol about the condition of all T&P, instruments etc. taken from BHEL's custody and return to BHEL after use. The contractor shall not use this equipment for purposes other than the scope of work given in this tender document. It is the responsibility of contractor to keep these equipments always in working condition and ensure their safe return in working condition to BHEL's store subject to normal wear & tear.
35.5	After use of T&P items issued by BHEL the same shall be returned to BHEL in good working condition subject to normal wear & tear failing which recoveries at the book value of the item or the market rate prevailing at the time of returning the items, whichever is higher shall be made from the payments due to the contractor from BHEL from this contract or from any other contract.

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35.10	Depending upon the availability, BHEL / BHEL's Customer handling equipment and other plants may be made available to the contractor on payment of higher charges as fixed, subject to the conditions laid down by BHEL/Customer from time to time. Unless paid in advance, such hire charges, if applicable shall be recovered from contractor's bill /security deposit or any other payment in one installment.
36.0	OTHER TERMS
39.1	All other term & conditions of this specification shall be governed by the pertinent provisions of GCC and other volumes of this tender, as applicable.

ANNEXURE B**HSE REQUIREMENTS-MAITREE PROJECT****MANPOWER AND INFRASTRUCTURE**

<u>SL NO.</u>	<u>ITEM</u>	<u>REQUIREMENTS</u>	<u>REMARKS</u>
1	HSE Manager	1 No. if no of HSE officers more than 1.	CV to be vetted by customer. Candidate should have <ul style="list-style-type: none"> • Degree/ diploma in Engg/Technology • Degree/ Diploma in H&S, • min 5 years' experience in field of safety incldng min 3 years experience in construction
2	Shift HSE Officer	Min 1 for every 500 workers or part thereof. Any sub-contractors with more than 20 workers must have a HSE officer. Each major work area must have a dedicated shift HSE officer as advised by BHEL HSE manager/officer.	Candidate should have <ul style="list-style-type: none"> • Degree/ diploma in Engg/Technology • Degree/ Diploma in H&S, min 2 years' experience in field of safety for Degree holder in Engg or Min 5 years with Diploma holder in Engg
3	Shift HSE stewards	Min 1 Steward for every 100 workers or part thereof. Deployment to be approved by BHEL HSE manager.	Candidate should have passed HSC(12 th standard) and attended a certificate course on construction safety or allied subjects
4	First aid box	1 in each office and major work area/floor	Items as per clause 76(2) of Bangladesh labour Rules and clause 7.4.5.3 of HSE plan for sub-contractors
5	Shift First aider	1 for each 150 workers Minor contractors may have tie up with major contractor with permission of BHEL HSE manager in this regard.	The candidate must have passed HSC and have a certificate from Bangladesh Red-cross society or as recognized by Govt. (PI refer 7.4.5.2 of HSE Plan for sub-contractors)
6	Ambulance	Round the clock experienced paramedical personnel with first aid facility & one ambulance including driver, fuel etc. shall be arranged/provided by you/other vendor . The above facilities will be shared by various BHEL	On running cost sharing basis with other sub-contractors Modalities to be worked out by site team.

		contractors working at site on chargeable basis to the providing agency (actual cost distributed among the various vendors present at site availing the facility on a prorate basis). The subject facility will be strengthened as per the requirement during peak work progress at site, by other vendor. Individual vendor may co-ordinate with the providing agency in this regard.	
7	Sick room	Shall be available at site, being provided by other agency.	PI refer 7.4.5.1 of HSE Plan for sub-contractors for details. Running cost & construction cost to be shared among all sub-contractors Modalities to be worked out by site team
8	Emergency vehicle	To be available in all shifts of work	Must be a 4-wheeler.
10	Walky-talky	If contractor engaged in height works- 1 No.	
11	Binoculars	If contractor engaged in height works- 1 No.	
12	Height Rescue-kit	If contractor engaged in height works- 1 No.	
15	HSE related instruments	<ol style="list-style-type: none"> 1. Lux meter- 1no, 2. ELCB Tester-1 no.- 3. Earth Megger- 1 No. 4. Anemometer-1 no- 5. Alcohol Breath Analyser-1 	To be made available to BHEL as and when demanded or to be shared with other sub-contractors as instructed by BHEL

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Special Notes:

1. The following welfare measures, in addition to those covered above, are to be taken at the site :
 - a. Adequate Drinking Water
 - b. Adequate no of toilets and washing area
 - c. Canteen
 - d. Rest Shed
 - e. Hygienic Accommodation (Labour Colony) and allied facilities
2. Water sprinkling arrangement for suppression of dust to be made
3. A Safety Park will be put up with participation by all major contractors
4. It must be ensured that no contaminated water including those discharged from Toilets, Canteen, Office and Labour Colony shall be discharged to under-ground water table and river water
5. AS THIS SITE IS LOACTED IN A CYCLONE-PRONE AREA, ALL BUILDINGS AND SHED MUST BE CONSTRUCTED STRONG ENOUGH TO WITHSTAND ADVERSE WEATHER CONDITION
6. FURTHER TO POINT#6, MASS EVACUATION OF PEOPLE FROM SITE MAY BE CALLED FOR, IF ADVISED SO, BY GOVT AGENCIES. AS IT WILL BE EXTREMELY DIFFICULT TO FIND A REST SHELTER FOR A FEW THOUSAND PEOPLE, IT IS FURTHER EMPHASISED THAT ACCOMMODATION MUST BE STRONG ENOUGH TO SURVIVE SUCH EXTREME WEATHER CONDITION.
7. BHEL shall be provided drawing for labour accommodation and contractor shall be constructed as per BHEL drawing with contractor own contribution/expenses.
8. It is assumed that First aider will be sitting in a porta-cabin.

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SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter - I : General Intent of Specifications

1.0	INTENT OF THE SPECIFICATION
1.1	The intent of this erection specification is to provide services for execution of the project according to most modern and proven techniques and codes. The omission of specific reference to any method, equipment or material necessary for the proper and efficient services towards installation of the plant shall not relieve the contractor of the responsibility of providing such services / facilities to complete the work or portion of work awarded to him. The quoted / accepted rates / price shall deem to be inclusive of all such contingencies.
1.2	The work shall conform to dimensions and tolerances given in various drawings and documents that will be provided during erection. If any portion of works is found to be defective in workmanship and not conforming to drawings / documents or other stipulations, the contractor shall dismantle and re-do the work duly replacing the defective materials at their own cost, failing which recoveries, as determined by BHEL, shall be effected from contractor's bills.
1.3	It is not the intent of this specification to specify herein all the details of erection and commissioning. However, the system shall conform in all respects to high standards of quality and workmanship for performing the required duties in a manner acceptable to purchaser who will interpret the meaning of drawings and specifications and shall be entitled to reject any work or material, which in his judgments is not in full accordance herewith.
1.4	The omission of specific reference to any fabrication / erection or other method, equipment or material necessary for proper and efficient working of the plant shall not relieve the tenderer of the responsibility of providing such facilities to complete the work at quoted rates. Any mismatch/ defect found due to mistake in fabrication / erection shall have to be rectified by the vendor free of cost. Inspection by BHEL/Customer does not relieve vendor of his responsibility of executing quality erection.
1.5	The work covered under this specification is of highly sophisticated nature, requiring the best quality workmanship, supervision, engineering and construction management. The contractor should ensure proper planning and successful and timely completion of the work to meet the overall project schedule. The contractor must deploy adequate quantity of tools & plants, modern / latest construction aids etc. He must also deploy adequate trained, qualified and experienced supervisory staff and skilled personnel.

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter - I : General Intent of Specifications

1.6	Contractor shall erect and commission all the equipments and auxiliaries as per the sequence & methodology prescribed by BHEL depending upon the technical requirements. Availability of materials and fronts will decide this. BHEL Engineer's decision regarding correctness of the work and method of working shall be final and binding on the contractor. No claims for extra payment from the contractor will be entertained on the ground of deviation from the methods / sequence adopted in erection of similar sets elsewhere.
1.7	Following shall be the minimum responsibility of contractor and have to be provided within finally accepted rates / prices:
1.7.1	Provision as required of all types of labour, supervisors, engineers, watch and ward, tools & tackles, calibrated MMEs (Monitoring and Measuring Equipment) as specified and otherwise required for the work, consumables for erection, testing and commissioning including material handling
1.7.2	Achieving Proper out-turn / Turn-over as per BHEL plan and commitment.
1.7.3	Completion of work as per BHEL Schedule
1.7.4	Good quality and accurate workmanship for proper performance of the equipment
1.7.5	Repair and rectification
1.7.6	Preservation / Re-conservation of all components during storage / erection / commissioning till handing over.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter - II : General Services to be rendered by the Bidder

2.0	GENERAL SERVICES TO BE RENDERED BY THE BIDDER
2.1	Services for construction, fabrication, equipment erection testing as well as trial run & commissioning of various equipment and accessories under the contract shall include but not be limited to the following:
2.2	Issuing materials from store/open yard from time to time for erection as per the construction programme. The Contractor shall be the custodian of all the materials issued till the plant/equipment is officially taken over by the owner / BHEL after complete erection any successful trial run & commissioning.
2.3	Transport of material to their respective places of erection and erection of the complete plant & equipment as supplied under this specification.
2.4	Trial run and commissioning of individual equipment / sub-systems to the satisfaction of Owner/BHEL.
2.5	Deployment of all skilled and unskilled manpower required for erection, supervision of erection, watch & ward, commissioning and other services to be rendered under this specification.
2.6	Deployment of all erection tools & tackle, construction machinery, transportation vehicles and all other implements in adequate number and size, appropriate for the erection work to be handled under scope of this specification except otherwise specified.
2.7	Supply of all consumables, eg welding electrodes, cleaning agents, diesel oil, lubricant etc as well as materials required for temporary supports, scaffolding etc as necessary for such erection work, unless specified other wise.
2.8	Providing support services for the contractor's erection staff eg construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, watch and ward for security and safety of the materials under the Contractor's custody etc. as required.
2.9	Maintaining proper documentation of all the site activities undertaken by the Contractor as per the proforma mutually agreed with BHEL, Submission of monthly progress reports and any such document as and when desired by BHEL/owner, taking approval of all statutory authorities i.e Boiler Inspector, Factory Inspector, Inspector of Explosives etc , as applicable for respective portions of work fall under the jurisdiction of such statutes of laws.
2.10	Any other service, although not specifically called for but required for a contract of the size and nature indicated in the specification.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter - III : General Technical Requirements (Codes and Standards)

3.0	GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS)
3.1	Except where otherwise specified, the plant/equipment shall comply with the appropriate Indian Standard or an agreed internationally accepted Standard Specification as mentioned elsewhere in contract specifications, each incorporating the latest revisions at the time of tendering. Where no internationally accepted standard is applicable, the Bidder shall give all particulars and details as necessary, to enable BHEL to identify all of the plant/equipment in the same detail as would be possible had there been a Standard Specification.
3.2	Where the Bidder proposes alternative codes or standards he shall include in his tender one copy (in English) of each Standard Specification to which materials offered shall comply. In such case, the adopted alternative standard shall be equivalent or superior to the standards mentioned in the specification.
3.3	In the event of any conflict between the codes and standards referred above, and the requirements of this specification, the requirements which are more stringent shall govern.
3.4	Tools used during erection and commissioning shall not be accepted except with the specific approval of the Engineer.

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter - IV : Obligations of Contractor

4.0	OBLIGATIONS OF CONTRACTOR
4.1	CONSUMABLES & OTHER ITEMS
4.1.1	The contractor shall provide within finally accepted price / rates, all consumables (excepting those indicated in BHEL scope) like welding electrodes (including alloy steel and stainless steel), filler wires, TIG filler wires (over & above as supplied by the unit along with the plant materials, which will be given free of cost to bidder), gases (inert, welding, cutting), soldering material, dye penetrants, radiography films, etc. Other erection consumables such as tapes, jointing compound, grease, mobile oil, M-seal, Araldite, petrol, CTC / other cleaning agents, grinding and cutting wheels are to be provided by the contractor. Steel, packers, shims, wooden planks, scaffolding materials hardware items etc required for temporary works such as supports, scaffoldings are to be arranged by the contractor. Sealing compounds, gaskets, gland packing, wooden/concrete sleepers, for temporary work, required for completion of work except those which are specifically supplied by manufacturing unit are also to be arranged by the contractor.
4.1.2	All the shims, gaskets and packing, which go finally as part of plant equipment, shall be supplied by BHEL free of cost.
4.1.3	It shall be the responsibility of the contractor to plan the activities and store sufficient quantity of consumables. Non-availability of any consumable materials or equivalent suggested by BHEL cannot be considered as reason for not attaining the required progress or for additional claim.
4.1.4	<u>TIG Filler wire for Boiler and Filler wires for Electrodes for P91/T91 piping:</u> These shall be supplied by BHEL free of cost as supplied by BHEL Manufacturing Units as part of regular supply. Required quantity as arrived at by calculation / standards will only be supplied. It would be the contractors' responsibility to account for the consumption of these filler wires. Additional consumption beyond standard / calculated quantity will be at cost recovery basis only unless and otherwise accounted for. Surplus quantity of TIG filler wire, if any, shall be properly stored and returned to BHEL stores.
4.1.5	It shall be the responsibility of the contractor to obtain prior approval of BHEL, regarding suppliers, type of electrodes etc before procurement of welding electrodes. On receipt of electrodes at site these shall be subjected to inspection and approval by BHEL. The contractor shall inform BHEL details regarding type of electrodes, batch number, date of expiry etc and produce test certificate for each lot / batch with correlation of batch / lot number with respective test certificate. No

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Chapter - IV : Obligations of Contractor

	electrode without a valid test certificate will to be used.
4.1.6	BHEL reserves the right to reject the use of any consumable including electrodes, gases, lubricants / special consumables if it is not found to be of the required standard / make / purity or when shelf life has expired. Contractor shall ensure display of shelf life on consumable wherever required and records maintained.
4.1.7	Storage of all consumables including welding electrodes shall be done as per requirement / instruction of the Engineer by the contractor at his cost.
4.1.8	In case of improper arrangement for procurement of any consumable, BHEL reserves the right to procure the same from any source and recover the cost from the Contractor's first subsequent bill at market value plus the departmental charges of BHEL from time to time. Postponement of such recovery is normally not permitted. The decision of Engineer in this regard shall be final and binding on the Contractor.
4.1.9	All lubricants and chemicals required for pre-commissioning, commissioning, testing, preservation and lubricants for trial runs of the equipment shall be supplied by BHEL / BHEL's client. All services including labour and T&P will be provided by the contractor for handling, filling, emptying, refilling etc. The consumption of lubricants / chemicals shall be properly accounted for. Surplus material if any shall be properly stacked/tagged and returned to BHEL/ CUSTOMER stores at no extra cost to BHEL. BHEL reserves the right to recover costs for wastage by the contractor.
4.1.10	Transportation of oil drums, from stores, filling of oil for flushing, first filling, subsequent changeover if any, topping/making up till the unit is fully commissioned and handed over to customer is included in scope of this contract. The contractor shall have to return all the empty drums to BHEL / BHEL's client store at no extra cost. Any loss / damage to above drums shall be to contractor's account.
4.1.11	All charges on account of Octroi, terminal or sales tax and other duties on materials obtained from any source for carrying out the works in the scope of the contractor shall be borne by the contractor.
4.2	TOOLS AND PLANTS / MONITORING AND MEASURING EQUIPMENT (MMEs)
4.2.1	T&Ps and MMEs to be provided by Contractor
4.2.1.1	All T&Ps and MMEs excepting those specifically indicated in BHEL scope are to be provided by the Contractor. Contractor has to make his own arrangement at his cost for completing the formalities (including arrangement of Road permits, if any) if required with Sales Tax/VAT authorities, for bringing their materials, plants and

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	equipments at site for the execution of work under this contract.
4.2.1.2	All suitable cranes, lifting and transport equipments for material handling at stores/yard/siding of BHEL/Customer are included in scope. BHEL's cranes will not be available for this purpose unless otherwise specifically permitted as per contract conditions
4.2.1.3	All T&Ps to be deployed by the contractor shall have the approval of BHEL Engineer with regard to brand, quality and specification.
4.2.1.4	Indicative list of Major T&Ps in the scope of Contractor are given in the Technical Conditions of Contract. Bidders to note that these are only indicative and as such all other T&P necessary for timely and satisfactory completion of work in scope shall be mobilized by Contractor
4.2.1.5	Timely deployment of adequate T&Ps is the responsibility of the contractor. The contractor shall be prepared to augment the T&P at short notice to match the planned programme and to achieve the milestones.
4.2.1.6	Contractor shall maintain and operate his tools and plants in such a way that major breakdowns are avoided. In the event of major breakdown, contractor shall make alternative arrangements expeditiously so that the progress of work is not hampered.
4.2.1.7	In the event of contractor failing to arrange the required tools, plants, machinery, equipment, material or non-availability of the same owing to breakdown, BHEL will make alternative arrangement at the risk and cost of the contractor. Decision of BHEL shall be final and binding on the contractor
4.2.1.8	The T&P to be arranged by the contractor shall be in proper working condition and their operation shall not lead to unsafe condition. The movements of cranes, and other equipment should be such that no damage / breakage occurs to foundations, other equipments, material, property and men. All arrangements for the movement of the T&P etc shall be the contractor's responsibility.
4.2.1.9	Use of welding generators/ rectifiers only shall be permitted for welding. Use of welding transformers will be subject to specific approval of BHEL engineer.
4.2.1.10	The contractor at his cost shall carry out periodical testing of his construction equipments. Test certificates shall be furnished to BHEL.
4.2.1.11	Contractor shall ensure deployment of serviced and healthy T&Ps including cranes, lifting tackles, wire ropes, manila ropes, winches and slings etc. History card and maintenance records for major T&Ps will be maintained by the contractor and will be made available to BHEL Engineer for inspection as and when required.

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	<p>Fitness certificate / Test Certificates of T&P shall have to be submitted before it is put in use. Identification for such T&Ps will be done as per BHEL Engineer's advice.</p> <p>BHEL reserves the right to permit only new slings up to 20 mm and lifting tackles up to 3 MT capacities.</p>
4.2.1.12	<p>Contractor shall ensure deployment of reliable and calibrated MMEs (Inspection measuring and Monitoring equipment). The MMEs shall have test / calibration certificates from authorized / Government approved / accredited agencies traceable to National / International standards. Each MME shall have a label indicating calibration status i.e. date of calibration, calibration agency and due date for calibration. A list of such instruments deployed by contractor at site with its calibration status is to be submitted to BHEL Engineer for control.</p>
4.2.1.13	<p>Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MME so that work does not suffer when the particular instrument is sent for calibration. If any MMEs not found fit for use, BHEL shall have the right to stop the use of such item. It will be necessary for the contractor to deploy proper item. Any readings taken by the defective instrument will be recalled and repeat the readings taken by that instrument with a proper one. In case he fails to do so, BHEL may deploy MMEs and retake the readings at contractor's cost.</p>
4.2.1.14	<p>BHEL shall have lien on all T&P, MMEs and other equipment of the contractor brought to the site for the purpose of erection, testing and commissioning. BHEL shall continue to hold the lien on all such items throughout the period of contract / extended period. The contractor and / or his sub-contractors, without the prior written approval of the Engineer, shall remove no material brought to the site.</p>
4.2.1.15	<p>The month wise T&P deployment plan to execute the work is to be submitted as per relevant format as per the instruction of BHEL. It shall be the contractor's responsibility to deploy the required T&P, for timely and successful completion of the job, to any extent.</p>
4.2.2	Obligations in respect of T&Ps and MMEs provided by BHEL
4.2.2.1	<p>T&P / MMEs being provided by BHEL to sub-contractor free of hire charges shall be shared by other subcontractors working for BHEL at site and the allotment done by BHEL Engineer shall be final and binding.</p>
4.2.2.2	<p>BHEL T&P will be issued in basic assembled condition. Additional loose components / sub-assemblies / attachments as and when necessary, will be</p>

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	issued by BHEL. Assembly of such additional loose components/sub-assemblies/ attachments is in contractor's scope.
4.2.2.3	In case of non-availability of the T&Ps to be provided by BHEL due to breakdown, major overhauls, distribution pattern or any other reason, the contractor shall plan / amend / alter his activities to meet erection / commissioning targets in consultation with BHEL.
4.2.2.4	void
4.2.2.5	The contractor shall engage trained and experienced operators for the operation of BHEL's T&Ps. Their skill / performance will be checked by BHEL Engineer before they are allowed to operate the same. However checking of skills by BHEL does not absolve the contractor of his responsibilities for proper and safe handling of equipment, consistent good performance of operators and regular performance evaluation of operators.
4.2.2.6	<p>The day to day operation and maintenance of BHEL's T&Ps (Other than cranes) shall be carried out by contractor as per manufacturer's / BHEL's maintenance schedule at his cost. The contractor shall arrange, at his own cost, trained operators, fuel and other consumables for their operation. BHEL shall arrange all spares needed for upkeep of major T&Ps provided like Huck Bolting Machine*, DG Set, Induction Machine and Hydraulic Test pumps. The contractor has to arrange for fixing of the spares; supervision in specialized cases will be provided by BHEL. For upkeep of all other T&Ps supplied by BHEL, spares shall be arranged by the Contractor. BHEL supplied T&Ps shall be maintained in good working condition during the entire period of use. T&Ps in defective / damaged condition shall be rectified promptly to the full satisfaction of BHEL engineer. Contractor shall maintain records for maintenance of major T&Ps. These shall be made available for inspection whenever required. In case of any lapses on the part of the contractor, BHEL at its own discretion shall get the servicing / repair of equipment done at the risk and cost of the contractor along with BHEL overheads. Further, if there are breakdowns / damages due to negligence of the contractor, the complete service / repair charges and cost of all the spares damaged with BHEL overheads shall be recovered from contractor's RA bills.</p> <p>*: for operation and maintenance of ESP Huck bolting machine, BHEL shall provide the basic power rig and hose. Balance toolingsie Guns, chuck jaws etc are to be arranged by contractor.</p>
4.2.2.7	void

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4.2.2.8	Increasing / shortening of the crane boom to suit work requirements shall have to be arranged by the indenting contractor at his cost including restoration to a state as directed by BHEL. All necessary manpower tools, support, consumables, illumination etc. will have to be arranged by contractor at his cost. If required, contractor has to return the crane with original boom.
4.2.2.9	The area and infrastructure development of the area to be carried out by the customer. However in construction projects of this magnitude it is possible that all the areas / approaches may not be ready. In such cases backfilling of approaches where ever necessary, consolidation of ground and arrangement of sleepers / sand bag filling etc for safe operation / movement of equipment including cranes / trailers etc shall be the responsibility of the contractor at his cost. No compensation on this account shall be payable.
4.2.2.10	In the event of contractor not using and maintaining BHEL T&Ps according to BHEL's instructions. BHEL will have the right to withdraw such item without any notice and no claim in this regard shall be entertained and contractor shall be responsible for delay in execution on this account.
4.2.2.11	The contractor shall furnish regular utilization report of the BHEL T&Ps, as per requirement of BHEL.
4.2.2.12	Any loss / damage to any part of BHEL T&Ps and MMEs shall be to the contractor's account and any expenditure on these accounts by BHEL will be recovered from the contractor's bill in case the contractor fails to make good the loss.
4.2.2.13	It shall be responsibility of the contractor to take delivery of T&Ps and MMEs from stores or place of use by other contractor at project site, transport the same to site and return the same to BHEL store / place as intimated by Engineer in project site in good working conditions after use.
4.2.2.14	The contractor shall return BHEL T&Ps and MMEs issued to him in good working condition as and when desired by BHEL (on completion or reduction of workload). If contractor delays return of T&P and MME, hire charges as applicable shall be levied by BHEL from time, it was requisitioned till the time of actual return. T&Ps and MMEs returned in damaged / unserviceable condition shall be got repaired by BHEL at its own discretion and entire cost of repair with BHEL overheads shall be recovered from the contractor.
4.2.2.15	Replacement cost including BHEL overheads in respect of irreparable / completely damaged / non return of T&Ps and MMEs shall be recovered from the

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	contractor's running / final bills
4.2.2.16	Obligations in respect of Cranes provided by BHEL
a)	BHEL will make available the cranes (as per Technical Conditions of Contract) free of charge to the contractor on sharing basis mainly for the purposes enumerated/indicated therein. BHEL cranes have to be shared with other agencies / contractors of BHEL. The allocation of cranes shall be the discretion of BHEL engineer, which shall be binding on the contractor.
b)	BHEL Cranes may be initially issued in basic assembled condition. Any alteration/addition like boom reduction / extension, assembly of components/sub-assemblies needed for modulating the capacity/reach/other features of cranes and restoration to the state as directed by BHEL shall be the contractor's responsibility.
c)	<p>In case the BHEL cranes are not covered under AMC of BHEL, then the day-to-day upkeep and running maintenance like filling / topping up of lubricants, changing filters, etc including repair of self starter and dynamo of these cranes shall be the responsibility of the contractor. If on checking it is found that the same is not followed, BHEL will exercise its right to get the job/works done at the risk and cost of contractor.</p> <p>In case BHEL cranes are covered under AMC awarded by BHEL, then the day-to-day upkeep and running maintenance as described above are excluded from scope. However any additional helpers if any required during Preventive/Breakdown Maintenance, Assembly/disassembly shall be provided by contractor at no extra cost.</p> <p>BHEL may also provide cranes through crane hiring agencies in which case the day-to-day upkeep and running maintenance shall be excluded from scope of contractor.</p>
d)	Minor consumables like cotton cloth, cotton waste, etc is to be supplied by Contractor. All spares and lubricants/grease is excluded from scope. Contractor to give the requirements of these items well in advance in case the cranes provided by BHEL are BHEL owned cranes.
e)	Unless otherwise specified, trained operators for BHEL owned cranes shall be provided by the contractor. These operators should possess valid license for heavy vehicle.
f)	BHEL cranes will be withdrawn for regular and capital maintenance as per the respective schedule of maintenance. As far as possible such schedules will be intimated to the contractor in advance and may be adjusted depending on the work

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	requirements at site. However no claim whatsoever will be entertained on account of non-availability of cranes.
g)	Where the services of the cranes provided by BHEL are to be shared by other agencies/ contractors of BHEL, the contractor's responsibilities defined above will also be apportioned accordingly to the beneficiary agency. Working arrangements in this regard will be done at site by BHEL engineer and in any case his decision shall be final and binding.
h)	Major breakdowns will be attended to by BHEL. However, in case of breakdowns or damages due to negligence of the contractor, the complete service/repair charges including cost of spares shall be to the account of the contractor, along with BHEL overheads.
4.2.2.17	Obligations in respect of Construction Lift/Elevators provided by BHEL
a)	The total erection including commissioning, maintenance, statutory clearances shall be included in scope of work. Supervision by the original equipment supplier or their authorized agency shall be arranged for by BHEL, in case found necessary.
b)	All day to day and routine maintenance and checking is to be carried out by the contractor as per the recommendations of the supplier. He should periodically check the brakes and carry out the all works to ensure the safety of all those using the lift/elevator. BHEL shall arrange spares required for upkeep of Construction lift/elevator
c)	The construction lift/elevator should never be overloaded as this can lead to serious accidents. Ensuring all safety aspects in operation of the lift shall be the responsibility of the contractor. Erection of all the required number of landing platforms is included in scope. Landing platforms are to be provided with proper barricades and hand railings.
d)	After completion of contractual scope of work or as per BHEL advice, the temporary elevator/lift shall be dismantled and handed over to BHEL neatly identified/tagged. Temporary structures/platforms etc erected for the elevators/lifts are also to be dismantled and materials to be returned to stores as applicable. The construction and dismantling of the foundations required for the construction/elevator lifts is included in the scope of the contractor.

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Chapter – V : Responsibilities of Contractor in respect of Labour, Supervisory Staff, etc.

5.0	RESPONSIBILITIES OF CONTRACTOR IN RESPECT OF LABOUR, SUPERVISORY STAFF, ETC.
5.1	Refer relevant clauses of General Conditions of Contract (GCC) also in this regard
5.2	The contractor shall deploy all the necessary skilled/semiskilled/ unskilled labour including highly skilled workmen etc. These workmen should have previous experience on similar job. They shall hold valid certificates wherever necessary. BHEL reserves the right to insist on removal of any employee of the contractor at any time if he is found to be unsuitable and the contractor shall forthwith remove him.
5.3	Contractor shall also comply with the requirements of local authorities/ project authorities calling for police verification of antecedents of the workmen, staff etc.
5.4	It is the responsibility of the contractor to engage his workmen in shifts and or on overtime basis for achieving the targets set by BHEL. This target may be set to suit BHEL's commitments to its customer or to advance date of completion of events or due to other reasons. The decision of BHEL in regard to setting the erection and commissioning targets will be final and binding on the contractor.
5.5	Contractor shall provide at different elevation suitable arrangement for urinal and drinking water facility with necessary plumbing & disposal arrangement including construction of septic tank. These installations shall be maintained in hygienic condition at all times.
5.6	The Contractor in the event of engaging 20 or more workmen, shall obtain Independent license under the Contract labour (Regulation and Abolition) Act 1970 from the concerned authorities based on Form-V issued by the Principal Employer/Customer. In order to issue Form-V by Customer, Contractor shall fulfill all Statutory requirements like Insurance Policy, PF Code/PF Account number etc as per the requirement of BHEL/Customer
5.7	Contractor shall deduct the necessary amount towards Provident Fund and contribute equal amount as per Government of India laws. This amount will be deposited regularly to the provident Fund Commissioner. BHEL/Customer may insist for submission of the account code duly certified by PF Commissioner
5.8	Contractor may also be required to comply with provisions of ESI Act in vogue if applicable and submit evidence to BHEL.
5.9	BHEL / customer may insist for witnessing the regular payment to the labour. They may also like to verify the relevant records for compliance with statutory

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	requirements. Contractor shall enable such facilities to BHEL / Customer.
5.10	Contractor shall deploy only qualified and experienced engineers/ supervisors. They shall have professional approach in executing the work.
5.11	The contractor's supervisory staff shall execute the work in the most professional manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. They shall be responsible to ensure that the assembly and workmanship conform to dimensions and tolerances given in the drawings/instructions given by BHEL engineer from time to time.
5.12	The supervisory staff employed by the contractor shall ensure proper outturn of work and discipline on the part of the labour put on the job by the contractor. Also in general they should see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other contractors of BHEL or BHEL's client.
5.13	It is the responsibility of the contractor to arrange gate pass for all his employees, T&P etc for entering the project premises. Necessary coordination with customer officials is the responsibility of the contractor. Contractor to follow all the procedures laid down by the customer for making gate passes. Where permitted, by customer / BHEL, to work beyond normal working hours, the contractor shall arrange necessary work permits for working beyond normal working hours.
5.14	The actual deployment will of Labour and Engineer/supervision staff shall be so as to satisfy the erection and commissioning targets set by BHEL. If at any time, it is found that the contractor is not in a position to deploy the required engineers/supervisors/workmen due to any reason, BHEL shall have the option to make alternate arrangements at the contractor's risk and cost. The expenditure incurred along with BHEL overheads thereon shall be recovered from the contractor
5.15	Contractor shall not deploy women labour at night.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter – VI: Material Handling, Storage & preservation

6.0	MATERIAL HANDLING, STORAGE AND PRESERVATION ETC
6.1	MATERIAL HANDLING AND STORAGE
6.1.1	All the equipments/materials furnished under this contract shall be received from the project stores, sheds / storage yards and transported to pre assembly area / erection site and stored in the storage spaces in a manner so that they are easily retrievable till the contractor erects them. While drawing/lifting material from BHEL / customer stores, the contractor shall ensure that the balance / other materials are stacked back immediately. No claim is admissible on this account
6.1.2	While BHEL will endeavor to store / stack / identify materials properly in their open / close / semi closed / tarpaulins covered storage yard / shed, it shall be contractor's responsibility to assist BHEL in identifying materials well in time for erection. They should take the delivery of the same, following the procedure indicated by BHEL, and transport the material safely to pre-assembly yard / erection site in time, according to program.
6.1.3	The contractor shall take delivery of components, equipment / consumables from storage area after getting the approval of BHEL Engineer on standard indent forms.
6.1.4	The contractor shall identify and deploy necessary Engineers / supervisors / workmen for the above work in sufficient number as may be needed by BHEL, for areas covering their scope.
6.1.5	All the equipment shall be handled very carefully to prevent any damage or loss. No untested wire ropes / slings etc. shall be used for unloading / handling. The equipment shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the stores shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at site.
6.1.6	Contractor shall ensure that while lifting slings shall be put over the points indicated on the equipment or as indicated in the manufacturer's drawings. Slings / shackles of proper size shall be used for all lifting and rigging purposes. All care shall be taken to safe guard the equipment against any damage. Dragging of piping / valves should be avoided. In case of any damage the cost shall be covered from the contractor.
6.1.7	Approach road conditions from the stores / yards to the erection site may not

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	be equipped and ideal for smooth transportation of the equipment. Contractor may have to be adequately prepared to transport the materials under the above circumstances without any extra cost. . The contractor may familiar himself with soil conditions at site.
6.1.8	Contractor shall be responsible for examining all the plant and materials issued to him and notify the Engineer immediately of any damage, shortage, discrepancy etc before they are moved out of the stores / storage area. The contractor shall be solely responsible for any shortages or damages in transit, handling, storage and erection of the equipment once received by him. As the erection work will be spread in different areas / locations of the project, contractor has to arrange sufficient number of watch / ward personal to avoid any pilferage of material
6.1.9	The contractor shall maintain an accurate and exhaustive record-detailing out the list of all equipment received by him for the purpose of erection and keep such record open for the inspection of the engineer at any time.
6.1.10	All the material in the custody of contractor and stored in the open or dusty locations must be covered with suitable weather proof / fire retardant covering material wherever applicable and shall be blocked up on raised level above ground. All covering materials including blocks and sleeper shall be arranged by the contractor at his cost.
6.1.11	If the material belonging to the contractor are stored in area other than those earmarked for his operation the engineer will have the right to get it moved to the area earmarked for the contractor at the contractors risk and cost.
6.1.12	The contractor shall be responsible for making suitable indoor storage facilities to store all equipment (drawn by the contractor from BHEL / customer stores), which require indoor storage till the time of their installation. The Engineer will direct the contractor in this regard, which item in his opinion will require indoor storage, and the contractor shall comply with Engineer's decision.
6.1.13	The contractor shall ensure that all surplus / damaged / scrap / unused material, packing wood / containers/ special transporting frames etc are returned to BHEL at a place in project area identified by the Engineer. The contractor will maintain an account for all items received and returned to BHEL. Any shortage in returning such items shall be chargeable to the contractor except allowable wastage for packing wood only.
6.1.14	The contractor shall hand over all parts / materials remaining extra over the normal requirement with proper identification tags to the stores as directed by

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter – VI: Material Handling, Storage & preservation

	the concerned BHEL engineer.
6.1.15	The contractor shall ensure that all the packing materials and protective devices installed on equipment during transit and storage are removed before installation.
6.1.16	It shall be the responsibility of the contractor to keep the work / storage areas in neat, tidy and working conditions. All surplus/unusable packing and other materials shall be removed and deposited at location(s) specified by BHEL within the project premises. If required weighing of the same within the project premises will have to be carried out.
6.2	PRESERVATION OF COMPONENTS
6.2.1	After taking delivery from BHEL / customer's stores, plant materials storage shall be subjected to the following protection besides other provisions indicated in these specifications elsewhere.
6.2.1.1	Items stored outdoors shall be stacked up at least six inches (6") off the ground. Items should not be stored in a low lying area where water logging is a possibility. Contractor should have sufficient numbers of wooden / concrete / steel sleepers for the job.
6.2.1.2	Motors, valves, electrical equipment, control equipment and instruments, and special or precision items requiring special care, etc shall be stored indoors. Motor windings shall be kept dry by use of external heat or space heaters.
6.2.1.3	Bearings and other wearing surfaces of plant materials shall be protected against corrosion and kept clean and should be regularly monitored.
6.2.1.4	Insulation materials shall be stored indoors or otherwise protected against getting wet/ damaged, using suitable measures and should be protected from direct rain.
6.2.2	It shall be the responsibility of the contractor to apply preservatives / touch up paints (primer) on equipment handled and erected by him till such time of final painting. It shall be contractor's responsibility to arrange for required paints (primer), thinners, labour, scaffolding materials, cleaning materials like wire brush, emery sheets, etc, cleaning of surface and provide one coat of preservatives / paints (primer) from time to time as decided by BHEL engineer. The accepted rate shall include this work also. It is to be noted that such painting may have to be done as and when required till such time the final painting is carried out.
6.2.3	The contractor shall effectively protect the finished work from action of weather

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Chapter – VI: Material Handling, Storage & preservation

	and from damage or defacement and shall cover the finished parts then and there for their protection.
6.2.4	Any failure on the part of contractor to carry out works according to above clauses will entail BHEL to carry out the job from any other party and recover the cost from contractor.

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Chapter – VII: Drawings and documents

7.0	DRAWINGS AND DOCUMENTS
7.1	The detailed drawings, specifications available with BHEL engineers will be made available to the contractor during execution of work at site. The contractor will also ensure availability of all drawings / documents at work place.
7.2	Necessary drawings to carry out the erection work will be furnished to the contractor by BHEL on loan, which shall be returned to BHEL Engineer at site after completion of work. Contractor shall ensure safe storage and quick retrieval of these documents.
7.3	The contractor shall maintain a record of all drawings and documents available with him in a register as per format given by BHEL Engineer. Contractor shall ensure use of pertinent drawings / data / documents and removal of obsolete ones from work place and returning to BHEL.
7.4	The data furnished in various annexure enclosed with this tender specification are only approximate and for guidance. However, the change in the design and in the quantity may occur as is usual in any such large scale of work. The contractors quoted rates shall be inclusive of the above factor
7.5	Should any error or ambiguity be discovered in the specification or information the contractor shall forthwith bring the same to the notice of BHEL before commencement of work. BHEL's interpretation in such cases shall be final and binding on the contractor.
7.6	Deviation from design dimensions should not exceed permissible limit. The contractor shall not correct or alter any dimension / details, without specific approval of BHEL.

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Chapter – VIII: Inspection and Quality

8.0	INSPECTION AND QUALITY
8.1	Inspection, Quality Assurance, Quality Control
8.1.1	Preparation of quality assurance log sheets and protocols with customer/ consultants/statutory authority, welding logs, NDE records, testing & calibration records and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work/specification. These records shall be submitted to BHEL/customer for approval from time to time.
8.1.2	The protocols between contractor and customer/ BHEL shall be made prior to installation for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of customer/ BHEL. This is necessary to ensure elimination of errors or keeping them within tolerable limits and to avoid accumulation and multiplication of errors.
8.1.3	<p>A daily log book should be maintained by every supervisor/engineer of contractor on the job in duplicate (one for BHEL and one for contractor) for detailing and incorporating alignment/clearance / centering / leveling readings and inspection details of various equipments etc.</p> <p>High pressure welding details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc. will be documented in welding log as per BHEL Engineer's instructions.</p> <p>Record of radiography containing details like serial number of weld joints, date of radiography, repairs, if any, re-shots etc shall also be maintained as per BHEL Engineer's instructions.</p> <p>Record of heat treatments performed shall be maintained as prescribed by BHEL</p>
8.1.4	The performance of welders will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically furnished for scrutiny of BHEL's Engineer. Corrective action as informed by BHEL shall be taken in respect of those welders not conforming to these standards. This may include removal/ discontinuance of concerned welder(s). Contractor shall arrange for the alternate welders immediately
8.1.5	All the welders shall carry identity cards as per the proforma prescribed by BHEL/Customer/Consultant. Only welders duly authorized by

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	BHEL/customer/consultant shall be engaged on the work.
8.1.6	Contractor shall provide all the Measuring Monitoring Equipments (MMEs) required for completion of the work satisfactorily. These MMEs shall be of brand, quality and accuracy specified by BHEL Engineer and should have necessary calibration and other certificates as per the requirement of BHEL Engineer. Decision of BHEL Engineer regarding acceptance or otherwise of the measuring instruments/gauges/tools for the work under this specification, is final and binding on the contractor. BHEL may give an indicative list of MMEs required for this work and to be made available by the contractor. The list will be reviewed by BHEL and the contractor shall meet any augmentation needed wherever required.
8.1.7	It is the responsibility of the contractor to prove the accuracy of the testing/measuring/calibrating equipments brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.
8.1.8	Any re-laying or re-termination of cables/re-erection of instruments/recalibration of instruments etc. required due to contractor's mistake or design requirement and found at any stage inspection, shall be carried out by the contractor at no extra cost.
8.1.9	BHEL, Power Sector Regions (PSNR/PSER/PSWR/PSSR) have already been accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements. One particular aspect which needs special mention is about arrangement of calibration of instruments by the contractor. Contractor shall ensure deployment of reliable and calibrated MMEs (Measuring and Monitoring Equipments). The MMEs shall have test / calibration certificates from authorised / Government approved / Accredited agencies traceable to National / International Standards. Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MMEs so that work does not suffer when the particular equipment / instrument is sent for calibration. Also if any MMEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall ie repeat the readings taken by that instrument, failing which BHEL may deploy MME and retake the readings at Contractor's cost.
8.1.10	Re-work necessitated on account of use of invalid MMEs shall be entirely to the

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	contractor's account. He shall be responsible to take all corrective actions, including resource augmentation if any, as specified by BHEL to make-up for the loss of time.
8.1.11	In the courses of erection, it may become necessary to carry repeated checks of the work with instruments recently calibrated, re-calibrated. BHEL may counter/ finally check the measurements with their own MMEs. Contractor shall render all assistance in conduct of such counter/final measurements.
8.1.12	Total Quality is the watchword of the work and Contractor shall strive to achieve the Quality Standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and Quality Standards.
8.2	Stage Inspection By FES/QA Engineers
8.2.1	Apart from day-to-day inspection by BHEL Engineers stationed at Site and Customer's Engineers, stage inspection of equipments under erection and commissioning at various stages shall also be conducted by teams of Engineers from Field Engineering Services of BHEL's Manufacturing Units, Quality Assurance teams from Field Quality Assurance, Unit/Factory Quality Assurance and Commissioning Engineers from Technical Services etc. Contractor shall arrange all labour, tools and tackles etc along with proper access for such stage inspections free of cost.
8.2.2	Any modifications suggested by BHEL FES and QA Engineers' team shall be carried out. Claims of contractor, if any, shall be dealt as per Section 13, and provided such modifications have not arisen for reasons attributable to the contractor.
8.3	Statutory Inspection of Work
8.3.1	<p>The work to be executed under these specifications has to be offered for inspection, at appropriate stages of work completion, to various statutory authorities for compliance with applicable regulations.</p> <p>The work related statutory inspections, though not limited to, are as under:</p> <ol style="list-style-type: none">1) Inspectorate of Steam Boilers and Smoke Nuisance2) Electrical Inspector3) Factory Inspector, Labour Commissioner, PF Commissioner and other authority connected to this project work

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	The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per BHEL Engineer's instructions, arranging materials for ground inspection, taking rub outs for the pressure parts to be offered for inspection, submitting co-related inspection reports, documents, radiographs etc and following up the matter with them. Contractor shall also make all arrangements for offering the Products / Systems for inspection at location, as applicable, to the concerned authority.
8.3.2	Contractor should be qualified to execute pressure parts & piping work coming under the purview of IBR, for which he should register himself with CIB of state concerned. contractor also should be aware of the latest IBR regulations and Electricity Act, including the amendments thereof.
8.3.3	Contractor shall comply with 'Qualification Tests for welders engaged in welding of Boilers and Steam Pipes under Construction, Erection and Fabrication at Site in India and in repairing Boilers and steam pipes by welding' in line with Chapter XIII of Indian Boiler Regulations-1950, for testing his welders / men / workers, including all associated fees, procedures, required instruments and equipments and their calibration there of. It shall be contractor's responsibility to obtain approval of Statutory Authorities, wherever applicable, for the conducting of any work which comes under the purview of these authorities, at his cost.
8.3.4	The following fees shall be excluded from scope of Contractor: 1. Registration Fee as per Regulation 385 of Chapter IX of Indian Boiler Regulations-1950 2. Fees for inspection of Boiler at the site of Construction as per Regulation 395 A, sl no 4 of Chapter IX of Indian Boiler Regulations-1950 However all other fees like visit fees charged by the Boiler Inspector and other arrangements for his visit or visits till satisfactory completion of work, shall be included in scope of Contractor
8.4	The Quality Management System of BHEL, Power Sector Regions (PSNR/PSER/PSWR/PSSR) have already been certified and accredited under ISO 9002 standards in this regard. The basic philosophy of the Quality Management System is to define the organizational responsibility, work as per

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	<p>documented procedures, verify the output with respect to acceptance norms, identify the non-conforming product/ procedure and take corrective action for removal of non-conformance specifying the steps for avoiding recurrence of such non-conformities, & maintain the relevant quality records. The nonconformities are to be identified through the conduct of periodical audit of implementation of quality systems at various locations/stages of work. Suppliers/vendors of various products/services contributing in the work are also considered as part of the quality management system. .as such the contractor is expected not only to conform to the quality management system of BHEL but also it is desirable that they themselves are accredited under any quality management system standard.</p>
8.5	Field Quality Assurance
8.5.1	<p>Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) as revised from time to time. Total quality shall be the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide the services of quality assurance engineer as per the relevant clauses.</p>

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Chapter - IX: HSE & OHSAS

9.0	<p>OCCUPATIONAL HEALTH, SAFETY & ENVIRONMENT MANAGEMENT/ QUALITY ASSURANCE PROGRAMME:</p> <p>BHEL, Power Sector Regions (PSNR/ER/WR/SR) are each certified for ISO 9001. Quality of work to customer's satisfaction and fulfillment of system requirements are the essence of ISO 9001 certification. BHEL, PS Regions have HSE certification (ISO 14001 & OHSAS 18001) and therefore Contractor also shall organise/ plan/ perform all their activities to meet with the applicable requirements of these standards.</p>
9.1	<p>HSE (Health, safety & Environment):</p> <p>Contractor will comply with HSE (Health, safety & Environment) requirements of BHEL. HSE requirements in brief, are given below :-</p>
9.1.1	<p>Contractor will nominate one of their qualified and experienced employees as Safety Officer, who will be responsible for all HSE related issues of contractors work area. Safety Officer will have authority to stop any activity, in case he observes that the activity is not being carried out in safe manner. He will conduct surprise inspection as well as periodic inspection/drill (at least once in a month) and submit such reports to BHEL. He will conduct periodic meetings with supervisors of different working groups and explain HSE issues and use of PPEs to them. Reports of such meetings will be submitted to BHEL. Contractor will develop suitable work procedures based upon HSE guidelines and OCPs and implement it. Such work procedures will consist of Area of work, T&P Details, Work Procedure, PPE requirements etc. Please refer Schedule VIII of BOCW Rules for number of safety officers, qualification, duties etc.</p> <p>Contractor should highlight the requirement of safety to staff and labour through daily tool box meeting before start of the days job.</p> <p>Contractor to also submit monthly safety reports as per the format/procedure of BHEL.</p>
9.1.2	<p>The contractor shall arrange induction and regular health check of their employees as per schedule VII of BOCW rules by aregistered medical practitioner. The contractor shall take special care of the employees affected with occupational diseases under rule 230 and schedule II of BOCW Rules. The employees not meeting the fitness requirement should not be engaged for such job</p>
9.1.3	<p>Following personnel protective equipments (PPEs), in adequate numbers, will</p>

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	be made available at site & their regular use by all concerned will be ensured :-
	- HELMET
	- SAFETY GOGGLES & WELDING FACE SHIELDS
	- SAFETY BELTS AND PROTECTIVE NET FOR WORKING AT HEIGHT
	- SAFETY SHOES
	- EAR PLUG
	- ANY OTHER SAFETY EQUIPMENT REQUIRED FOR SAFE COMPLETION OF THE WORK
	Contractor to also submit monthly reports on above as per the format/procedure of BHEL.
9.1.4	Providing appropriate First Aid facilities for prompt treatment of injuries and illness at work place. Arranging training to contractor workmen/ employees for giving first aid.
9.1.5	Arranging ambulance in case of any emergency situation .
9.1.6	Identification of nearest hospital and health check-up of workmen/employees
9.1.7	Providing filtered drinking water at work place in cool container.
9.1.8	Providing Canteen, Rest Room, Washing facilities to the contracted employees as per provisions of Contract Labour Regulation Act 1970 (Chapter V).
9.1.9	Providing appropriate fire fighting equipment at designated work place and nominate a fire officer/warden adequately trained for his job.
9.1.10	Identification of nearest fire station and display contact telephone nos. / person's name around work places for cases of emergencies .
9.1.11	Providing adequate no. of 24 V sources and ensure that no hand lamps are operating at voltage level above 24 Volts.
9.1.12	Fulfilling safety requirements at all power tapping points.
9.1.13	Red & White caution tape of proper width(1.5 to 2 inch) to be used for cordoning unsafe area such as open trench, excavation area etc.
9.1.14	Providing contractors company logo on cloths /uniform/ proper identity cards with photographs, for correct identification of people working at project site .
9.1.15	High/ Low pressure welders to be identified with separate colourclothings. No welders will be deployed without passing appropriate tests and holding valid welding certificates. Approved welding procedure should be displayed at work place.
9.1.16	Displaying safe handling procedures for all chemicals such as lube oil, acid, alkali, sealing compounds etc , at work place .

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9.1.17	All scaffolding/ platforms should be made from materials of appropriate quality/grade so that these are safe for use. It should be certified/declared safe for use by an experienced contractor person, before any scaffolding/platform is used. Please refer IS:3696 part 1&2 and 4014 part 1 & 2
9.1.18	All T&Ps/ MMEs should be of reputed brand/appropriate quality & must have valid test/calibration certificates bearing endorsement from competent authority of BHEL.. Contractor to also submit monthly reports of T&Ps deployed and validity test certificates to BHEL safety Officer as per the format/procedure of BHEL.
9.1.19	Ensure that the regulatory requirement of excessive weight limit (to carry/lift/ move weights beyond prescribed limits) for male and female workers are complied with.
9.1.20	Safety slogan, Safety/ Caution boards , wherever required to be displayed in consultation with BHEL.
9.1.21	Take suitable measures for waste management and environment related laws/legislation as a part of normal construction activities. Compliance with the legal requirements on storage/ disposal of paint drums (including the empty ones), Lubricant containers, Chemical Containers, and transportation and storage of hazardous chemicals will be strictly maintained. Ensure proper cleanliness of work place, housekeeping and waste management (including proper waste disposal) on daily basis.
9.1.22	It is imperative on the part of the contractor to join and effectively contribute in joint measures such as tree plantation, environment protection, contributing towards social upliftment, conversion of packing woods to school furniture, keeping good relation with local populace etc.
9.1.23	The contractor shall carry out periodic air and water quality check and illumination level checking in his area of work place and take suitable control measure.
9.1.24	The Contractor is required to provide proper safety net systems (IS-11057) where ever the hazard of fall from height is present as per instruction of BHEL Engineer. The safety nets shall be fire resistant, duly tested and shall be of ISI Mark and the nets shall be located as per site requirements to arrest or to reduce the consequences of a possible fall of persons working at different heights.
9.1.25	All applicable OCPs (Operational control procedures) will be followed by contractor as per BHEL instructions. This will be done as part of normal scope of work. List of such OCPs is given below . In case any other OCP is found to

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be applicable during the execution of work at site, then contractor will follow this as well, within quoted rate. These OCPs (applicable ones) will be made available to contractor during work execution at site. However for reference purpose, these are kept with Safety Officer of BHEL at the Power Sector Regional HQ, or available in downloadable format in the website, which may be refereed by contractor, if they so desire.

■	OCP for safe handling of chemicals
■	OCP for Electrical safety
■	OCP for energy conservation
■	OCP for safe welding and gas cutting operation
■	OCP for fire safety
■	OCP for safety in use of hand tools
■	OCP for first aid
■	OCP for food safety at canteen
■	OCP for safety in use of cranes
■	OCP for storage and handing of gas cylinders
■	OCP for manual arc welding
■	OCP for safe use of helmets
■	OCP for good house keeping
■	OCP for working at height
■	OCP for safe excavation
■	OCP for safe filling of Hydrogen in cylinder
■	OCP for illumination
■	OCP for handling and erection of heavy metals
■	OCP for safe acid cleaning
■	OCP for safe alkali boil out
■	OCP for safe oil flushing
■	OCP for steam blowing
■	OCP for safe working in confined area
■	OCP for safe operation of passenger lift, material hoists & cages
■	OCP for Vehicle maintenance
■	OCP for safe radiography
■	OCP for waste disposal
■	OCP for working at night
■	OCP for blasting
■	OCP for DG Set
■	OCP for handling & storage of mineral wool

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	■ OCP for drilling, reaming and grinding(machining) etc.
	■ OCP for hydraulic test
	■ OCP for spray insulation
	■ OCP for trial run of rotary equipment
	■ OCP for stress relieving
	■ OCP for material preservation
	■ OCP for cable laying/tray work
	■ OCP for electrical maintenance
	■ OCP for transformer charging
	■ OCP for safe handling of battery system
	■ OCP for computer operation
	■ OCP for storage in open yard
	■ OCP for sanitary maintenance
	■ OCP for batching
	■ OCP for piling rig operation
	■ OCP for gas distribution test
	■ OCP for cleaning of hotwell / deaerator
	■ OCP for electro-resistance heating
	■ OCP for compressor operation
	■ OCP for O&M of control of AC plant & system
	■ OCP for air compressor
	■ OCP for passivation
	■ OCP for Safe EDTA Cleaning
	■ OCP for Safe Chemical cleaning of Pre boiler system
	■ OCP for Safe Boiler Light up
	■ OCP for Safe Rolling and Synchronisation
	■ OCP for Safe Loading of Unit
9.2	<p>SAFETY AND CLEANLINESS :</p> <p>The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per discretion of BHEL or its authorised officials (Site Construction Manager) to prevent loss of human lives, injuries, to personnel engaged and damage to property. Before commencing the work, the contractor shall submit a "Safety Plan" to the above authorised BHEL official and obtain approval on the same. The safety plan shall indicate in detail the measures that would be taken by the contractor to ensure safety of men, equipment, materials and environment during execution of the work. This will also include an organization structure, role and responsibilities of the concerned key</p>

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	personnel, the safety practices that will be followed, PPEs deployed, plan for handling critical activities and emergencies.
9.3	If the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions issued by the authorised BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor.
9.4	During the course of construction, alternation or repairs, scrap with protruding nail, sharp edge etc and all other debris shall be kept clean from working areas, passage, ways and stairs in and around site.
9.5	Combustible scrap and debris shall be removed at regular intervals during the course of execution. Safe means shall be provided to facilitate such removal. The combustible scrap should be stored in safe place away from the plant materials to avoid fire accidents. The area shall be chosen in consultation with the Engineer and to be cordoned off.
9.6	Rigging equipment for materials handling shall be inspected prior to use in each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment will be removed from service.
9.7	Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment, when not in use, shall be removed from the original work area so as not to present a hazard to employees.
9.8	Contractor shall notify the engineer, of his intention to bring on to site any equipment or any container, with liquid or gaseous fuel or other substance which may create a hazard. The Engineer shall have the right to prescribe the condition under which such equipment or container may be handled and used during the performance of the works and the contractor shall strictly adhere to such instructions. The Engineer shall have the right to inspect any construction tool and to forbid its use, if in his opinion it is unsafe. No claim due to such prohibition will be entertained.
9.9	Where it is necessary to provide and/or store petroleum products or petroleum mixture & explosives, the contractor shall be responsible for carrying out such provision / storage in accordance with the rules & regulations laid down in the relevant petroleum act, explosive act and petroleum and carbide of calcium manual, published by the chief inspector of explosives of India. All such storage shall have prior approval if necessary from the chief inspector of explosives or any other statutory authority. The contractor shall be responsible for obtaining

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	the same.
9.10	Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dragged, struck or permitted to strike each other violently.
9.11	When cylinders are transported by powered vehicle they shall be secured in a vertical position.
9.12	All workmen of the contractor working on construction area shall wear safety shoes, hand gloves, safety helmets and safety belt as applicable. The contractor shall provide to its workforce and ensure the use of following personnel protective equipment as found necessary and as directed by BHEL.
9.12.1	Safety Helmets conforming to IS-2925 : 1984
9.12.2	Safety Belts conforming to IS-3521:1983
9.12.3	Safety Shoes conforming to IS-1989 : 1978
9.12.4	Eye and face protection devices conforming to IS – 1179:1967, IS 5983:1980, IS 8521 Part 1:1977, IS 8521 Part 2: 1994.
9.12.5	Hand and body protection devices conforming to IS 4770:1991 and IS- 6994 : Part 1: 1973, IS – 8619 : 1977
9.12.6	Ear protection IS-9167:1979
9.12.7	Respiratory Protective Devices as per IS-9473:2002, i4746:1999 and 14166:1994
9.13	The contractor shall insure his workmen against all accidents and the policy shall be presented to BHEL Engineer on demand. Other wise, BHEL will arrange the same and the expenditure towards this will be debited to the contractor. In case of a fatal or disabling injury accident to any person at construction site due to lapses by the contractor, the victim and/or his/her dependants shall be compensated by the contractor as per statutory requirements. However, if considered necessary BHEL shall have the right to impose appropriate financial penalty on contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependence before imposing any such penalty. Appropriate enquiry shall be held by BHEL giving opportunity to the contractor for presenting his case. Above safety conditions are not exhaustive but gives an idea for the contractor and contractor shall adhere to all safety precaution given by the

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	Engineer at site.
9.14	The contractor shall arrange at his cost adequate lighting facilities e.g. flood lighting, hand lamps, area lighting etc. at various levels for safe and proper working operations during night hours at the work spot as well as at the pre-assembly area.
9.15	The contractor shall be responsible for provision of all the safety notices and safety equipment as enjoined on him by the application of relevant statutory regulation / provisions and/or as called upon by BHEL from time to time. He shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instruction that may endanger safety of men, equipment and material.
9.16	The contractor shall provide temporary fencing wherever required as a safety measure against accident and damage to properties. Suitable caution notices shall be displayed where access to any part is found to be unsafe and hazardous.
9.17	Contractor shall ensure safety of all the workmen, material and equipment either belonging to him or to others working at site. He shall observe safety rules and codes applied by BHEL without exception.
9.18	It will be the responsibility of the contractor to ensure safe lifting of the equipment, taking due precaution to avoid any accident and damage to other equipment and personnel. All requisite tests and inspection of handling equipment, tools & tackle shall be periodically done by the contractor by engaging only the COMPETENT PERSONS as per law. Defective equipment or uncertified shall be removed from service. Any equipment shall not be loaded in excess of its recommended safe working load.
9.19	The contractor shall provide necessary first aid facilities as per schedule III. In addition, ambulance facilities, OHC and CMO as per schedule IV, V, X and XI of BOCW Rules as applicable for all his employees, representatives and workmen at site and BHEL shall have no obligation in this regard. The first aid boxes should be placed at various elevations so as to make them available within the reach and at the quickest possible time. The contractor should conduct periodical first –aid classes to keep his supervisor and Engineers properly trained for attending to any emergency.
9.20	Training

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9.20.1	The contractor shall arrange induction safety training for all employees before assigning work. In addition, awareness programme, mock drill at regular intervals and daily tool box meetings shall be arranged. Monthly report of the above to be given to BHEL safety Officer as per prescribed BHEL formats
9.20.2	All the contractor's supervisory personnel and sufficient number of workers shall be trained for fire protection systems. Enough number of such trained personnel must be available during the tenure of contract. Contractor should nominate his supervisor to coordinate and implement the safety measures.
9.21	Contractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, temporary structure in labour colony etc. Such fire protection equipment shall be easy and kept open at all times. The fire extinguishers shall be properly refilled and kept ready which should be certified at periodic intervals. The date of changing should be marked on the Cylinders. All other fire safety measures as laid down in the "codes for fire safety at construction site" issued by safety coordinator of BHEL shall be followed. Non-compliance of the above requirement under fire protection shall in no way relieve the contractor of any of his responsibility and liabilities to fire accident occurring either to his materials or equipment or those of others. Emergency contacts nos must be displayed at prominent locations
9.22	The contractor shall at his cost, remove from vicinity of work at least once each day all combustible waste, scrap, painting materials, rubbish, unused or other materials and deposit them in places specified by BHEL to keep the work site clear and tidy. Use of undercoated canvas paper, corrugated paper, fabricated carton, plastic or other flammable materials shall be restricted to the minimum and promptly removed.
9.23	The contractor shall not use any hand lamp energized by Electric power with supply voltage of more than 24 volts in confined spaces like inside water boxes, turbine casings, condensers etc.
9.24	All portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed. Only electricians licensed by appropriate statutory authority shall be employed by the contractor to carry out all types of electrical works. Details of earth resource and their test date to be given to BHEL safety officer as per the prescribed formats of BHEL
9.25	In case of any delay in completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from

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	the payments due to the contractor, after notifying the contractor suitably.
9.26	Valve protection caps shall be kept in place and secured.
9.27	The contractor shall be responsible for the safe storage and handling of his radio-active sources as per BARC rules and regulations.
9.28	Tarpaulin being inflammable should not be used (instead, only non infusible covering materials shall be used) as protective cover while preheating, welding, stress relieving etc. at site.
9.29	If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instruction regarding safety issued by BHEL, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than 7 days indicating the steps that would be taken by BHEL.
9.30	If the contractor succeeds in carrying out its job in time with out any fatal or disabling injury accident and without any damage to property BHEL may, at its sole discretion, favorably consider to reward the contractor suitably for the performance.
9.31	The contractor shall carefully follow the safety requirement of BHEL/ the purchaser with the regard to voltages used in critical areas.
9.32	The contractor shall use only properly insulated and armored cables which conform to the requirement of Indian Electricity Act and Rules for all wiring, electrical applications at site. BHEL reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the contractor. All electrical appliances used in the work shall be in good working condition and shall be properly earthed. No maintenance work shall be carried out on live equipment. The contractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installations. Area wise Electrical safety inspection is to be carried out on monthly basis as per "Electrical Safety Inspection checklist' and the report is to be submitted to BHEL safety officer
9.33	The contractor shall arrange adequate number of persons specifically for clearing any debris and for house keeping of the erection area including restacking of components in the erection areas. Housekeeping to be carried out

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	as per BHEL's checklist and report is to be submitted to BHEL safety officer
9.34	In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover the cost of such damages from the contractor after holding an appropriate enquiry.
9.35	The contractor shall submit report of all accidents, fires and property damage etc to the Engineer immediately after such occurrence, but in any case not later than 24 hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. In addition periodic reports on safety shall also be submitted by the contractor to BHEL from time to time as prescribed by the Engineer. Compiled monthly reports of all kinds of accidents, fires and property damage to be submitted to BHEL safety officer as per prescribed formats
9.36	Before commencing the work, the contractor shall appoint/nominate a responsible person to supervise implementation of all safety measures and liaison with his counterpart of BHEL.
9.37	Suitable scaffolds shall be provided for workman for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration of work which can be done safely from ladders. When a ladder is used, it shall be of rigid construction made of steel. The steps shall have a minimum width of 45 cm and a maximum rise of 30 cm. Suitable handholds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ horizontal and 1 vertical.
9.38	Scaffolding or staging more than 3.6 m above the ground floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 90 cm above the floor or platform of such scaffolding or staging and extending along the entire length of the out side and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from savor, from swaying, from the building or structure.
9.39	Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally and if the height of the platform gangways provided is more than 3.6 m above ground level or floor level, they shall be closely boarded and shall have adequate width which shall not be less than 750 mm and be suitably fenced as described above.

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9.40	Every opening in the floor or a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.
9.41	Wherever there are open excavation in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.
9.42	Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m in the length while the width between side rails in rung ladder shall in no case be less than app. 29.2 cm for ladder upto and including 3 m in length. For longer ladders this width shall be increased at least ¼" for each additional foot of length.
9.43	A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to Construction.
9.44	All personnel of the Contactor working within the plant site shall be provided with safety helmets. All welders shall wear welding goggles while doing welding work and all metal worker shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.
9.45	Adequate precautions shall be taken to prevent danger for electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.
9.46	All trenches, four feet or more in depth, shall at all times be supplied with at least one ladder for each 30 m in length or fraction thereof. The ladder shall be extended from bottom of the trench to at least 90 cm above the surface of the ground. Sides of the trenches which are 1.50 m or more in depth shall be stepped back to give suitable slope or securely held by timer bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.
9.47.1	The contractor shall take permission of BHEL prior to risky jobs such as working at height, hot work, liftig activities, etc through permits. No job should be started without permits.
9.47.2	The Contactor shall take all measures at the sites of the work to protect all persons from accidents and shall be bound to bear the expenses of defense of

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	every suit, action or other proceeding at law that may be brought by any persons for injury sustained or death owing to neglect of the above precautions and to pay any such persons such compensation or which may with the consent of the Contractor be paid to compromise any claim by any such person should such claim proceeding be filed against BHEL, the Contractor hereby agrees to indemnify BHEL against the same.
9.48	Before any demolition work is commenced and also during the process of the work the following shall be ensured:
9.48.1	All roads and open areas adjacent to the work site shall either be closed or suitably protected.
9.48.2	No electric cable or apparatus which is liable to be a source of danger nor a cable or an apparatus used by the operator shall remain electrically charged.
9.48.3	All practical steps shall be taken to prevent danger to persons employed from the risks of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render them unsafe.
9.49	All necessary personnel safety equipment as considered adequate by the Engineer should be kept available for the use of the persons employed in the Site and maintained in a condition suitable for immediate use and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
9.49.1	Workers employed on mixing asphalted materials, cement and lime mortars shall be provided with protective foot wear and protective goggles.
9.49.2	Those engaged in white washing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.
9.49.3	Those engaged in welding works shall be provided with welder's protective eyesight lids.
9.49.4	Stone breakers shall be provided with protective goggles and protective clothing and seated sufficient to safe intervals.
9.49.5	Where workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into manhole, and the manholes so opened shall be cordoned off with suitable railing and provided

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	with warning signals or boards to prevent accident to the public.
9.49.6	The Contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precautions should be taken.
9.49.6.1	No paint containing lead or lead products shall be used except in the form of paste or ready made paint.
9.49.6.2	Suitably face masks should be supplied for use by the workers where paints are applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
9.49.6.3	Overalls shall be supplied by the Contractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
9.50	When the work is being done near any place where there is risk of drowning all necessary equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
9.51	Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safe guards. Hoisting appliance should be provided with such means as will reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers employed on electrical installations which are already energized, insulting mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductor of electricity.
9.52	All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near the places of work.
9.53	The contractor shall maintain and ensure necessary safety measures as required for inspection and tests HV test, Pneumatic test, Hydraulic test, Spring test, Bend test etc as applicable, to enable inspection Agency for performing Inspection. If any test equipment is found not complying with proper safety

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	requirements then the Inspection Agency may withhold inspection, till such time the desired safety requirements are met.
9.54	The Contractor shall notify BHEL of his intention to bring to site any equipment or material which may create hazard. BHEL shall have the right to prescribe the conditions under which such equipment or materials may be handled and the contractor shall adhere to such instructions. BHEL may prohibit the use of any construction machinery, which according to him is unsafe. No claim for compensation due to such prohibition will be entertained by BHEL.
9.55	All safety precautions shall be taken for welding and cutting operations as per IS-818. All safety precautions shall be taken for foundation and other excavation marks as per IS-3764.
9.56	.All gas cylinders shall be stored in upright position. Suitable trolley shall be used. There shall be flash-back arrestors conforming to IS-11006 at both cylinder and burner ends. Damaged tube and regulators must be immediately replaced. No of cylinders shall not exceed the specified quantity as per OCP
9.57	These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent, place at work spot. The persons responsible for compliance of the safety code shall be named therein by the Contractor
9.58	To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangement made by the contract shall be open to inspection by the Engineer of the Engineer's Representative.
9.59	Keeping the work area clean/ free from debris, removed scaffoldings, scraps, insulation/sheeting wastage /cut pieces, temporary structures, packing woods etc. will be in the scope of the contractor. Such cleanings has to be done by contractor within quoted rate, on daily basis by an identified group. If such activity is not carried out by contractor / BHEL is not satisfied, then BHEL may get it done by other agency and actual cost alongwith BHEL overheads will be deducted from contractor's bill. Such decisions of BHEL shall be binding on the contractor.
9.60	Notwithstanding the above clauses there is nothing to exit the Contractor from the operations of any other Act or Rule in force in area of work in this respect. Provided always that all safety measures apart from those specifically provided in this agreement which are brought to the notice of the Contractor from time to time by the Engineer shall be complied by the Contractor. Provided further that

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	all consequences, damages, or losses arising by reason of any safety code shall be met with by the Contractor.																																																																
9.61	<p><u>NON COMPLIANCE:-</u> NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND BHEL HAS RIGHT TO IMPOSE FINES ON THE CONTRACTOR AS UNDER <u>for every instance of violation noticed:</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">SN</th> <th style="width: 70%;">Violation of Safety Norms</th> <th style="width: 20%;">Fine (in Rs)</th> </tr> </thead> <tbody> <tr><td>01</td><td>Not Wearing Safety Helmet</td><td>50/- *</td></tr> <tr><td>02.</td><td>Not wearing Safety Belt or not anchoring life line</td><td>100/-*</td></tr> <tr><td>03</td><td>Not wearing safety shoe</td><td>100/-*</td></tr> <tr><td>04</td><td>Not keeping gas cylinders vertically</td><td>100/-</td></tr> <tr><td>05</td><td>Not using flash back arrestors</td><td>50/-</td></tr> <tr><td>06</td><td>Not wearing gloves</td><td>50/- *</td></tr> <tr><td>07.</td><td>Grinding Without Goggles</td><td>50/- *</td></tr> <tr><td>08.</td><td>Not using 24 V Supply For Internal Work</td><td>500/-</td></tr> <tr><td>09.</td><td>Electrical Plugs Not used for hand Machine</td><td>100/-</td></tr> <tr><td>10.</td><td>Not Slinging property</td><td>200/-</td></tr> <tr><td>11.</td><td>Using Damaged Sling</td><td>200/-</td></tr> <tr><td>12.</td><td>Lifting Cylinders Without Cage</td><td>500/-</td></tr> <tr><td>13.</td><td>Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.</td><td>200/-</td></tr> <tr><td>14.</td><td>Not Removing Small Scrap From Platforms</td><td>200/-</td></tr> <tr><td>15.</td><td>Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting</td><td>200/-</td></tr> <tr><td>16.</td><td>Not Maintaining Electric Winches Which are Operated Dangerously</td><td>500/-</td></tr> <tr><td>17.</td><td>Improper Earthing Of Electrical T&P</td><td>500/-</td></tr> <tr><td>18</td><td>No or improper barricading</td><td>500/-</td></tr> <tr><td>19.</td><td>Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)</td><td>1000/-</td></tr> <tr><td>20.</td><td>Accident Resulting in Partial Loss in Earning Capacity</td><td>25,000/- per victim</td></tr> </tbody> </table>		SN	Violation of Safety Norms	Fine (in Rs)	01	Not Wearing Safety Helmet	50/- *	02.	Not wearing Safety Belt or not anchoring life line	100/-*	03	Not wearing safety shoe	100/-*	04	Not keeping gas cylinders vertically	100/-	05	Not using flash back arrestors	50/-	06	Not wearing gloves	50/- *	07.	Grinding Without Goggles	50/- *	08.	Not using 24 V Supply For Internal Work	500/-	09.	Electrical Plugs Not used for hand Machine	100/-	10.	Not Slinging property	200/-	11.	Using Damaged Sling	200/-	12.	Lifting Cylinders Without Cage	500/-	13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-	14.	Not Removing Small Scrap From Platforms	200/-	15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	200/-	16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-	17.	Improper Earthing Of Electrical T&P	500/-	18	No or improper barricading	500/-	19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-	20.	Accident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
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SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter - IX: HSE & OHSAS

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<p>Legend:- *: per head, #: or as deducted by Customer whichever is higher</p> <p>Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the contractor. The amount collected above will be utilized for giving award to the employees who could avoid accident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.</p>					
9.61	<p><u>CITATION:</u> -If safety record of the contractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job</p>				
9.62	<p><u>MEMORANDUM OF UNDERSTANDING</u> After Award Of Work, Contractors Are Required To Enter Into A Memorandum Of Understanding As Given Below:</p> <p style="text-align: center;"><u>Memorandum of Understanding</u></p> <ul style="list-style-type: none"> ➤ BHEL, Power Sector _____ Region is committed to Health, Safety and Environment Policy (EHS Policy). ➤ M/s _____ do hereby also commit to the same EHS Policy while executing the Contract Number _____ ➤ M/s _____ shall ensure that safe work practices not limited to the above are followed by all construction workers and supervisors. Spirit and content therein shall be reached to all workers and supervisors for compliance. ➤ BHEL will be carrying out EHS audits twice a year and M/s _____ shall ensure to close any non-conformity observed/reported within fifteen days. <p>Signed by authorized representative of M/s -----</p>				

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter - IX: HSE & OHSAS

	Name : Place & Date:
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SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter-X: RA Bill Payments

10.0	RA Bill Payments
10.1	The contractor shall submit his monthly RA bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas for the previous calendar month.
10.2	Mode of payment and measurement of work completed shall be as per relevant clauses of General Conditions of Contract
10.3	Release of payment in each running bill including PVC Bills where ever applicable will be restricted to 95% of the value of work admitted as per stages of progressive pro rata payments.
10.4	The 5% thus remaining shall be treated as 'Retention Amount' and shall be released as per terms specified in the General Conditions of Contract.
10.5	<p>The payment for running bills will normally be released within 30 days of submission of running bill complete in all respects with all documents. It is the responsibility of the contractor to make his own arrangements for making timely payments towards labour wages, statutory payments, outstanding dues etc and other dues in the meanwhile.</p> <p>In case of Civil works, 60% of RA Bills complete and correct in all respects and certified by BHEL Engineer, shall be paid within 15 days of receipt. Balance payment shall be within 30 days.</p>
10.6	<p>BHEL shall release payment through Electronic Fund Transfer (EFT)/RTGS. In order to implement this system, Contractor to furnish details pertaining to his Bank Accounts where proceeds will be transferred through BHEL's banker, as per prescribed formats:</p> <p>Note: BHEL may also choose to release payment by other alternative modes as applicable</p>
10.7	Paying Authority shall be the Construction Manager of the Site. Any change in the paying Authority shall be intimated to the Contactor accordingly.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter-XI : Performance Monitoring

11.0	Performance Monitoring
11.1	Performance of the contractor is monitored through various reports/reviews and shall be jointly evaluated every month for unit wise identified packages as per prescribed formats. Based on the net weighted scores obtained, Contractors shall be rated 'Good' or 'Satisfactory' or 'Unsatisfactory'
11.2	In case of any dispute on performance rating and the contractor refuses to sign on the performance rating given by BHEL package Incharge, the same shall be reviewed by BHEL site Incharge/Construction Manager and his decision shall be final.
11.3	Release of RA Bills will be contingent upon joint evaluation of performance
11.4	Performance of the contractor will be taken into consideration for assessing the capacity of the bidder to execute future jobs under tender, as detailed in the Notice Inviting Tender. Risk of non evaluation or non availability of the Monthly performance evaluation reports is to be borne by the Bidder.
11.5	In case of 'Unsatisfactory performance' for a continuous period of three or more months for a package or packages, BHEL has the right to get the balance works executed at the risk and cost of the contractor.
11.6	In case of 'Unsatisfactory performance' in a financial year, BHEL reserves the right to put on hold such Contractors for a period of six months for similar package or similar packages

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter-XII: Suspension of Business Dealings

12.0	Suspension of Business dealings
12.1	BHEL reserves the right to take action against contractors who fail to perform or indulge in malpractices, by suspending business dealings with them.
12.2	Suspension could be in the form of 'Hold', 'De-listing' or 'Banning' a contractor.
12.3	<p>A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:</p> <ul style="list-style-type: none"> a) Bidder does not honour his own offer or any of its conditions within the validity period. b) Bidder fails to respond against three consecutive enquires of BHEL. c) After placement of order, Bidder fails to execute a contract. d) Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence. e) Bidder's performance rating falls below 60% in specific category (more fully described in chapter 'Performance Monitoring') f) Bidder works are under strike/ lockout for a long period.
12.4	<p>A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:-</p> <ul style="list-style-type: none"> a) Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics. b) Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL. c) Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.
12.5	<p>A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:</p> <ul style="list-style-type: none"> a) Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest. b) In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements. c) Bidder is found to be involved in cartel formation

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter-XII: Suspension of Business Dealings

	<p>d) The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.</p> <p>e) The Bidder is found guilty by any court of law for criminal activity/offences involving moral turpitude in relation to business dealings.</p> <p>f) The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.</p> <p>g) Bidder is found to have obtained Official Company information/documentation by questionable means.</p> <p>h) Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.</p>
12.6	Contracts already entered with a contractor before the date of issue of order of 'HOLD' or 'DE-LISTING' shall not be affected.
12.7	All existing contracts with a 'BANNED' contractor shall normally be short closed
12.8	Once the order for suspension is passed, existing offers/new offers of the contractor shall not be entertained
12.9	The above guidelines are not exhaustive but enunciate broad principles governing action against contractors

VOLUME-III PRICE SCHEDULE, REV-01	
PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.	
TENDER DOCUMENT NO: PSER:SCT:KLN- C1960:19.	
PREAMBLE	
01	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned any where in this document.
02	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for tender purposes and giving some idea of the work involved. The work is to be executed as per drawings & documents, which shall be furnished during execution.
03	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
04	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, taxes (except service tax), transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
05	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus thirty percent ($\pm 30\%$) of the awarded price as per LOI.
06	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.
07	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill.This condition shall not be applicable where the tender is finalised through Reverse Auction.
08	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
09	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing , clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.

VOLUME-III PRICE SCHEDULE, REV-01	
PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.	
TENDER DOCUMENT NO: PSER:SCT:KLN- C1960:19.	
PREAMBLE	
11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
12	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
13	No splitting of the job is envisaged. Decision of BHEL in this regard shall be final and binding to the bidders.
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
15	Bidders to note that for Civil &/Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No.(i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1."
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR/BPWD schedule as prescribed in the tender/BOQ cum Rate Schedule.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor.
20	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
21	Bidder's Total price shall be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

VOLUME-III PRICE SCHEDULE, REV-01			
PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.			
TENDER DOCUMENT NO: PSER:SCT:KLN- C1960:19.			
SCH-1 : TOTAL PRICE			
SL NO	DESCRIPTION	PRICE SCHEDULE REF	TOTAL QUOTED PRICE (IN USD)
1.0	TOTAL PRICE FOR PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH AS PER ENTIRE TENDER DOCUMENTS.	SCH 2 - BREAK UP OF TOTAL PRICE	IN FIGURES:- IN WORDS:-
2	NON-SCHEDULE ITEM Quote % above or % below or at par for items not covered as above of this schedule. The rate shall be derived from Schedule of Rates 2014, PWD, Govt. of Bangladesh		
1a)	Rate of complete item	_____ % above/ _____ % below/ at par of BPWD Rate Schedule 2014	
1b)	Rate of supply of material at site only	_____ % above/ _____ % below/ at par of BPWD Rate Schedule 2014	
1c)	Rate for execution complete excluding supply of materials.	_____ % above/ _____ % below/ at par of BPWD Rate Schedule 2014	
NOTE			
1.0	Bidder shall quote total price for total price of SCH-1- Part only at sl no 1 above. All other amounts/ rates of each item of works in respective schedules/ parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place/ schedule of Volume-III will not be recknoed & will stand null & void.		
2.0	Bidder to note that total price at sl no 1.0 above shall be considered for evaluation & awarding. As such grand total price should be complete in all respect for the full scope defined and considering all terms and conditions.		
3.0	Bidder to note that SCH-2 is Break-up of Total Price.		
3.1	Bidder to note that SCH-3 covers SERVICE of respective items, unless specified otherwise in the description of items.		
3.2	Bidder to note that SCH-4 is Break-up of SUPPLY unless specified otherwise in the description of items.		
4.0	Bidder's quoted total priceat Sl. no 1 above respectively shall be apportioned into amount of various items of works based on allocated percentages against respective item, in respective schedules/ parts. As such, bidder shall not indicate/ quote any amount/ rate in these schedules/ parts and any amount/ rate quoted against any item shall not be taken into cognizance/ account and offer may be liable for rejection.		
5.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items after roundeding off .		
6.0	Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per Sl No.7below.		
7.0	Unit rates of each item of works of respective schedules/ parts will be derived by dividing derived amount by corresponding quantities. In deriving the unit rates of each item in this manner, figures only upto 2 decimal places will be taken into account. Any adjustment, if required, due to such methodology, will be effected in final bill.		
8.0	Successful bidder shall draw a schedule of quantities of various items of work of SCH-4 and obtain BHEL's approval/ clearance in writing before procurement, supply, etc.		
9.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.		
10.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.		
11	The quantity of items may vary during execution mainly due to actual requirement etc. The unit rates work out from the overall amount quoted & accepted by BHEL shall be considered and no separate unit rates shall be allowed. Unit rates shall be valid throughout the contract period.		
12	For payment of non schedule items, the rate shall be derived from Schedule of Rates 2014, PWD, Govt. of Bangladesh.		

**VOLUME-III
PRICE SCHEDULE, REV-01**

**PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT,
BANGLADESH.**

TENDER DOCUMENT NO: PSER:SCT:KLN- C1960:19.

SCH-2 : BREAK UP OF TOTAL PRICE SCHEDULE

SL NO	DESCRIPTION	<u>PRICE SCHEDULE REF</u>	ALLOTTED PERCENTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 6 decimal points) W.R.T THE TOTAL OF QUOTED PRICE IN SCH-1
1.0	SERVICE	SCH 3 -SERVICE	48.5580890%
2.0	SUPPLY	SCH 4-SUPPLY	51.4419110%
	TOTAL ALLOTTED PERCENTAGE		100.0000000%

**VOLUME-III
PRICE SCHEDULE, REV-01**

PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.

TENDER DOCUMENT NO: PSER:SCT-KLN- C1960:19.

SCH-3 : SERVICE

ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	ALLOTTED PERCENTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 6 decimal points) W.R.T THE TOTAL OF QUOTED PRICE IN SCH-1
	1500 ROOFING / SIDE CLADDING			
	Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per relevant laws of Bangladesh, relavant BS Standards or Equivalent International standards approved by BIFPCL/BHEL, specification, drawings and as directed by engineer - in - charge.			
1501	Fixing permanently color coated galvanised MS troughed metal sheet decking plate minimum 0.7mm bare metal thickness with minimum trough depth of 44 mm having minimum yield strength of 250 MPa including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans.Fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking.			
a	Span Upto 1800mm	SQM	13786.000	0.7243230%
1502	Fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant BS code or equivalent international code and specification.	QUINTAL	600.000	0.3680270%
1503	Fixing of External sheet of Permanent colour coated metal cladding for wall/ roof with troughed high strength tensile steel sheets of minimum 0.75 mm bare metal thickness [designed for applicable loads (dead, live, wind etc.) for a span of 1.5m] having minimum yield strength 350 MPa and hot dipped galvanized with a minimum zinc coating weight of 275 gsm total both sides including pre-treatment by "chemical conversion" of the zinc coating to a non-metallic surface with corrosion inhibiting and adhesion additives, nominal 8 micron thick anti-corrosive pigmented epoxy primer on both sides, nominal 70 micron thick TF epoxy barrier coat with special flexibilizer compounds applied on both sides and baked to a hard corrosion resistant finish, nominal 40 micron thick urethane exterior coating on outer face, fixing to supports / rails by concealed/non concealed fixing system (as approved by BIFPCL/BHEL), corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The sheet shall have minimum 500 mm cover width, minimum 42mm height crests at maximum 250mm c/c with special male/female side laps and anti-siphoning features to prevent leakage.	SQM	123847.000	1.8860820%
1505	Fixing of Internal sheet of Permanent colour coated metal cladding for wall/roof with troughed high strength tensile steel sheets of minimum 0.75 mm bare metal thickness [designed for applicable loads (dead, live, wind etc.) for a span of 1.5m] having minimum yield strength 350 MPa and hot dipped galvanized with a minimum zinc coating weight of 275 gsm total both sides including pre-treatment by "chemical conversion" of the zinc coating to a non-metallic surface with corrosion inhibiting and adhesion additives, nominal 8 micron thick anti-corrosive pigmented epoxy primer on both sides, nominal 70 micron thick TF epoxy barrier coat with special flexibilizer compounds applied on both sides and baked to a hard corrosion resistant finish, nominal 20 micron thick stoving polyester decorative finish on exposed face, fixing to supports / rails by concealed/non concealed fixing system (as approved by BIFPCL/BHEL), Z spacers, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The sheet shall be fixed directly to side runners and Z spacers as per relevant BS code or equivalent international code. The sheet shall be fixed at the rate not more than 1500 mm center to center to hold the insulation and external sheeting. The sheet shall have minimum 980 mm cover width, minimum 28mm height crests at maximum 195mm c/c with special male/female side laps and anti-siphoning features to prevent leakage.	SQM	59458.000	0.9960430%
1506	Providing and fixing non combustible insulation of resin bonded mineral wool of minimum 60 mm nominal thickness having maximum heat transmission coefficient of 0.75 W/(sqm K) and conforming to relevant BS or equivalent international code having a minimum density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including application of glue and tying with lacing wire, for glass/rock wool as per manufacturer's recommendations.	SQM	59458.000	3.0696230%
	2300 STRUCTURAL STEEL			
	Structural steel works including all labour, material (unless otherwise specified in BOQ/specification), equipments, transportation, handling etc. at any level as per relevant laws of Bangladesh, relavant BS Standards or Equivalent International standards approved by BIFPCL/BHEL, specification, drawings and as directed by engineer - in - charge.			
2301	Supply, fabrication, erection and alignment of structural steel with mild steel conforming to BS EN 10025-2, pipes/chequered plate, mild steel rounds, monorails, stays, safety chains, ladders, MS grating etc. in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 1 coat of redoxide zinc-chromate primer (one coat at shop), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating, post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, surface preparation by means of manual or mechanical power tools, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete as per specification, relevant BS code or equivalent international code. Including appointment of a seperate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL. (STRUCTURAL STEEL SHALL BE SUPPLIED BY BHEL AS FREE OF COST AS PER TCC)			

**VOLUME-III
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PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.

TENDER DOCUMENT NO: PSER:SCT-KLN- C1960:19.

SCH-3 : SERVICE

ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	ALLOTTED PERCENTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 6 decimal points) W.R.T THE TOTAL OF QUOTED PRICE IN SCH-1
a	For Built up sections composed of Structural plates only (Grade S355) including stiffeners e.g. plated columns, girders, etc. (other than coal bunker)	MT	222.000	0.5164610%
b	For built up section composed of "rolled sections (Grade S275)" or "rolled sections (Grade S275) and plates (Grade S275)" including stiffeners (other than coal bunker	MT	222.000	0.5422910%
d	For all other items (Grade S275) not covered above e.g. rolled sections, pipes, chequered plate, seal plates etc	MT	40.000	0.0930560%
2301A	Erection and alignment of structural steel with mild steel conforming to BS EN 10025-2 or equivalent, pipes/chequered plate, mild steel rounds, monorails, stays, safety chains, ladders, MS grating etc. in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including collection of steel from stores, minor rectification in fabricated members, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating, post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, surface preparation by means of manual or mechanical power tools, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete as per specification, relevant BS code or equivalent international code.			
a	For Built up sections composed of Structural plates only (Grade S355) including stiffeners e.g. plated columns, girders, etc. (other than coal bunker)	MT	7995	7.4401570%
b	For built up section composed of "rolled sections (Grade S275)" or "rolled sections (Grade S275) and plates (Grade S275)" including stiffeners (other than coal bunker	MT	10748	10.5013350%
c.1	For Ash Silo / Bunker (excluding liner) i.e. bunker wall, stiffeners, ring beam etc	MT	642	0.8214720%
d	For all other items (Grade S275) not covered above e.g. rolled sections, pipes, chequered plate, seal plates etc	MT	1314	1.2228100%
2302	Extra over ST NO. 2301 for preparing, blast cleaning of steel structures to near white metal surface(Sa 2 1/2) and applying Zinc-epoxy primer in 1 coat of minimum 80 micron (DFT), instead of primer coat of red oxide zinc-chromate, including touch-up painting etc all complete as per specification	MT	444.000	0.1773830%
2305	Providing and applying one coats of epoxy high solid finish paint with minimum 80 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 160 microns including protection, cleaning, rectification of damaged primer, scaffolding etc. all complete as per specification.	MT	12158.000	3.0458120%
2305A	Providing and applying two coats of epoxy high solid intermediate paint with minimum 80 micron total dry film thickness (DFT) of each coat (total 160 micron DFT of both the coats) and 1 coat of 2-comp polyurethane finish paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 290 microns including protection, cleaning, rectification of damaged primer, scaffolding etc. all complete as per specification.	MT	6799.000	2.3849370%
2306	Laying and clamping of crane rails over the crane girder at all elevations as per relevant BS code or equivalent international code including all fixtures, clamps, testings etc. all complete as per drawing and specification.	MT	4	0.0165080%
2306A	laying in position, fixing and clamping of stacker and portal reclaimers machines -crane rails over the concrete as per relevant BS code or equivalent international code including all fixtures, clamps, testings etc. all complete as per drawing and specification. (Supply of Rails and Rail fixers are in BHEL-ISG scope). cost including loading, transportation, unloading etc. all complete from BHEL store to plant site	MT	600.000	2.4761650%
2307	Erection and alignment of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to relevant BS code or equivalent international code in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	224.000	0.5952420%
2307A	Supplying, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 900 g/sqm) conforming to relevant BS code or equivalent international code in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	56	0.7336390%
2308	Erection and alignment of factory made galvanised welded grating units with mild steel conforming to relevant BS code or equivalent international code in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 1 coat of redoxide zinc-chromate primer (one coat at shop), fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	60.000	0.1837150%
2309	Extra over above ST NO. 2301 for finishing the steel with hot dipped galvanisation @ 900 gm/sqm over blast cleaned steel surfaces instead of painting with one coat of red oxide zinc-chromate primer all complete	MT	200.000	0.3124310%
2309A	Providing and applying one coat of Epoxy high solid finish paint over galvanized surfaces (galvanization to be paid separately) with minimum 125 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade all complete as per specification.	MT	560.000	0.1683200%

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PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.

TENDER DOCUMENT NO: PSER:SCT-KLN- C1960:19.

SCH-3 : SERVICE

ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	ALLOTTED PERCENTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 6 decimal points) W.R.T THE TOTAL OF QUOTED PRICE IN SCH-1
2309B	Providing and applying one coat of Epoxy high solid intermediate paint over galvanized surfaces (galvanization to be paid separately) with minimum 125 micron total dry film thickness (DFT) and 1 coat of 2-Comp. polyurethane finish paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade all complete as per specification.	MT	100.000	0.0350780%
2309C	Extra over above ST NO. 2301 for finishing the grating units/bolts/inserts with Cold galvanisation @ 610 gm/sqm over blast cleaned steel surfaces instead of painting with two coats of primer all complete	MT	40.000	0.0577710%
2310	Fixing in position of permanent mild steel bolts (class 4.6 as per relevant BS code or equivalent international code) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.	Quintal	28.000	0.0152420%
2311	Fixing in position of high strength structural bolts (of property class 8.8, 10.9 as per relevant BS code or equivalent international code) and high strength structural hardened and tempered nuts conforming to relevant BS code or equivalent international code with hardened and tempered washers etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	Quintal	400.000	0.4478580%
2311A	Fixing in position of BHEL Supplied high strength structural bolts (of property class 8.8, 10.9 as per relevant BS code or equivalent international code) and high strength structural hardened and tempered nuts conforming to relevant BS code or equivalent international code with hardened and tempered washers etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	Quintal	3400	3.8067950%
2312	Dismantling of steel structure , lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions (weight of such adjacent members and temporarily dismantled members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete	MT	160.000	0.0949000%
2313	Addition to, alterations in and/or modification of " Erection Marks " including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:			
a	In erected position	MT	160.000	0.2257730%
b	In fabrication yard	MT	160.000	0.1778110%
2314	Re-erection of dismantled fabricated structural steel members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required position, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, re-welding, supporting and restoring to the correct position of all temporarily dismantled members, re-alignment of adjacent connected members(weight of such temporarily dismantled members and adjacent members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	160.000	0.1404410%
2317	Fixing in position PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of ±175 mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads.			
a	20 Tons	EACH	8	0.0036120%
b	25 Tons	EACH	8	0.0040870%
c	40 Tons	EACH	8	0.0044440%
d	50 Tons	EACH	8	0.0048000%
e	60 Tons	EACH	176.000	0.1160490%
f	100 Tons	EACH	142.000	0.1029940%
2320	Supply, fabrication and fixing of GI pipe hand railing (900 mm high) of 32 mm/40 mm dia (Medium Grade) including transportation, loading/unloading, painting etc. all complete.	MT	309	4.7305370%
2321	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	420	0.2164910%
2322	Conducting ultasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	420	0.0281860%
2323	Conducting ultasonic test on steel plates as per ASTM-A435 or equivalent wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	SQM	560	0.0177390%
2324	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	480	0.0236110%
2325	Conducting dye penetration test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges etc. all complete (over and above the work already specified in the specifications.)	RM	640	0.0280380%
TOTAL ALLOTTED PERCENTAGE				48.5580890%

VOLUME-III PRICE SCHEDULE, REV-01				
PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.				
TENDER DOCUMENT NO: PSER:SCT:KLN- C1960:19.				
SCH-4: SUPPLY				
ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	ALLOTTED PERCENTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 6 decimal points) W.R.T THE TOTAL OF QUOTED PRICE IN SCH-1
S1500 ROOFING / SIDE CLADDING				
	Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per relevant laws of Bangladesh, relevant BS Standards or Equivalent International standards approved by BIFPCL/BHEL, specification, drawings and as directed by engineer - in - charge.			
1501	Supply permanently color coated galvanised MS troughed metal sheet decking plate minimum 0.7mm bare metal thickness with minimum trough depth of 44 mm having minimum yield strength of 250 MPa including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans.Fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking.			
a	Span Upto 1800mm	SQM	13786.000	1.6879880%
S1502	Providing of shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant BS code or equivalent international code and specification.	QUINTAL	600.000	0.8587400%
S1503	Designing, providing of External sheet of Permanent colour coated metal cladding for wall/ roof with troughed high strength tensile steel sheets of minimum 0.75 mm bare metal thickness [designed for applicable loads (dead, live, wind etc.) for a span of 1.5m] having minimum yield strength 350 MPa and hot dipped galvanized with a minimum zinc coating weight of 275 gsm total both sides including pre-treatment by "chemical conversion" of the zinc coating to a non-metallic surface with corrosion inhibiting and adhesion additives, nominal 8 micron thick anti-corrosive pigmented epoxy primer on both sides, nominal 70 micron thick TF epoxy barrier coat with special flexibilizer compounds applied on both sides and baked to a hard corrosion resistant finish, nominal 40 micron thick urethane exterior coating on outer face, fixing to supports / rails by concealed/non concealed fixing system (as approved by BIFPCL/BHEL), corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The sheet shall have minimum 500 mm cover width, minimum 42mm height crests at maximum 250mm c/c with special male/female side laps and anti-siphoning features to prevent leakage.	SQM	123847.000	25.5501220%
S1505	Designing, providing of Internal sheet of Permanent colour coated metal cladding for wall/roof with troughed high strength tensile steel sheets of minimum 0.75 mm bare metal thickness [designed for applicable loads (dead, live, wind etc.) for a span of 1.5m] having minimum yield strength 350 MPa and hot dipped galvanized with a minimum zinc coating weight of 275 gsm total both sides including pre-treatment by "chemical conversion" of the zinc coating to a non-metallic surface with corrosion inhibiting and adhesion additives, nominal 8 micron thick anti-corrosive pigmented epoxy primer on both sides, nominal 70 micron thick TF epoxy barrier coat with special flexibilizer compounds applied on both sides and baked to a hard corrosion resistant finish, nominal 20 micron thick stoving polyester decorative finish on exposed face, fixing to supports / rails by concealed/non concealed fixing system (as approved by BIFPCL/BHEL), Z spacers, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The sheet shall be fixed directly to side runners and Z spacers as per relevant BS code or equivalent international code. The sheet shall be fixed at the rate not more than 1500 mm center to center to hold the insulation and external sheeting. The sheet shall have minimum 980 mm cover width, minimum 28mm height crests at maximum 195mm c/c with special male/female side laps and anti-siphoning features to prevent leakage.	SQM	59458.000	11.6597380%
S2300 STRUCTURAL STEEL				
	Structural steel works including all labour, material (unless otherwise specified in BOQ/specification), equipments, transportation, handling etc. at any level as per relevant laws of Bangladesh, relevant BS Standards or Equivalent International standards approved by BIFPCL/BHEL, specification, drawings and as directed by engineer - in - charge.			
2306	Providing of crane rails over the crane girder at all elevations as per relevant BS code or equivalent international code including all fixtures, clamps, testings etc. all complete as per drawing and specification.	MT	5	0.0481480%
S2307	Supplying & fabrication of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to relevant BS code or equivalent international code in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	224	1.3888870%
S2308	Supplying & fabrication of factory made galvanised welded grating units with mild steel conforming to relevant BS code or equivalent international code in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 1 coat of redoxide zinc-chromate primer (one coat at shop), fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	60	0.4286690%
S2309	Extra over above ST NO. S2308 for finishing the steel with hot dipped galvanisation @ 900 gm/sqm over blast cleaned steel surfaces instead of painting with one coat of red oxide zinc-chromate primer all complete.	MT	50	0.1822390%

**VOLUME-III
PRICE SCHEDULE, REV-01**

PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.

TENDER DOCUMENT NO: PSER:SCT:KLN- C1960:19.

SCH-4: SUPPLY

ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	ALLOTTED PERCENTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 6 decimal points) W.R.T THE TOTAL OF QUOTED PRICE IN SCH-1
S2309C	Extra over above ST NO. S2308 for finishing the grating units/bolts/inserts with Cold galvanisation @ 610 gm/sqm over blast cleaned steel surfaces instead of painting with two coats of primer all complete.	MT	50	0.1684980%
S2310	Providing of permanent mild steel bolts (class 4.6 as per relevant BS code or equivalent international code) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.	Quintal	28.000	0.0355620%
S2311	Providing of high strength structural bolts (of property class 8.8, 10.9 as per relevant BS code or equivalent international code) and high strength structural hardened and tempered nuts conforming to relevant BS code or equivalent international code with hardened and tempered washers etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	Quintal	3400	8.8826930%
S2317	Providing of PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of ±50 mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads.			
a	20 Tons	EACH	8	0.0084280%
b	25 Tons	EACH	8	0.0095360%
c	40 Tons	EACH	8	0.0103680%
d	50 Tons	EACH	8	0.0111990%
e	60 Tons	EACH	176	0.2707790%
f	100 Tons	EACH	142	0.2403170%
TOTAL ALLOTTED PERCENTAGE				51.4419110%

**PROJECT: PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK
FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.**

ANNEXURE-A

Sl. No	Volume / Section / Document	Page No	Clause No / Drawing no	Bid Specification	Bidders Query	Clarification by BHEL
1	NIT	1 of 38	iii	Salient Features of NIT 1. Volume - IA- GCC Supply - Not Applicable 2. Volume - IC - SCC Service - Not Applicable	The scope of the work of the project consisting the supply and services work, however the GCC, SCC is not applicable for the same. Bidder requests that please make applicable the tender document of the GCC and SCC for the Supply Portion of the work. Please confirm and consider.	Please refer TCN-01 & TCN-02
2	NIT	1 of 38	iii	Salient Features of NIT 1. Volume - IF - TCC	Bidders requests that kindly Provide the TCC document which is missing and also not available at Your Portal for download.	Please refer TCN-01 & TCN-02
3	NIT	1 of 38	v	Salient Features of NIT Due date: 04-05.2019	The Project of scope of work comprising : 1.Massive Structural Steel Fabrication and Erection work. 2.Specical Roofing and Cladding work etc; Further, to identification and finalisation of the Vendors and Subcontractors to need additional time. Citing the above , we request you to provide the bid extention of 4 week from the present date of submission.	DDS has been extended up to 13.05.2019
4	NIT	2 of 38	vii	EMD Amount	We presume that the EMD is not applicable for the Project, please confirm and Clarify.	EMD is not applicable for the tender
5	NIT	2 of 38	ix	Last date for clarification	We requests that kindly extend the last date of bid clarification and it should be valid upto 7 days prior to bid submission date.	Last date of bid clarification is hereby extended till 10.5.19
6	Volume- IC, SCC - Supply	11 of 28	15	Insurance	We presume that CAR insurances in Employer scope whereas Workmen Compensation, Tools & Plants, etc in contractor scope, please confirm and Clarify.	Correct
7	Volume- IC, SCC - Supply	23 of 28	29	Cl. No. 29.1, SCC - Supply , Completion Period =18 months Cl.No.10.1, SCC - Service, Completion Period = 21 months	Both clauses stated that different completion period of the work. Citing the above, we request that please clarify and confirm the construction period of the work whether it is 18 or 21 months for preparation of the construction schedule and planning the activities of the work.	Supply , Completion Period =18 months from the start of work as certified by the Construction Manager,BHEL Rampal Site. Service, Completion Period = 21 months months from the start of work as certified by the Construction Manager,BHEL Rampal Site.

**PROJECT: PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK
FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.**

ANNEXURE-A

Sl. No	Volume / Section / Document	Page No	Clause No / Drawing no	Bid Specification	Bidders Query	Clarification by BHEL
8	Volume- IC, SCC - Supply	24 of 28	32	Terms of the Payment: India, Bangladesh	For the said clause, we understand that full payment of the work in USD will be given in India, please confirm and clarify whether our understanding is correct.	Payment In India - INR & Bangladesh - in USD
9	Volume- IC, SCC - Supply	26 of 28	32.3	RA Bill Payment..... Within 60 days	We requests that the RA bill payment shall be released within 30 days from the date of submission of RA Bill , please considered and confirmed.	Shall be as per Tender Provision.
10	Volume- IC, SCC - Supply	27 of 28	37	LD10 % of the contract Price.	Considering the logistic and nature of the work, Bidder requests that to reduces the liquidated damages / penalty at the rate of 0.1% of the contract value, per week of delay or part thereof subject to a maximum of 5% of the contract value., please confirm and clarify.	Shall be as per Tender Provision.
11	Volume- IC, SCC - Supply	27 of 28	38	Guaerantee / Warranty.....24 months	Bidder requests that the Guarantee / Warranty of the project shall be reduced upto 12 months from the date of physical completion of the work., please confirm and Clarify.	Shall be as per Tender Provision.
12	Volume- IC, SCC - Services	4 of 39	3.1	Open Space for office & Storage	We presume that the open space for office and Storage will be provided by employer free of cost.	Open land (very limited space) for storage shall be provided by BHEL on free of cost basis as per availability.
13	Volume- IC, SCC - Services	7 of 39	5.2	Issue of Steel - BHEL free of cost....	We presume that the free issue material shall be supplied by employer within the site premises stacking yard, please clarify.	Shall be as per Tender Provision.
14	Volume- IC, SCC - Services	12 of 39	12	Terms of the Payment	We requests that the RA bill payment shall be released within 30 days from the date of submission of RA Bill , please considered and confirmed.	Shall be as per Tender Provision.
15	Volume- IC, SCC - Services	31 of 39	34	Tools & Plants	We presume that the list of tools and plants are indicative and bidder will be changed based on the methodology and planning, please confirm and clarify.	Shall be as per Tender Provision.

**PROJECT: PACKAGE 14B: STRUCTURAL WORKS FOR CHP,AHP & MISC.WORK
FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.**

ANNEXURE-A

Sl. No	Volume / Section / Document	Page No	Clause No / Drawing no	Bid Specification	Bidders Query	Clarification by BHEL
16	Volume- IC, SCC - Services	34 of 39	35	T & P to be provided by BHEL Mid range crane CC 250 T for structural work of CHP, AHP areas ... Free of cost.	Bidder requests that please provide availability schedule of the crane which is to be free issued during the period of the construction.	Shall be as per Tender Provision.
17				Unloading of materials at the storage yard or at places designated by BHEL, stacking & restacking, shifting & reshifting, using contractor's own cranes, trailers and other equipment's with the valid road permit for their operation, unloading and stacking etc shall be responsibility of the contractor under this contract. All materials/equipment shall be stacked, stored above ground level by use of concrete or wooden sleepers No materials shall remain on ground at any time. All concrete sleepers required for stacking the materials shall be arranged by contractor (successful bidder of this package). All other material handling equipment's like winches, d-shackles, slings of various sizes, max puller, pulley blocks, jacks, trucks, tailors etc required for such material handling of steel etc. shall be arranged by contractor within quoted/accepted rates.	As per BOQ, Structural steel of 20,699 MT has to be unloaded/Stacked/Re-Handling as a part of scope of work and Man Power/Cranes/Sleepers etc has to be engaged for unloading process. Which involves more expenses to contractor. In this connection, we request BHEL to allocate % of Payment for unloading & stacking activities for better cash flow at Site.	BHEL site at its discretion may split up percentage break up and effect payment to suit the site condition, cash flow requirement, according to the progress of work.
18	Clause No.5.1.3 of Volume-1D- SCC-R-O (Page No.05 of 39)			Handling of steel of total project including its unloading will be in vendor's scope for which no separate payment will be given by BHEL.	BHEL has to make necessary arrangements like providing the required place to unload the major components near to work place to avoid Re- Handling of material.	Shall be as per Tender Provision.
19	Clause No -3 PE-TS-421-600-C001 Volume II B			Execution of Civil Works like Excavation, Back filling, Disposal of surplus materials, Dewatering	For Civil & Structural works individual tenders has been floated by BHEL - PSEER. Hence Civil work is not part of Package - 14B- Please confirm.	Execution of civil works like Excavation, backfilling etc. are not in scope of Bidder of Pkg#14B.
20	Clause No -3 PE-TS-421-600-C001 Volume II B			General Technical Specification	Tender document is not relevant to the scope of work. Most of the clauses are related to Civil works. Kindly provide the Technical specification for Structural Steel Works.	It is a common Technical specification for Civil & Structural works. No separate Technical specification shall be issued for structural work.
21	ST no 2309, Price Schedule Volume -III & ST 2311a			Extra over above ST NO. 2301 for finishing the steel with hot dipped galvanization @ 900 gm / sqm over blast cleaned steel surfaces instead of painting with one coat of red oxide zinc-chromate primer all complete	Alignment of Weightage was mismatched. We request to confirm that Percentage allocated to Item no 2309 is 0.312431% and Item no 2311A is 3.806795%.	Ref. revised Price Schedule,R1 for clarification

Annexure - B (AMMENDMENTS TO VOLUME IB /IA/ ID part B)

Amendment to GCC (Vol-IB)

1. Introduction of Clause No 1.15.13 in GCC (IB) as below:

Clause No 1.15.13: Additional security deposit (SD) has to be submitted by the successful bidder with value as follows:

“If the final price of successful bidder is lesser by ‘more than 20%’ of BHEL’s estimate - ‘Additional Security Deposit’ will be required to be submitted by the successful bidder with value as follows:

Additional Security Deposit = 30 % of (A-B) limited to a maximum of 10% of the ‘Total Price/Contract Value’, where,

A = 80% of BHEL estimate

B = The final offered price of successful bidder through RA (In case of RA)

OR

Sealed paper price bid of successful bidder (in case of paper bid)

This ‘Additional Security Deposit’ shall have the same validity as that of the ‘Security Deposit’ and shall be revalidated/released in the manner as spelt out for the ‘Security Deposit’ as per relevant clause of GCC.

The BHEL’s estimated value shall be disclosed to the successful bidder (on their request) at appropriate juncture in case ‘Additional Security Deposit’ is applicable.”

2. Clause no. 1.9.1(ii) of GCC(IB) shall be read as below:

The EMD may be accepted only in the following forms:

(a) Cash deposit as permissible under the extant Income Tax Act (before tender opening)

(b) Electronic Fund Transfer credited in BHEL account (before tender opening)

(c) Banker’s cheque/ Pay order/ Demand draft, in favour of BHEL (along with offer)

(d) Fixed Deposit Receipt (FDR) issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).

In addition to above, the EMD amount in excess of Rs. 2 Lakh may also be accepted in the form of Bank Guarantee from scheduled bank. The Bank Guarantee in such cases shall be valid for atleast six months. EMD of successful tenderer will be retained as part of Security Deposit.

Clause no. 1.9.1(iv) & (v) of GCC stands deleted.

3. Clause no. 1.10.1 of GCC(IB) shall be read as below:

The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.

4. Clause no. 1.10.2 of GCC(IB) shall be read as below:

At least 50% of the required Security Deposit, including the EMD, should be furnished before start of the work. Balance of the Security Deposit can be deposited by deducting 10% of the gross amount progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.

The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of competent authorities.

5. Clause no. 1.10.3 of GCC(IB) shall be read as below:

The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:

- a) Cash (as permissible under the extant Income Tax Act)
- b) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL
- c) Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL
- d) Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)
- e) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL)

(Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith)

6. Introduction of Clause No. 1.10.8 in GCC (IB) as below:

Clause No 1.10.8: SDBG to be furnished by the vendor before start of work. No payment will be released till SDBG is submitted by the vendor.

If requested by the vendor, cash recovery equivalent to SDBG value to be made from bills submitted by the vendor.

Also recovery of interest calculated @SBI PLR +2% on amount equivalent to SDBG / PBG value to be made for the gap period (difference between date of start of work and date of submission of BG / cash recovery).

In case of delay in extension of SDBG, in case of validity expiry, SDBG shall be invoked. However if the vendor submits a new BG after invocation of the previous BG then, it shall be refunded and recovery for the gap period, i.e. the duration for which BG is not available shall be made as stated above.

7. Clause no. 1.11 of GCC (IB) shall be read as below:

Security Deposit shall be refunded/Bank Guarantee(s) released to the Contractor along with the 'Final Bill' after deducting all expenses / other amounts due to BHEL under the contract / other contracts entered into with them by BHEL upon fulfilment of contractual obligations as per terms of the contract.

8. Clause no. 2.8.3, 2.8.4 and 2.8.5 of GCC (IB) shall be read as below:

Clause no. 2.8.3: The contractor shall comply with all applicable Laws, Statutory Rules, Regulations, Notifications, etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Disputes Act, Employers Provident Act, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act, Payment of Bonus & Gratuity Act, Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, or any other

Acts, Rules, and Regulations for labour/workers or governing execution of the work as may be enacted by the Bangladesh Government during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also comply with provisions of and give all such notices to the local Governing Body, Police and other relevant Authorities as may be required by the Law of the land.

Clause no. 2.8.4: The Contractor shall obtain independent License for engaging contract labour/workers as required from the concerned Authorities issued by the Principal Employer/Customer/Statutory Bodies as per the prevailing Act or Rules/Regulations of Bangladesh

Clause no. 2.8.5: The contractor shall pay and bear all taxes, fees, license charges, Cess, duties, deposits, tolls, royalties, commission or other charges which may be leviable on account of his operations in executing the contract.

9. **Clause 2.12 of GCC (Overrun Compensation) of GCC (IB) stands revised as follows:**

2.12 OVERRUN COMPENSATION (ORC)

2.12.1 **ORC during original contract period:** No ORC shall be applicable during the original contract period.

2.12.2 **ORC during extended period for the reasons solely attributable to contractor:** No ORC shall be applicable during the extended period granted for the reasons solely attributable to contractor and work executed during this period shall be paid as per original contract rates.

2.12.3 **ORC during extended period for the reasons not attributable to contractor:** ORC shall be payable as per following procedure:

2.12.3.1 For initial period of twelve months of extended period, ORC rate applicable over executed value shall be 5%. For every subsequent period of twelve months, ORC rate shall be further increased by 5% over the previous rate. For example, ORC rates applicable for initial period of 12 months and subsequent period of 12 months are given below.

Sl. No.	Extended Period for the reasons attributable to BHEL	ORC rate applicable over executed value
1	First 12 months	5%
2	13th-24th month and so on	10.25% {[(1.05 x 1.05)-1] x 100}

This process of increasing ORC rate for each subsequent period of 12 months shall continue till applicability of ORC.

2.12.3.2 On completion of original contract period as well as on completion of each subsequent period of twelve months i.e. at the time of change in applicable ORC rate, Delay Analysis shall be carried out and percentage shortfall attributable to both BHEL & Contractor shall be calculated.

2.12.3.3 For the purpose of calculation of ORC, executed value of work in the month shall be divided in Part-1 and Part-2 in proportion of percentage shortfall attributable to BHEL and contractor respectively, based on the last delay analysis as worked out in 2.12.3.2. ORC shall be payable only on Part-1 and no ORC shall be payable on Part-2.

Value of Part-1 shall be further limited to the value of actual inputs provided by BHEL i.e. "Plan - Shortfall attributable to BHEL" for the month, as per Form-14 for calculation of ORC.

2.12.3.4 Payment of ORC amount shall be further regulated as follows:

- (i) 50% of the ORC is allocated for deployment of matching resources (with weightages) agreed as per the joint programme drawn vide 2.11.4. ORC Payment against resources shall be calculated in proportion to percentage of resources actually deployed w.r.t. planned resources, as per Form-14.
- (ii) 50% of ORC is allocated for achieving of planned progress agreed as per the joint programme drawn vide 2.11.4. ORC Payment shall be reduced in proportion to percentage shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month, as per Form-14.

2.12.3.5 The maximum amount of ORC payable for the month shall be limited to Rs. 5,00,000/-.

2.12.3.6 In case, there is no shortfall attributable to contractor for the month and also contractor has deployed the resources as agreed in Form-14 but ORC amount payable for the month worked out as per procedure mentioned in clause 2.12.3.3, 2.12.3.4 and 2.12.3.5, is less than Rs.1,00,000/-, then ORC amount payable for the month shall be Rs.1,00,000/- otherwise ORC amount payable for the month shall remain same.

2.12.3.7 In case execution is on **HOLD** (Other than Force Majeure), ORC shall be payable as per following:

- i). Contractor has not been permitted by BHEL to de-mobilize
 - a) ORC amount of Rs. 1,00,000/- per month shall be applicable during the period of HOLD provided resources as planned are deployed (not demobilised) during the period of hold.
 - b) Subsequent to lifting of HOLD, Period of HOLD shall not be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.
- ii). Contractor has been permitted to demobilize and to remobilize after lifting of HOLD
 - a) No ORC shall be payable to contractor for the period of HOLD.
 - b) Subsequent to lifting of HOLD, Period of HOLD shall not be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.

2.12.3.8 In case **Force Majeure** is invoked:

- (i) No ORC shall be applicable during the period of Force Majeure.
- (ii) Subsequent to revocation of Force Majeure, period of Force Majeure shall be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.

2.12.4 Applicability of ORC: ORC shall not be applicable for following activities.

- (i) Area cleaning, removal of temporary structures and return of scrap.
- (ii) Punch list points / pending points liquidation pending due to reasons attributable to contractor
- (iii) Submission of "As built Drawing"
- (iv) Material Reconciliation
- (v) Completion of Contract Closure formalities like HR Clearance/ No dues from various dept./ Statutory Authorities etc.

2.12.5 Total Over Run Compensation shall be limited to 10% of the cumulatively executed contract value till the month (excluding Taxes and Duties if payable extra). For this purpose, executed contract value excludes PVC, ORC and Extra/Supplementary Works.

10. **Clause 2.14 of GCC (IB) (Quantity Variation)**

a) Existing Clause 2.14.1 of GCC (IB) stands revised as follows:

"The quantities given in the contract are tentative and may change to any extent (both in plus side and minus side). The quoted rates for individual items shall remain firm irrespective of any variations in the individual quantities No compensation becomes payable in case the variation of the final executed contract value is within the limit of Minus (-) 15% of awarded contract value"

b) Existing Clause 2.14.2 ii). of GCC (IB) stands revised as follows:

"In case the finally executed contract value increases above the awarded Contract Value due to quantity variation, there will be no upward revision in the rates for the individual items and also contractor is not eligible for any compensation."

11. Clause 2.17 of GCC(IB) (Price Variation Compensation) stands revised as follows:

2.17 PRICE VARIATION COMPENSATION

2.17.1 In order to take care of variation in cost of execution of work on either side, due to variation in the index of LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS, Price Variation Formula as described herein shall be applicable (only for works executed during extended period, if any, subject to other conditions as described in this section)

2.17.2 85% component of Contract Value shall be considered for PVC calculations and remaining 15% shall be treated as fixed component. The basis for calculation of price variation in each category, their component, Base Index shall be as under:

SL NO	CATEGORY	BASE INDEX	PERCENTAGE COMPONENT('K')				
			CIVIL PACKAGES (See Note AB/C)			MECHANICAL PACKAGES	Electrical, C&I Material Management/ Handling and other labour oriented packages
			A	B	C		
i)	LABOUR (ALL CATEGORIES)	'MONTHLY ALL-INDIA AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' published by Labour Bureau, Ministry of Labour and Employment, Government of India. (Website: labourbureau.nic.in)	40	25	30	65	80
ii)	HIGH SPEED DIESEL OIL	Name of Commodity: HSD Commodity Code: 1202000005 (See Note E)	5	3	5	5	5
iii)	WELDING ROD	Name of Commodity: MANUFACTURE OF BASIC METALS Commodity Code: 1314000000 (See Note E)				15	
iv)	CEMENT	Name of Commodity: ORDINARY PORTLAND CEMENT Commodity Code: 1313050003 (See Note E)		20	30		

v)	STEEL (Structural and Reinforcement Steel)	Name of Commodity: MILD STEEL: LONG PRODUCTS Commodity Code: 1314040000 (See Note E)		25			
vi)	All OTHER MATERIALS (Other than Cement & Steel)	Name of Commodity: ALL COMMODITIES Commodity Code: 1000000000 (See Note E)	40	12	20		

Note: A) Cement & Steel: Free Issue (BHEL Scope)
 B) Cement & Steel : In Contractor Scope
 C) Cement in Contractor Scope, and Steel is Free Issue (BHEL Scope)
 D) For Composite packages (i.e. Civil+Mechanical+Electrical and/or CI or Civil+Mechanical or Mechanical+Electrical and/or CI), the COMPONENT ('K') for various categories shall be as per respective packages as above.
 E) As per the 'MONTHLY WHOLE SALE PRICE INDEX' for the respective Commodity and Type, published by Office of Economic Adviser, Ministry of Commerce and Industry, Government of India. (Website: <http://eaindustry.nic.in/home.asp>). Revisions in the index or commodity will be re adjusted accordingly.

2.17.3 #

2.17.4 Payment/recovery due to variation in index shall be determined on the basis of the following notional formula in respect of the identified COMPONENT ('K') viz LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS.

$$P = K \times R \times \frac{(X_N - X_0)}{X_0}$$

Where

P = Amount to be paid/recovered due to variation in the Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials

K = Percentage COMPONENT ('K') applicable for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials

R = Value of work done for the billing month (Excluding Taxes and Duties if payable extra)

X_N = Revised Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials for the billing month under consideration

X₀ = Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials as on the Base date

2.17.5 Base date shall be the calendar month of the schedule completion date (i.e. Actual start date+ Scheduled Contractual completion period as per Letter of Intent/award and/or work order).

2.17.6 PVC shall not be payable for the ORC amount, Supplementary/Additional Items, Extra works. However, PVC will be payable for items executed under quantity variation of BOQ items under originally awarded contract.

2.17.7 The contractor shall furnish necessary monthly bulletins in support of the requisite indices from the relevant websites along with his Bills.

2.17.8 The contractor will be required to raise the bills for price variation payments on a monthly basis along with the running bills irrespective of the fact whether any increase/decrease in the index for relevant categories has taken place or not. In case there is delay in publication of bulletins (final figure), the provisional values as published can be considered for payments and arrears shall be paid/recovered on getting the final values.

2.17.9 PVC shall be applicable only, during the extended period of contract (if any) after the scheduled completion period and for the portion of work delayed / backlog for the reasons not attributable to the Contractor.

However total quantum of Price Variation amount payable/recoverable shall be regulated as follows:

- i. For the portion of shortfall / backlog not attributable to contractor, PVC shall be worked out on the basis of indices applicable for the respective month in which work is done. Base index shall be applicable as defined in clause 2.17.5
- ii. In case of Force majeure, PVC shall be regulated as per (a) or (b) below:
 - a) Force majeure is invoked before "base date"/ "revised base date" (as explained below) OR immediately after "base date"/ "revised base date" in continuation (i.e. during the period when PVC is not applicable):
 1. Base date shall be revised: Revised base date =Previous base date+ duration of Force majeure.
No PVC will be applicable for the work done till revised base date.
 2. PVC will be applicable for the work done after "base date"/ "revised base date" as the case may be (during extended period when delay is not attributable to contractor). PVC shall be worked out on the basis of indices applicable for the respective month in which work is done with base index as on "base date"/"revised base date" as the case may be.
 - b) Force majeure is invoked after "base date"/ "revised base date" as the case may be (during extended period when delay is not attributable to contractor) -
 1. PVC shall be applicable for the work done after revocation of force majeure.
 2. PVC for the work done after revocation of force majeure shall be worked out on the basis of indices applicable for the respective month in which work is done excluding the effect of change in indices during total period of Force majeure(s) invoked after "base date"/ "revised base date" as the case may be. Base index shall be taken as on "base date"/ "revised base date" as the case may be.
- iii. The total amount of PVC shall not exceed 15% of the cumulatively executed contract value. Executed contract value for this purpose is exclusive of PVC, ORC, Supplementary/Additional Items and Extra works except extra items due to quantity variation.

12. **Clause 2.2 of GCC (IB) (Law governing the contract and court jurisdiction)** stands revised as follows:

"The contract shall be governed by the Law for the time being in force in the Republic of India. **Subject to Clause 2.21.1 or 2.21.2 of this Contract**, the Civil Court having original Civil Jurisdiction at Delhi for PSNR, at Kolkata for PSER, at Nagpur for PSWR and at Chennai for PSSR, shall alone have exclusive jurisdiction in regard to all **matters** in respect of the Contract."

13. **Existing Clause 2.21 "ARBITRATION" of GCC (IB) has been amended as follows:**

2.21 ARBITRATION & CONCILIATION

2.21.1 ARBITRATION:

- 2.21.1.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2.21.2 herein below or otherwise) in respect of any dispute or difference; arising out of the formation, breach,

termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. The arbitration shall be conducted by a sole arbitrator to be appointed by the Head of the BHEL Power Sector Region issuing the Contract within 60 days of receipt of the complete Notice. The language of arbitration shall be English.

The Arbitrator shall pass a reasoned award.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder as in force from time to time shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Kolkata (the place from where the contract is Issued). The Contract shall be governed by and be construed as per provisions of the laws of India. Subject to this provision 2.21.1.1 regarding ARBITRATION, the principal civil court exercising ordinary civil jurisdiction over the area where the seat of arbitration is located shall have exclusive jurisdiction over any DISPUTE to the exclusion of any other court.

2.21.1.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 as amended from time to time.

2.21.1.3 The cost of arbitration shall initially be borne equally by the Parties subject to the final allocation thereof as per the award/order passed by the Arbitrator.

2.21.1.4 Notwithstanding the existence of any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner unless the dispute inter-alia relates to cancellation, termination or short-closure of the Contract by BHEL.

2.21.2 CONCILIATION:

If at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee (IEC) to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.

2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure 2.3 to this GCC. The Procedure 2.3 together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this GCC.

The Contractor hereby agrees that BHEL may make any amendments or modifications to the provisions stipulated in the Procedure 2.3 to this GCC from time to time and confirms that it shall be bound by such amended or modified provisions of the Procedure 2.3 with effect from the date as intimated by BHEL to it.

2.21.3 No Interest payable to Contractor

Notwithstanding anything to the contrary contained in any other document comprising in the Contract, no interest shall be payable by BHEL to Contractor on any moneys or balances including but not limited to the Security Deposit, EMD, Retention Money, RA Bills or the Final Bill, or any amount withheld and/or appropriated by BHEL etc., which becomes or as the case may be, is adjudged to be due from BHEL to Contractor whether under the Contract or otherwise.

14. Clause no. 2.7.2 and 2.7.3 of Volume-IB-GCC shall be revised as follows:

2.7.2.1 To terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor after due notice of a period of 14 days' by BHEL in any of the following cases:

- i). Contractor's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor including unexecuted portion of work does not appear to be executable within balance available period considering its performance of execution.
- ii). Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.
- iii). Non-completion of work by the Contractor within scheduled completion period as per Contract or as extended from time to time, for the reasons attributable to the contractor.
- iv). Termination of Contract on account of any other reason (s) attributable to Contractor.
- v). Assignment, transfer, subletting of Contract without BHEL's written permission.
- vi). Non-compliance to any contractual condition or any other default attributable to Contractor.

Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

* Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount. Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line with LD clause no. 2.7.9 of GCC, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of "LD against delay in executed work in case of termination of contract" is given below.

- i). Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii) Let the value of executed work till the time of termination of contract= X
- iii) Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv) Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v) LD shall be calculated in line with LD clause (clause 2.7.9) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.

- 2.7.2.2 In case Contractor fails to deploy the resources as per requirement, BHEL can deploy own/hired/otherwise arranged resources at the risk and cost of the contractor and recover the expenses incurred from the dues payable to contractor. Recoveries shall be actual expenses incurred plus 5% overheads or as defined in TCC.

2.7.3 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor

Following sequence shall be applicable for recoveries from contractor:

- a) Dues available in the form of Bills payable to contractor, SD, BGs against the same contract.
- b) Demand notice for deposit of balance recovery amount shall be sent to contractor, if funds are insufficient to effect complete recovery against dues indicated in (a) above.
- c) If contractor fails to deposit the balance amount to be recovered within the period as prescribed in demand notice, following action shall be taken for balance recovery:
 - i) Dues payable to contractor against other contracts in the same Region shall be considered for recovery.
 - ii) If recovery cannot be made out of dues payable to the contractor as above, balance amount to be recovered, shall be informed to other Regions/Units for making recovery from the Unpaid Bills/Running Bills/SD/BGs/Final Bills of contractor.
 - iii) In-case recoveries are not possible with any of the above available options, Legal action shall be

initiated for recovery against contractor.

15. **Clause 2.24 of GCC(IB) (Performance Guarantee for Workmanship)**

Term "**Special** Conditions of Contract" appearing in 3rdline of the current clause 2.24.1, is replaced by "**Technical** Conditions of Contract"

Amendment to GCC (Vol-IA)

AMENDED/ REVISED/MODIFIED TERMS	
CLAUSE NO	DESCRIPTION
VOLUME-IA-GCC (SUPPLY)	
(I)	New clauses have been introduced under Volume-IA-GCC superseding all pertinent clauses of risk and cost
1.1	<p>Risk and cost may be invoked in any of the following cases:</p> <ul style="list-style-type: none"> i). Contractor's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor including unexecuted portion of supply does not appear to be executable within balance available period considering its performance of execution. ii). Withdrawal from or abandonment of the work by contractor before completion of the work as per contract. iii). Non completion of work/ Non-supply by the Contractor within scheduled completion/ delivery period as per Contract or as extended from time to time, for the reasons attributable to the contractor. iv). Termination of Contract on account of any other reason (s) attributable to Contractor. v). Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL. vi). Non-compliance to any contractual condition or any other default attributable to Contractor. <p><u>Risk & Cost Amount against Balance Work:</u> Risk & Cost amount against balance work shall be calculated as follows: Risk & Cost Amount= [(A-B) + (A x H/100)] Where, A= Value of Balance scope of Work/ Supply (*) as per rates of new contract B= Value of Balance scope of Work/ Supply (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any. H = Overhead Factor to be taken as 5</p> <p>In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).</p> <p>* Balance scope of work/ supply (in case of termination of contract): Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work/ Supply for calculating risk & cost amount. Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities. Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities. Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.</p>

	<p>However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.</p> <p>NOTE: Incase portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work/ supply' for calculating Risk & Cost amount.</p> <p><u>LD against delay in executed work/ supply in case of Termination of Contract:</u></p> <p>LD against delay in executed work/ supply shall be calculated in line with LD clause no. 12.2.1 of GCC, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work/ supply till termination of contract.</p> <p>Method for calculation of "LD against delay in executed supply in case of termination of contract" is given below.</p> <p>i). Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1</p> <p>ii). Let the value of executed work/supply till the time of termination of contract= X</p> <p>iii). Let the Total Executable Value of work/supply for which inputs/fronTS were made available to contractor and were planned for execution till termination of contract = Y</p> <p>iv). Delay in executed work/supply attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$</p> <p>v). LD shall be calculated in line with LD clause (clause 12.2.1) of GCC for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.</p>
1.2	<p><u>Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor</u></p> <p>Following sequence shall be applicable for recoveries from contractor:</p> <p>a) Dues available in the form of Bills payable to contractor, SD, BGs against the same contract.</p> <p>b) Demand notice for deposit of balance recovery amount shall be sent to contractor, if funds are insufficient to effect complete recovery against dues indicated in (a) above.</p> <p>c) If contractor fails to deposit the balance amount to be recovered within the period as prescribed in demand notice, following action shall be taken for balance recovery: Dues payable to contractor against other contracts in the same Region shall be considered for recovery.</p> <p>If recovery cannot be made out of dues payable to the contractor as above, balance amount to be recovered, shall be informed to other Regions/Units for making recovery from the Unpaid Bills/Running Bills/SD/BGs/Final Bills of contractor.</p> <p>In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.</p>
(II)	<p><u>Additional clauses have been introduced under Volume-IA-GCC/under security deposit (SD) & performance bond (PB) for supply part.</u></p>
2.0	<p>A <u>Security deposit (SD) & performance bond (PB) for supply part</u></p> <p>SD/ PB BG shall be submitted by successful bidder before release of 1st payment by BHEL. Payment will be released on submission of SD & PB BG or after recovery from RA bill(s) of requisite SD (minimum 50% as per tender provision) and PB amount.</p> <p>In case, successful bidder submits SD & PB BG for the equivalent amount, recovered amount will be refunded.</p>

	In case of delay in extension of SD/PB BG at a later date as per the tender requirement, SD/ PB BG will be invoked. However, if successful bidder submits a new BG after invocation of the previous BG then, it shall be refunded and recovery for the gap period, ie the duration for which BG is not available, shall be made as @SBI PLR +2% on amount equivalent to SDBG / PBG value to be made for the gap period.
(III)	Additional clauses have been introduced under Volume-IA-GCC under arbitration for supply part
	<p>2.21.1.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2.21.2 herein below or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. The arbitration shall be conducted by a sole arbitrator to be appointed by the Head of the BHEL Power Sector Region issuing the Contract within 60 days of receipt of the complete Notice. The language of arbitration shall be English.</p> <p>The Arbitrator shall pass a reasoned award.</p> <p>Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder as in force from time to time shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Kolkata (the place from where the contract is Issued). The Contract shall be governed by and be construed as per provisions of the laws of India. Subject to this provision 2.21.1.1 regarding ARBITRATION, the principal civil court exercising ordinary civil jurisdiction over the area where the seat of arbitration is located shall have exclusive jurisdiction over any DISPUTE to the exclusion of any other court.</p> <p>2.21.1.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:</p> <p>In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 as amended from time to time.</p> <p>2.21.1.3 The cost of arbitration shall initially be borne equally by the Parties subject to the final allocation thereof as per the award/order passed by the Arbitrator.</p> <p>2.21.1.4 Notwithstanding the existence of any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the</p>

performance of its obligations under this Contract with due diligence and expedition in a professional manner unless the dispute inter-alia relates to cancellation, termination or short-closure of the Contract by BHEL.

2.21.2 CONCILIATION:

If at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee (IEC) to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure 2.3 to this GCC. The Procedure 2.3 together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this GCC.

The Contractor hereby agrees that BHEL may make any amendments or modifications to the provisions stipulated in the Procedure 2.3 to this GCC from time to time and confirms that it shall be bound by such amended or modified provisions of the Procedure 2.3 with effect from the date as intimated by BHEL to it.

2.21.3 No Interest payable to Contractor

Notwithstanding anything to the contrary contained in any other document comprising in the Contract, no interest shall be payable by BHEL to Contractor on any moneys or balances including but not limited to the Security Deposit, EMD, Retention Money, RA Bills or the Final Bill, or any amount withheld and/or appropriated by BHEL etc., which becomes or as the case may be, is adjudged to be due from BHEL to Contractor whether under the Contract or otherwise.

Amendment to SCC ID PART B (FILE-3.0.1-SCT-KLN-C1960-VOLUME-ID-SCC-PART-B)

16. **Clause 4.2.1.7 of Special Condition of Contract (SCC i.e. pertaining to FILE-3.0.1-SCT-KLN-C1960-VOLUME-ID-SCC-PART-B)**

At the end of Clause 4.2.1.7 (i.e. after the line "Decision of BHEL shall be final and binding on the contractor") following para is to be added

"It is not obligatory on the part of BHEL to provide any tools and tackles or other materials other than those specifically agreed to do so by BHEL. However, depending upon the availability, BHEL /BHEL's Customer handling equipment and other plants may be made available to the contractor on payment of hire charges as fixed, subject to the conditions laid down by BHEL/Customer from time to time. Unless paid in advance, such hire charges, if applicable, shall be recovered from contractor's bill / security deposit or any other due payment in one installment."

17. **Clause 9.61 of (SCC i.e. pertaining to FILE-3.0.1-SCT-KLN-C1960-VOLUME-ID-SCC-PART-B)
(NON-COMPLIANCE)**

Under NON-COMPLIANCE, at the end of Clause 9.61 (i.e. **after the line** "Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.") following para is to be added:

"In case of any financial deduction made by Customer for lapses of safety other than what is provided above or elsewhere in the contract, the same shall be charged on back-to-back basis on the defaulting contractor without prejudice to any other right spelt anywhere in the tender / contract"

18. **Clause 9.1 & 9.2 to 9.62 of (SCC i.e. pertaining to FILE-3.0.1-SCT-KLN-C1960-VOLUME-ID-SCC-PART-B) (HSE & OHSAS Obligations)**

Cl. no. 9.0	No change
Cl. no. 9.1	HSE (Health, safety & Environment): Contractor will comply with HSE (Health, safety & Environment) requirements of BHEL as per "HSE Plan for Site Operations by Sub-contractors" (Document no. HSEP:14, Rev.00) attached with this tender.
Cl. no. 9.2 to 9.62	Deleted