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These special conditions shall be construed as part of tender document and shall be read along with general conditions of contract (GCC) and other volumes of tender. In case of any conflict or inconsistency between GCC, other volumes and these Technical conditions contract (TCC), the same shall be brought out by the bidder in writing to BHEL for clarification with stipulated date & before due date of submission of offer, failing which most stringent interpretation/ clause in favour of BHEL shall be adopted and the same shall be binding to the bidder.

1.0 PROJECT SYNOPSIS AND GENERAL INFORMATION	
1.1	1. OWNER : NPGCL 2. PROJECT TITLE : NABINAGAR THERMAL POWER PROJECT FGD PACKAGE 3. PROJECT RATING : 3x660 MW 4. LOCATION : NABINAGAR, DIST-AURANGABAD , BIHAR 5. NEAREST RLY STN : DEHRI-ON-SON (APPROX 30 KM FROM PROJ ECT LOCATION) 6. NEAREST PORT : PARADIP 7. NEAREST AIRPORT : GAYA (APPROX 100 KM FROM PROJECT LOCATION) 8. ROAD APPROACH : NH-2 (25 KM FROM PROJECT LOCATION)
2.0 SCOPE OF THE CONTRACT	
2.1	<p>The scope of works covers Repair and Renovation of existing stores, Development of Open Yard area and Misc. other Civil, Electricals repair etc. at 3 X 660 MW NPGCL Nabinagar FGD System, Bihar. Major scope of work under the purview of this contract is as follows-</p> <ul style="list-style-type: none"> • Providing & Laying PCC concrete, Water bound macadam as per standard specifications & direction of BHEL Engineer. • Removal of vegetation, Levelling, grading and compaction of open yard area by JCB/Doser & Roller/Vibrator as per requirement. • Rectification of approach roads in existing open yards. • Repairing of Existing Masonry / concrete wall, Floor, Ceiling etc. Supply and fixing of cladding sheet for necessary repair. • Repairing of rolling shutters of existing stores. • Replacement of Broken glass panes and re fixing with new glass along with supply of consumables • Supply & Installation of Heavy duty angle frame, pigeon hole industrial racks etc. • Supply and installation of Water tank along with supply of necessary piping, tap, fittings, wash basin, motor starter for existing water pump • Installation and connection of miscellaneous cables, Supply and installation of MCBs for repair/ refurbishment of store lighting system. • Supply and installation of lamps and making necessary arrangement for commissioning. • Disposal of Insulation Wool / Other garbage at specified location. • Supply and Installation of Fencing along with necessary civil works.

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	<ul style="list-style-type: none"> • Supply and laying of Hume pipes.
2.2	The works to be performed under this contract consist of providing all labour, supervision, material, scaffolding, construction equipment, tools and plants, temporary works, supplies, 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 materials, concrete, earthwork other allied works, etc. are included in the rates for various items of work.
2.3	All quality standards, tolerances & other technical requirements shall be strictly adhered to the Bidder shall fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, soil conditions, local conditions and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may not have been specifically brought out in the specifications.
2.4	The area of work shall be cleared of all vegetation, rubbish and other objectionable matter and materials removed shall be disposed of as directed by the Engineer-in-Charge. 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.
2.5	The unit rates shall include all materials, equipment, labour charges, required temporary works and everything whether of permanent or temporary in nature necessary for the completion of job in all respects.
2.6	The unit rates for various items of BOQ shall include all the stipulations mentioned in technical specifications and nothing extra over BOQ rates shall be payable.
2.7	The bidder should fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, local conditions, stringent safety norms, labour laws, requirement of statutory clearances (if required), 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 regarding entry to site, safety regulations etc. and surroundings of 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.
3.2	OPEN SPACE FOR OFFICE & STORAGE
3.2.1	Open spaces for temporary site office and storage area shall be provided inside the plant premises. Contractor has to make his own material storage yard, construction of temporary site office/bunk house in the allocated area. Electricity and water for the work has to be arranged by the contractor at his own cost. Labour colony as per requirement shall be arranged by contractor at his own cost outside the plant premises.
3.2.2	Construction of necessary stores and storage of materials for the work shall be in contractor's scope. Security of stores & work place shall be in Contractor's scope.
3.2.3	REMOVAL OF TEMPORARY FACILITIES When the Work is completed all temporary structures and facilities built by the contractor during progress of work shall be removed from the Site and the area shall be finished as per drawing / restored to its original condition.
3.3	WATER, POWER & OTHER FACILITIES
3.3.1	Contractor has to make his own arrangement for water and power supply, as shall be required to carry out the entire scope of work under this tender specification at his own

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	cost. BHEL shall not be responsible, for providing any source of water or power to the contractor. The contractor may have to carry out the jobs even during the night. Hence all necessary arrangements may be deployed to ensure 24 hour working to ensure timely completion of the job.
3.3.2	All resources including T&P, manpower, consumables etc. required for carry out the job are to be arranged by the contractor within the quoted / accepted rates.
3.3.3	Contractor has to make his own arrangement at his cost for completing the formalities with the all authorities / customer, if required, for bringing their material, plant, equipment at site for execution of the work.
3.3.4	Contractor has to make his own arrangement for accommodation, transportation & other facilities of their workmen / employees at their own cost. Contractor has to make his own arrangement for computer facilities (including stationary), to carry out their portion of work and for preparation of reports etc. at their own cost. BHEL may call for weekly/ monthly meeting for reviewing the progress of the work and the contractor will comply with it.
4.0	TOOLS & PLANTS
4.1	<p>All the tools and plants required for execution of the above work shall have to be provided by the contractor at his quoted price.</p> <p>At the time of making gate pass for T&P; may be physically verified by Customer (NTPC) authority and they may perform healthiness testing of the T&Ps for granting permission to enter inside the project premises. Testing charges of the T&Ps shall be borne by the vendor. T&P which will be rejected by Customer authority and shall be failed in healthiness testing are not to be issued gate pass for entering inside the project premises.</p> <p>Approval for entering the T&P shall not relieve the responsibility of the contractor to ensure safe handling of equipment and taking necessary precautions to avoid any accident and damage to other equipment and personnel.</p>
5.0	MATERIAL HANDLING & RECONCILATION
5.1.1	No material will be issued by BHEL.
5.1.2	Procurement & handling of steel, cement , Cladding Sheets, paints etc for the total work will be in vendor's scope for which no separate payment will be given by BHEL.
5.1.3	It will be the responsibility of the contractor to submit the account of all such materials received by them to BHEL, as per requirement.
5.1.4	The contractor shall solely responsible for the safety & quality of the material.
6.0	INSPECTION, TESTING AND INSPECTION CERTIFICATES
6.1	Before procurement of any material, contractor has to take written permission of brand / make or sample to be submitted to BHEL for their approval.
6.2	The contractor has to submit the test certificates for all brought out items, as applicable, before start of work failing which BHEL may hold their payment against utilization of the materials.
7.0	INSURANCE
7.1	BHEL shall arrange comprehensive MCE (marine cum erection) Insurance Policy for total project supply & services including balance of plant package 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 including theft, sabotage, fire, lightning and other natural calamities.

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7.2	Contractor shall report to BHEL in writing any damages to equipment/components on receipt, storing, and during withdrawal of the materials from stores, in transit to site and unloading at place of work and during erection and commissioning till trial operation completion including handing over. The above report shall be as prescribed by BHEL site management. Any consequential loss arising out of non-compliance of this stipulation will be borne by contractor.
7.3	The contractor will take necessary precautions/ due care to protect the material at Project site, while in his custody from any damage/ loss till the same is handed over to BHEL/ customer at Project site. For lodging/ processing of insurance claim the contractor will submit necessary documents. BHEL will reserve the right to recover the loss from the contractor as detailed below in case the damage/loss is due to negligence/ carelessness on the part of the contractor. In case of theft of material under contractor's custody, the same shall be reported to police by the contractor 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 contractor of his contractual obligation for the materials in his custody.
7.4	In case the damage/loss/theft of materials are attributable to negligence/failure in discharging the duties and obligations of the contractor, 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 contractor.
7.5	Other conditions of Insurance shall be as per relevant clause of GCC/SCC.
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 ground of 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 scope of job shall be successfully completed in all respect within 6 (six) months from date of start of work, as certified by Construction Manager, BHEL. Mobilization at site shall be done within 15 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.
11.0	TERMS OF PAYMENT

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11.1	For all items of work as per Volume-III, Price Schedule, interim payment shall be limited to 95% of the gross value of interim bill on item rate basis. The balance 5% shall be payable on completion of guarantee period and Confirmation of receipt of all TCS certificates from vendor, if applicable. However, this 5%, retained from each RA bill, may be released against submission of a separate bank guarantee as per Performance Bank Guarantee format, to be kept valid till final bill & guarantee period, subject to (i) Receipt of certificate that all works are completed in all respects; (ii) Reconciliation of materials / T&P / IMTE; (iii) Completion of final bill formalities and (iv) handing over to BHEL / customer and Confirmation of receipt of all TCS certificates from vendor, if applicable. All admissible recovery / adjustments etc. shall be made from the interim payable amount.
11.2	Out of above mentioned 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 vendor 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.
11.2.1	0.7 % shall be paid on compliance of housekeeping of vendor's working area and store/ office areas.
11.2.2	0.3 % shall be paid on compliance of general illumination of vendor's working area and stores, office area.
11.2.3	0.2 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL/ PSER and as specified in the tender.
11.2.4	0.3 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.
11.3	Contractor's RA bill, complete & correct in all respects, certified by BHEL engineer, shall be paid in the following manner.
11.4	BHEL site at its discretion may further split up the above percentages of break up and effect payment to suit the site condition, cash flow requirement, according to the progress of work.
11.5	Such payment as above shall be effected only on certification by BHEL against completion of each stage.
11.6	No bills including RA bills will be paid to individual consortium partners in case of consortium arrangement.
11.7	Applicable component of GST, which shall be claimed with each RA bill, shall be released to the successful bidder upon compliance of following:
11.7.1	Vendor declaring such Invoice in his GSTR-1
11.7.2	Receipt of Goods/ services and Tax Invoice by BHEL
11.7.3	Confirmation of payment of GST thereon by you on GSTN Portal
11.7.4	Above is subject to receipt of goods/ service and tax invoice thereof along with vendor declaring invoice in their return and paying GST within timeline prescribed for availing ITC by BHEL.
11.8	Vendor has to comply the BOCW norms as per details of activities noted vide relevant Annexure of this Tender.
11.9	It is to be strictly followed that monthly payment to all the workmen shall be made within 07 th day of each month.
12.0	INTEREST BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE
12.1	Not applicable.

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13.0	TAXES, DUTIES ETC
13.1	<p>All taxes excluding GST & BOCW Cess (as specified elsewhere in the tender) 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.</p> <p>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.</p>
13.2	GST along with Cess (as applicable) legally leviable & payable by successful bidder as per GST Law, shall be paid by BHEL, extra. Hence, bidder shall not include GST along with Cess (as applicable) in their quoted rates/ price.
13.3	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.
13.4	Since GST on output will be paid by BHEL separately as enumerated above, bidder's your quoted rates/ price should be after considering the Input Credit under GST law at bidder's end.
13.5	TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills (RA bills) unless exemption certificate from the appropriate authority/ authorities is furnished.
13.6	TDS under GST shall be deducted at applicable rates on gross invoice value from the running bills (RA bills).
13.6.1	You may collect TCS under section 206C (1H) of Income Tax Act, 1961 if applicable.
13.6.2	In case, you collect TCS under section 206C (1H) of Income Tax Act, 1961, following compliance is required.
13.6.2.1	TAN and PAN of vendor should appear in all invoices/claims. Copy of TAN /TCS registration is to be submitted.
13.6.2.2	Amount of TCS and Assessable value on which TCS has been calculated should be specified clearly in the invoice.
13.6.2.3	You shall be required to submit certificate of TCS in Form no. 27D within 15 days from the due date for furnishing the statement of tax collected at the source.
13.6.3	<p>In case, you do not collect TCS under section 206C(1H) of Income Tax Act, 1961, following declaration is to be submitted alongwith each invoice: -</p> <p>"I/We hereby declare that I/We are not required to collect TCS under section 206C (1H) of Income Tax Act, 1961, on this bill.</p>
13.6.4	In event of failure to comply with the provisions of the Act, or proper certificate not issued, or if tax collected but not remitted to the Government, or for any other reason and thereby causing loss to BHEL, the same shall be recoverable from the vendor with

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	applicable interest.
13.6.5	You shall comply with all statutory amendment/notifications in this respect.
13.7	<p>Bidder shall note that GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred thereunder) wherein the 'Bill To' details shall encompass following.</p> <p>BHEL GSTN: As per attached GSTN Code table. Name: Bharat Heavy Electricals Ltd. Address: Shall be intimated later.</p> <p>Any change to above shall be notified by BHEL at appropriate juncture..</p>
13.8	<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 notified by BHEL at appropriate juncture.</p>
13.9	In case of delay in submission of above mentioned documents on the date of despatch, BHEL may incur penalty/ interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from successful bidder, in case such delay is not attributable to BHEL.
13.10	In case of raising any Supplementary Tax Invoice (Debit/ Credit Note), successful bidder shall issue the same containing all the details as referred to in Section 34 read with Section 31 of GST Act & Rules referred there under.
13.11	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 despatch.
13.12	Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed/ non receipt of goods and/ or Tax Invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons, not attributable to BHEL, GST amount shall be recoverable from successful bidder along with interest levied/ leviable on BHEL, as the case may be.
13.13	Successful bidder shall upload the invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the successful bidder along with interest levied/ leviable on BHEL.
13.14	<p>Way Bill: Successful bidder to arrange for way bill/ e-waybill for any transfer of goods for the execution of the contract.</p> <p>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</p>

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	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.
13.15	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.
13.16	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.
14.0	IDLE CHARGES
14.1	Not applicable.
15.0	PRICE VARIATION COMPENSATION / ESCALATION
15.1	Not applicable.
16.0	OVER RUN CHARGES / RATE REVISION
16.1	Not applicable.
17.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
17.1	<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 materials 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>
17.2	PLANNING & MONITORING
17.2.1	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 subsystem / 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.
17.2.2	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.
17.3	DELETED
17.4	PROGRESS REPORTING
17.4.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials, consumables etc. 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.
17.4.2	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.

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17.4.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.
17.4.4	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.
17.4.5	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.
17.4.6	During construction contractor shall take an average ten colour photograph / slides (soft copy) each month (not less than two per week) of the works during progress. In case of failure in providing such photograph in each month, an amount of Rs. 1000 per month shall be deducted from contractor's RA bill.
17.4.7	Skill Test to be done for the worker before issuing Gate Passes.
17.5	<p>PHOTOGRAPHS</p> <p>During construction contractor shall take an average twenty colour digital photograph / slides (indicating date) each month (not less than four per week) of the works during progress.</p> <p>In case of failure in providing such photograph, in spite of instruction of BHEL Site engineer in each month, an amount of Rs. 10,000/- per month shall be deducted from contractor's RA bill.</p>
17.6	SITE ORGANIZATION
17.6.1	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 Site-in-charge 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 bio-data indicating various levels of experts to be posted for supervision in the fields of supervision and execution, quality, 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.
17.6.2	Apart from the qualified and competent Site-in-charge, following (minimum) manpower to be deployed at site by the contractor for their day to day supervision etc.
17.6.2.1	Qualified safety officers, for safety supervision, shall be deployed at site throughout the execution period.
17.6.2.2	Site supervising engineer and supervisors for civil works and electrical works
17.6.2.3	Deputation of above man-power shall be jointly decided at site in line with construction schedule.
17.6.2.5	Manpower for other functions like store & purchase, material management, fin, administration etc. are to be provided as per site requirement and not considered above .
17.6.2.6	In the event of non-deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct Rs. 30,000/- per month from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at

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	site as per requirement without any financial implication.	
17.6.3	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.	
17.6.4	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.	
18.0	CONSTRUCTION SCHEDULE	
18.1	Entire work shall be carried out in accordance with the broad construction schedule given below, within the stipulated completion period. 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. Major Milestones given below	
	Description	Completion period from date of start of work
18.1.1	Renovation BHEL stores (M1)	3 months
18.1.2	Leveling , compaction of yard, Roads, Drains & Culverts, Fencing etc. (M2)	5 months
18.1.3	Completion of balance Works	6 months
18.2	The contractor shall plan his work in such a manner so as to meet the overall schedule, in consultation with BHEL, Engineer.	
18.3	Contractor shall submit daily work program based on 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.	
19.0	GUARANTEE / WARRANTY	
19.1	The contractor will be responsible for the quality of workmanship, quality of materials / items and design for which the contractor is responsible.	
19.2	Guarantee period shall be 6 months from the date start of guarantee period as per relevant clause of GCC. Commencement of guarantee period shall be from the date of completion of work under the contract as certified by BHEL	
20.0	SECURITY DEPOSIT	
20.1	Security deposit shall be applicable as per relevant clause of GCC.	
21.0	CONTRACT PRICE	
21.1	Bidder shall quote their rates strictly in accordance with prescribed Price Schedule, Volume-III (latest revision). Evaluation shall be done on total quoted price.	
21.2	The quantities of various items mentioned in the price schedule, Volume-III are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The 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 the work executed under any part of the this contract including extra items, if any, but excluding any price variation, if any, remains within (+/-) 15% (plus / minus fifteen percent) of the awarded price of LOI.	
22.0	QUALITY CONTROL & QUALITY ASSURANCE	

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22.1	INSPECTION & FIELD QUALITY ASSURANCE
22.1.1	Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) & technical instructions 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.
22.1.2	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.
22.1.3	The protocols between contractor and customer / BHEL shall be made 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 and to avoid accumulation and multiplication of errors.
22.1.4	A daily log book (with proper indexing) should be maintained by every supervisor / engineer of contractor, for respective area of work, on the job for detailing and incorporating alignment/ clearance / centering / levelling readings and inspection details of various equipment, etc. This log book shall be always accessible to BHEL engineers. High pressure welding (as applicable under the scope of this contract) 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. Record of radiography (as applicable under the scope of this contract) 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. Record of heat treatments (as applicable under the scope of this contract) performed shall be maintained as prescribed by BHEL.
22.1.5	The performance of welders (as applicable under the scope of this contract) will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically 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.
22.1.6	Only welders duly authorized by BHEL / customer / consultant after welder qualification test as per ASME Sec-Ix / AWS D1.1 (as applicable) shall be engaged on the work. All the welders shall carry identity cards as per the proforma prescribed by BHEL / Customer / Consultant.
22.1.7	Any re-laying or re-termination of cables / re-erection of instruments / recalibration of instruments etc. required due to contractor's mistake and found at any stage inspection, shall be carried out by the contractor at no extra cost. Repair / rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.
22.1.8	Weekly Quality Review Meeting at site shall be organised by BHEL to discuss quality issues and next week inspection plans. Site in-charge of the contractor along with QAEs of the contractor must be present in the meeting with closure report of the issues raised by BHEL in the previous meetings.
22.2	REQUIREMENT OF ISO 9001

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22.2.1	BHEL: PSER is accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements.
22.2.2	<p>The basic philosophy of the Quality Management System under ISO 9001 is to define the organizational responsibility, work as per 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 non-conformities 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.</p> <p>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>
22.2.3	BHEL reserves the right to carry out quarterly quality audits 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 & surveillance.
22.2.4	Quality audits / 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 no way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment / service as per specification.
22.3	MMEs / MMRs
22.3.1	Contractor shall ensure deployment of reliable and calibrated MMEs (Measuring and Monitoring Equipment). 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 i.e. repeat the readings taken by that instrument, failing which BHEL may deploy MME and retake the readings at Contractor's cost.
22.3.2	Contractor shall provide all the Measuring Monitoring Equipment (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 shall give an indicative list of MMEs required for this work else where in this contract and to be made available by the contractor. The list will be reviewed by BHEL site as per the requirement of approved FQPs and the contractor shall meet any augmentation needed wherever required.
22.3.3	It is the responsibility of the contractor to prove the accuracy of the testing / measuring / calibrating equipment brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.
22.3.4	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.
22.3.5	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.
22.4	INSPECTION BY TS / FES / QA ENGINEERS OF BHEL UNITS / ENGINEERING CENTRES
22.4.1	Apart from day-to-day inspection by BHEL Engineers stationed at Site and Customer's Engineers, stage inspection of equipment under erection and commissioning at various stages may 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.
22.4.2	Any modifications suggested by BHEL FES and QA Engineers' team shall be carried out. Claims of contractor, if any, shall be dealt as per applicable clause of the contract, and provided such modifications have not arisen for reasons attributable to the contractor.
22.5	CONFORMANCE TO THE STATUTORY REQUIREMENTS (AS APPLICABLE UNDER THE SCOPE OF THE CONTRACT)
22.5.1	<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. The work related statutory inspections, though not limited to, are as under:</p> <p>1) Electrical Inspector</p> <p>2) Factory Inspector, Labour Commissioner, PF Commissioner and other authorities connected to this project work.</p> <p>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 stamping of the pressure parts / pipes 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.</p>
22.5.2	Contractor should be qualified to execute pressure parts & piping work coming under the purview of IBR or Competent Inspecting Authority, for which he should register himself with CIB of state concerned / Competent Inspector. Contractor also should be aware of the latest Boiler regulations and Electricity Act, including the amendments thereof, as applicable under the scope of this contract.
22.5.3	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 equipment and their calibration there of. It shall be contractor's responsibility to obtain approval of Statutory Authorities, wherever

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	applicable, for the conducting of any work which comes under the purview of these authorities, at his cost.						
22.6	DELETED						
22.7	PENALTIES ON VENDORS / SUB-CONTRACTORS AGAINST NON-COMPLIANCE OF QUALITY NORMS						
Sl. No.	Nature of Non-compliance	Penalty for Domestic Project	Penalty for Export Project	Remarks			
GENERAL							
22.7.1	Unavailability of QAE deployment schedule (duly approved by BHEL Site) matching with manpower requirement of approved L2 schedule	0.10%	0.10%	Against each RA bill			
22.7.2	Unavailability of required number of QAE with proper experience & NDT certification as per the requirement of the Contract	Rs. 1,000.00	\$16.00	Per person per day			
22.7.3	Not attending quality meeting of BHEL by nominated member of vendor / sub-contractor	Rs. 2,000.00	\$32.00	Per meeting			
CALIBRATION							
22.7.4	Use of MMEs without valid calibration certificate	Rs. 1,000.00	\$16.00	Per equipment per instance			
22.7.5	Use of NDT equipment, welding equipment without having valid calibration certificate / condition not as per requirement	Rs. 1,000.00	\$16.00	Per equipment per instance			
WELDING & NDT							
22.7.6	Unqualified welders carrying out welding / tack welding	Rs. 1,000.00	\$16.00	Per welder per instance. (Gatepass of the person shall be withheld)			
22.7.7	Not using portable oven for welding consumables	Rs. 500.00	\$8.00	Per welder per instance. (The consumables in the oven			

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				shall be confiscated)
22.7.8	Not using electrodes pre-baked in baking oven	Rs. 500.00	\$8.00	Per instance. (The subject consumables shall be confiscated)
22.7.9	Not using welding consumables of approved make & not using correct type of electrode as per approved EWS / Drawing / WPS	Rs. 1,000.00	\$16.00	Per instance. (The subject consumables shall be confiscated)
22.7.10	Non-removal of welding slag and spatters after welding	Rs. 500.00	\$8.00	Per joint
22.7.11	Not using NDT equipment as prescribed in the manual / FQP / guidelines / Contract	Rs. 1,000.00	\$16.00	Per equipment per instance
22.7.12	Welder doing welding without valid job card	Rs. 500.00	\$8.00	Per instance
22.7.13	Discrepancy observed in the weld joints identified by BHEL / Customer for RT vs RT film offered	Rs. 2,000.00	\$32.00	per joint

MATERIAL MANAGEMENT

22.7.14	Non-maintenance of grid pillar marking	Rs. 200.00	\$3.00	Per location week
22.7.15	Mismatch of location of material in store area w.r.t. location mentioned in stock register	Rs. 500.00	\$8.00	Per instance
22.7.16	Non-compliance of Preservation of material as per storage & preservation manuals	Rs. 1,000.00	\$16.00	Per equipment
22.7.17	Not offering received material for verification within stipulated time as per contract	Rs. 500.00	\$8.00	Per instance

PAINTING & ALLIED WORKS

22.7.18	Not using primer / paints of approved make and as per Specifications	Rs. 1,000.00	\$16.00	Per instance
22.7.19	Painting without proper surface preparation as per approved schedule / drawing / FQP	Rs. 500.00	\$8.00	Per instance

PROTOCOLS & LOG SHEETS

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22.7.20	Delay in preparation of Protocols / Logsheets as per approved FQP within 3 days of completion of checks	Rs. 200.00	\$3.00	Per protocol per day delay
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INSPECTION OF BOUGHT-OUT ITEMS / CONSUMABLES

22.7.21	Delay in offering inspection of Bought-out Items / Consumables / Aggregates (for items which need site inspection as per approved QP) within 3 days of receipt of material at site	1% of the item value of the LOT	1% of the item value of the LOT	per item per day delay after receipt of material
22.7.22	Delay in submission of required documents (viz. Invoice, Inspection Release Note, COC, MDCC, MTC as the case may be) of Bought-out Items (shop inspection items / consumables) within 3 days of receipt of material at site.	1% of the item value of the LOT	1% of the item value of the LOT	per item per day delay after receipt of material

NOTE:

Any non-conformity requiring dismantling / rework, attributable to vendor / sub-contractor, shall be penalised at a rate mentioned above or cost to BHEL, whichever is higher.

23.0	QUALITY ASSURANCE PROGRAMME
	DELETED
24.0	GENERAL REQUIREMENTS – QUALITY ASSURANCE
	DELETED
25.0	WORK & SAFETY REGULATIONS
25.1	Refer HSE Plan for subcontractors attached with this tender.
26.0	LIQUIDATED DAMAGE / PENALTY
26.1	Intermediate Milestones
26.1.1	In case delay in achieving the Specific activities as mentioned in Clause 18.1.1 above (M1), is solely attributable to the contractor, 0.5% per week of executable contact value* (net off GST component), limited to maximum 2% of executable contact value* (net off GST component), will be withheld.
26.1.2	In case delay in achieving the specific activity as mentioned in Clause 18.1.2 above (M2), is solely attributable to the contractor, 0.5% per week of executable contact value* (net off GST component), limited to maximum 3% of executable contact value* (net off GST component), will be withheld.
26.1.3	Amount already withheld, if any against slippage of clause 18.1.1, 18.1.2 above, shall be released only if there is no delay attributable to contractor in achievement of Specific Activity as mentioned in clause 18.1.3 above.
26.1.4	Amount to be withheld on account of slippage of identified intermediate activities shall be withheld out of the payable amount related to those specific activities and balance amount (if any) shall be withheld @10% of RA Bill amount from subsequent RA bills.
26.1.5	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 activities shall be adjusted against

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	LD or released as the case may be. GST (as applicable) will be charged extra on the Final LD amount.
26.1.6	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.
26.2	Apart from the LD specified above and other recoveries specified elsewhere in the tender, If the completion of work is delayed beyond the overall completion period as referred in cl. no. 10.0 above due to reasons attributable to the contractor, they shall pay to BHEL as penalty a sum @ 0.5% of contract price along with applicable GST for per week of delay or part thereof subject to a maximum of 10% of total contract price.
26.3	In case of LD recovery, the applicable GST shall also be recovered from vendor/Contractor/ suppliers.
26.4	All other terms shall be as per the provision of GCC in this regard.
Notes	*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 the Milestone.
27.0	PERFORMANCE BOND
27.1	Performance bond is not applicable.
28.0	CERTIFICATE TOWARDS COMPLETION
28.1	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 Site Construction Manager / Site In charge in this regard shall be final and binding on the contractor.
29.0	EXTENSION OF TIME FOR COMPLETION
29.1	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.
29.2	Based on review of agreed & jointly signed 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.
29.3	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.
29.4	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.
29.5	During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program
29.6	At the end of total work completion as certified by BHEL engineer, and upon analysis of the

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	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.	
30.0	PAYMENT FOR ADDITIONAL/EXTRA ITEMS FOR WORKS	
30.1	It shall be as per relevant clause of the GCC.	
31.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)	
31.1	Tentative list of T&P to be deployed by contractor for successful completion of work is detailed below. No T&P shall be provided by BHEL	
31.2	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 measuring (calibrated) instruments, lifting and handling equipment 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.	
31.3	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/ Customer & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.	
31.4	Following Major T&Ps for Renovation job as to be arranged by contractor within the indicated time	
31.4a	Major T&P items (for Enabling job)	Deployment Schedule from Start date
31.4a.1	1 Nos. Hydraulic Excavator / Poclain	As per requirement
31.4a.2	1 no. dozer	As per requirement
31.4a.3	3 Nos. dumper	As per requirement
31.4a.4	1 no. vibromax /earth compactor	As per requirement
31.4a.5	1 No. Concrete Mixer Machine	As per requirement
31.4a.6	1 No. diesel driven Concrete vibrator with adequate needle	Within 20 days
31.4a.7	1 No. total station	As per requirement
31.4a.8	1 Nos. auto level & staff	As per requirement
31.4a.9	1 Nos. DG set 50 KVA	As per requirement
31.4a.10	Concrete compressive strength testing moulds – 12 Nos.	As per requirement
31.4a.11	1 No. Water Tanker – 3000 Ltr. Capacity	Within 20 days
31.4a.12	1 no drinking water tank – 500 lit.	Within 20 days
31.4a.13	Portable fire extinguishers as below: Soda acid – 2 sets. Dry chemical powder – 2 sets CO2 – 2 sets.	Within 30 days from start of work

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	Water & sand bucket (4 buckets in one stand) – 2 sets.	
31.5	<p>T&P shown in the above mentioned list are tentative based on planned progress requirement. Actual Mobilization schedule, based on front availability, drawings, construction schedule and material availability at site is to be reviewed and mutually agreed with CM, BHEL site periodically from time to time for mobilization 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.</p> <p>Further requirement will be reviewed time to time at site and contractor will provide additional T&P / equipment 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 equipment.</p>	
31.6	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.	
31.7	In the event of non-mobilization of any T&P by the successful bidder in spite instruction of BHEL Site engineer 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
31.7.1	Hydraulic Excavator / Poclain	Rs. 15000/- per week or part thereof
31.7.2	Dozer	Rs. 20000/- per week or part thereof
31.7.3	Dumper	Rs. 10000/- per week or part thereof
31.7.4	Vibromax / Earth compactor	Rs. 15000/- per week or part thereof
31.7.5	Concrete Mixer Machine	Rs. 5000/- per week or part thereof
31.7.6	Total station	Rs. 500/- per week or part thereof
31.7.7	Auto level & staff	Rs. 300/- per week or part thereof
31.7.8	DG set 50KVA	Rs. 5000/- per week or part thereof
31.7.9	Concrete compressive strength testing moulds	Rs. 100/- per week or part thereof
31.7.10	Water Tanker – 3000 Ltr. Capacity	Rs. 5000/- per week or part thereof
31.7.11.1	Drinking water tank – 1000 lit.	Rs. 500/- per week or part thereof
31.7.11.2	Portable fire extinguishers as below: Soda acid Dry chemical powder CO2 Water & sand bucket (4 buckets in one stand)	Rs. 1000/- per week or part thereof

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31.7.12	Any other instrument	As per discretion of the engineer
32.0	OTHER TERMS	
32.1	All other term & conditions of this specification shall be governed by the pertinent provisions of GCC and other volumes of this tender, as applicable.	

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Annexure-F

TENTATIVE LIST OF CONSUMABLES TO BE PROVIDED BY THE CONTRACTOR

1. Insulation Tapes
2. White spirit
3. Kerosene/Petrol/Diesel.
4. Detergent/Soap/cleaning chemicals
5. Welding electrode.
6. Gas
7. Paint
8. Other consumables as required for completion of job

NOTE

The above lists are not exhaustive and all required the consumables required to complete the work shall have to be arranged by the successful contractor at his cost