



भारत हेवी इलेक्ट्रिकल्स लिमिटेड
(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED
(A Govt. of India Undertaking)

TCN – 01

Ref: PSER:SCT:BAR-C2110:TCN-01

Date: 27-07-2021

Sub	Tender Change Notice (TCN) – 01.	
Job	APPLICATION OF BOROSILICATE GLASS BLOCK LINING SYSTEM INSIDE THE MS FLUE CAN OF EXISTING CHIMNEY & ALREADY ERECTED TRANSITION DUCTS OF FGD UNIT-1, 2 & 3 AT 3x660 MW BARH STPP, STAGE-I.	
Ref	1.0	Tender no PSER:SCT:BAR-C2110:21
	2.0	BHEL's NIT, vide reference no PSER:SCT:BAR-C2110:WFH-12, Date: 15-07-2021
	3.0	All other pertinent issues till date.

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

1. Pre-Bid Clarification attached vide Annexure-A to TCN-01.
2. Revised Volume-IF-TCC-CML-Rev-01 is attached herewith, superseding Volume-IF-TCC-CML-Rev-00 issued earlier along with NIT. Bidders are requested to go through entire volume before submitting their offer.
3. Revised Form F-15 (Rev-03) along with Annexure-AA to Form F-15 attached.
4. Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
5. All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

SR. ENGR (SCT)

Encl : As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091
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ANNEXURE-A TO TCN-01				
JOB: APPLICATION OF BOROSILICATE GLASS BLOCK LINING SYSTEM INSIDE THE MS FLUE CAN OF EXISTING CHIMNEY & ALREADY ERECTED TRANSITION DUCTS OF FGD UNIT-1, 2 & 3 AT 3x660 MW BARH STPP, STAGE-I.				
TENDER NO - PSER:SCT:BAR-C2110:21				
CLARIFICATION OF BIDDER'S PRE-BID QUERIES				
Sl. No.	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's Clarification
1	Clause No. 1.10 GCC	5 % of the contract Value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of security deposit.....	It should be Maximum 3% as per announcement of finance minister on 12/11/2020 Security BG will have initial validity of 1 year and same will be extended before expiry	Should be as per tender.
2	Clause No. 2.8.3 GCC	The contractor shall comply with all applicable State and Central 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, 1970.....	Rates quoted in the tender are on the basis of State Minimum wages where the work is being executed.	Tender clause is self-explanatory.
3	Clause No. 18 NOTICE INVITING TENDER	BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders.....	Reverse Auction (RA) should not be applicable	Should be as per tender.
4	Clause No. 2.21 GCC	2.21 ARBITRATION & CONCILIATION 2.21.1 ARBITRATION: 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.....	As per the latest honorable Supreme Court Judgement QUOTE: "A Party interested in the outcome of the award loses the right to appoint the Arbitrator"	Should be as per tender.
5	Clause No. 7.2 TCC	Land for labour colony shall be arranged by successful bidder at their own.....	We request BHEL to provide Land for labour colony on free of cost basis	Arrangement of Land for labour colony is in successful bidder's scope.
6	Clause No. 8.1 TCC	Contractor has to make his own arrangement for water for drinking and required to carry out the entire scope of work	Uninterrupted supply of Water for construction at two point to be provided within 50m of Chimney Site, 50m of fabrication yard & Labour Colony (Free of cost). Connections should be provided with handing over of work front to BIL.	As per tender.
7	Clause No. 9.1 TCC	BHEL Shall Provide Construction Power free of charges at 415V level at two points for Batching Plant and Power House area (within 500 M from his work places as mentioned) and bidders has to make his own distribution arrangement to draw electricity.	Uninterrupted supply of Electricity (Free of cost) at three point to be provided within 50 m of Chimney Site, 50m of fabrication yard & Labour Colony. Connections should be provided with handing over of work front to BIL. Please remove Batching Plant; as its not required as per scope	As per tender.
8	Clause No. 13.7 TCC	PENALTIES ON VENDORS / SUB-CONTRACTORS AGAINST NON-COMPLIANCE OF QUALITY NORMS.....	These penalties are on higher sider, we request BHEL to delete this clause. Particularly, penalty mentioned in clause no. 13.7.21 & 13.7.22. penalty equivalent to 1% value of the item per day delay is not acceptable to BIL.	As per tender.
9	Clause No. 15.3.2 TCC	Following Tentative Manpower with power plant construction background to be deployed at site by the successful vendor for their day-to-day supervision etc. as directed.	The deployment of personnel will be as per agreed schedule and/or as per site requirement.	Kindly refer revised TCC, Rev-01 attached with this TCN-01.
10	Clause No. 25 TCC	Following Major T&Ps to be arranged by contractor within the time as indicated:	These T&P will be provided as per site requirements.	As per tender.
11	Clause No. 27.0 TCC	Completion time- 10 Months	We request you to revise completion time to 14 Months	As per tender.
12	Clause No. 28 TCC	CERTIFICATE TOWARDS COMPLETION: The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by CM, BHEL / NTPC. The decision of BHEL in this regard shall be final and binding on the contractor.	The protocol for inviting BHEL / NTPC officials is not defined in the tender. It may be considered to allow contractor / BIL to issue a RFI (Request for Inspection), as soon as any stage of Milestone is completed and the Client shall promptly inspect the completed works of that stage within 07 days of the receipt of such RFI NOTICE of completion of a milestone and thereafter the Client shall issue a list of deficiencies, if any, in the contracted specifications of the executed work along with the time period as may be mutually agreed by both the parties, to remedify such deficiencies.	As per tender.
13		EXTENSION OF TIME FOR COMPLETION: If the completion of work as detailed in the scope of work gets delayed beyond the contract / completion period, the contractor shall request for an extension of the contract and BHEL at its discretion may extend the contract.....	EOT/Time extension shall be decided by BHEL within 1 Months of receipt of EOT application submitted by BIL.	As per tender.
14	Clause No. 39 TCC	MOBILIZATION ADVANCE: Not applicable	To avoid the negative cash flow, please provide Interest Free Advance as follows:- 1. 5% advance (Interest Free) excluding GST with LOI/LOA & against submission of Advance Bank Guarantee for equivalent amount 2. 5% advance (Interest Free) excluding GST against mobilisation of following: 2.1. Setting of site office, store 2.2. Labour camp for initial work. 2.3. Electrical installations and water pipeline & water storage. 2.4. Mobilisation of workers and staff for initial work. 2.5. Completion of formalities for Labour License.	As per tender.
15	Clause No. 26.2 TCC	Intermediate Milestones i.e., M1&M2 (Applicable for each unit separately)	Please delete this clause as this will create negative cash flow.	As per tender.
16	Clause No. 26.2 TCC	CONTRACT PRICE: 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 the work executed under any part of this contract including extra items, if any, but excluding any price variation, remains within +/- 15 % (plus/minus fifteen percent) of the awarded price	The quoted rates of each item will remain firm throughout the period of execution for reasons whatsoever, as long as variation in the total value of the work executed under any part of this contract including extra items, if any, but excluding any price variation, remains within +/- 10 % (plus/minus ten percent) of the awarded price. The quantity variation of individual items shall remain within +/- 15 %	As per tender.
17	Clause No. 33.2.2 TCC	Retention Amount shall be 5% of executed contract value and shall be recovered at the rate of 5% from each Running Bill	As per announcement of finance minister on 12/11/2020. The maximum amount of performance security should be 3% including retention & As such no retention should be deducted for performance of contract	As per tender.
18	Clause No. 33.2.2 TCC	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.	Please delete this clause as this will create negative cash flow.	As per tender.

ANNEXURE-A TO TCN-01				
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Sl. No.	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's Clarification
19	Clause No. 33.2.4 TCC	Contractor's RA bill, complete & correct in all respects, certified by BHEL engineer, shall be paid after 45 days of receipt of bill with all supporting documents.	Contractor's RA bill, complete & correct in all respects, certified by BHEL engineer, shall be paid within 30 days of receipt of bill with all supporting documents. 70% Payment as ad hoc should be released within 7 days & balance 30% payment should be released within 30 days	As per tender.
20	Clause No. 34 TCC	PRICE VARIATION CLAUSE(PVC): Not applicable for this tender.	Should be applicable as per standard norms	As per tender.
21	Clause No. 35 TCC	OVER RUN CHARGES(ORC): Not applicable for this tender.	Should be applicable	As per tender.
22	Clause No. 38 TCC	Guarantee period shall be 12 months from the date of start of guarantee period as per relevant clause of GCC	Please change Guarantee to Warranty. Only Warranty is applicable for Chimney work.	As per tender.
23	Clause No. 30.2 TCC	If the contractor fails to maintain the required progress of work which results in delay in the completion of the work 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 10% of the contract value.	Liquidated Damages: 1. An amount equal to 0.5% of contract value per week with maximum limit of 5% of contract value will be imposed as liquidated damages if delay is attributable to BIL. 2. The maximum amount of liability of BIL for LD & other penalties will be maximum of 5% of contract value. 3. Grace Period of 2 months will be allowed for imposition of LD. 4. In this clause there is no provision of FLOAT available to the contractor and on the contrary even if the contractor finishes the activities in time but because of the condition of finishing to be achieved before the agreed schedule will attract compensation of delay clause.	As per tender.
24	Clause No. 9 VOLUME-III PRICE SCHEDULE, REV-00	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures and levelling 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.	Cleaning & demolition of old structure will be excluded from bidder scope of work.	As per tender.
25	Form No.: F-15 (Rev 02)	Contractor All risk (CAR) Policy	CAR Policy will be taken by BHEL	Kindly refer clause 4.0 of TCC & 2.18 of GCC which are self-explanatory in this regard.
26	Bank Guarantee	Formats of Bank Guarantee's	Format will be duly vetted by our bankers & thereafter BG, SDBG & PBG will be submitted. We will submit the Bank Guarantees from Barclay's Bank/ Societe Generale	BGs should be furnished as per the formats provided in the tender. BGs can be submitted from Barclay's Bank/ Societe Generale.
27	Bank Guarantees	Bank Guarantee extension & other action by BHEL	BHEL will give advance notice of 60 days to BIL for any action to be taken by BHEL	Advance notice of 1 month will be given for extension of BG. Advance notice of 10 days will be given for invocation based on non-extension. For any contractual issues other than extension, BG will be invoked any time before the expiry of BG.
28	MSME	Not Applicable	MSME Should be applicable. Please note that BIL is covered under MSME and our MSME registration number is UDYAM-MH-19-0001067.	Shall remain as per tender.
29	Clause 3.7 TCC	Before start of application one demo application on the area of approx. 500mmx500mm shall be done as per the direction of OEM/ supplier. No any extra payment shall be applicable for this work. Successful bidders should quote accordingly	Should be paid by BHEL	As per tender.
30	Clause 3.9 TCC	Dehumidifier and Fan Blower shall be provided by successful bidder free of cost to BHEL within the quoted price.	Should be provide by BHEL free of cost	As per tender.
31	Clause 13.5 TCC	CONFORMANCE TO THE STATUTORY REQUIREMENTS (AS APPLICABLE UNDER THE SCOPE OF THE CONTRACT): 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: 1) Inspectorate of Steam Boilers and Smoke Nuisance 2) Electrical Inspector 3) Factory Inspector, Labour Commissioner, PF Commissioner and other authorities connected to this project work.	Should be taking care by BHEL	Applicable statutory compliances related to the work shall be in Successful bidder's scope.
32	Clause 14.19 TCC	Penalties: If the Contractor fails in providing safe working environment as per the Safety Rules of NTPC or continues the work even after being instructed to stop the work by the Engineer I/C as provided in Clause XVII (1) above, the Contractor shall be penalized at the rate of Rs. 25,000/- per day or part thereof till the instructions are complied with and so certified by the Engineer I/C.....	Please delete this clause as this will create negative cash flow.	As per tender.
33	Clause 15.3.5 TCC	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. 50,000.00 per man-month for engineer, Rs. 35,000.00 per man-month for the supervisor/ safety officer/chemist and Rs. 30,000 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.....	Please delete this clause as this will create negative cash flow.	As per tender.
34	Clause 15.3.5 TCC	RECOVERY OF MATERIAL: 1. BOROSILICATE GLASS BLOCK - Actual cost of procurement+5% overhead. 2. ADHESIVES / MEMBRANCE - Actual cost of procurement+5% overhead. 3. PRIMER PAINT - Actual cost of procurement+5% overhead.	Recovery should be as per procurement cost	As per tender.
35	Idling Charges	Idling Charges	Successful bidder will be compensated for idling of equipment, manpower etc. if the work is stopped for more than 3 days for reasons not attributable to BIL and due to epidemic, lock down by Government and other Force Majeure factors.	As per tender.
36	Clause 25.1.1 TCC	01 No DG set 250KVA	DG set 250KVA capacity is more It should be 62.5 KVA	Kindly refer relevant clause of TCC, Rev-01 attached with this TCN-01.
37		Duct & Opening	Please share the Ducts dimension & opening	Bidder is requested to visit site to understand actual site condition and submit their bid accordingly.
38			Kindly provide start date for Unit-2 & Unit-3 to take up the said lining works. Since the particular unit has to be under shut down for us to take up the said works specific date is important to understand and organize the necessary resources required for the said works.	U#3 work can be started immediately after the order placement. Successful bidder to plan Work in other area in consultation with site after order placement.
39	Clause 15.3.2 TCC	Qualified Safety Officer - One No Engineer & Supervisor for quality Inspection - 2 nos each Site supervising engineer - One no Qualified Blaster - Six No	Our comments on the manpower advised are as below for one unit only. Agreed 1 no each One no Four No for both shift work, Mason - 6 nos for single shift, Helper - 20 nos for both shifts all works considered. Kindly confirm whether we can quote as per the resources considered by us or we have to strictly followed your guidelines.	Tentative deployment of manpower mentioned in TCC Rev-01 however additional deployment as per the work requirement shall be done by successful bidder within quoted rate. (TCC-CML-Rev-01 attached with this TCN-01)

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TENDER NO - PSER:SCT:BAR-C2110:21			
CLARIFICATION OF BIDDER'S PRE-BID QUERIES			
Sl. No.	Reference clause of tender document	Existing Provision	BHEL's Clarification
40	Clause 33.2.4 of TCC	Payment Terms 45 days of submission of bill	We understand the payment terms proposed at your end in consideration of the TCC, SCC etc. can finally be summarised as below which may please be confirmed. 60% of R/A Bills - within 15 days Balance - within next 15 days - so entire payment within 30 days.
	SCC CLAUSE 10.5	30 DAYS FROM DATE In case of Civil Work 60% of R/A Bills - within 15 days Balances - within 15 days	
41		Compensation Clause (B-26)	Please consider validity of ORC / PVC etc. Since the project delay can be attributed to various unknown factors as has been witnesses by us in our previously awarded job we would request and advise to maintain ORC & PVC Clause as applicable.
42			For extra works manpower rate is considered @ Rs.108/- per man hours only with the present rates of unskilled manpower @ Rs. 500/- Per day . In case of increase in the minimum wages of the unskilled labour the said rate shall be subject to necessary revision on prorata basis.
43			We understand expert supervision shall be provided by the manufacturer in account of BHEL only.
44		EMD	We understand EMD being not applicable in the said tender need not be deposited.
45		Delivery Schedule : For C 276 & Titanium Sheet	Variation / fluctuation in pricing of C276 / titanium sheet is a major concern & prices can be based on today's pricing only - how much variation shall be acceptable ? Also, delivery schedule is a major factor since presently 8 months is being considered for a normal priced C276 supply by Indian suppliers.

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These Technical conditions shall be construed as part of tender document and shall be read along with General Conditions of Contract. In case of any conflict or inconsistency between the general and these special conditions, the same shall be brought out by the bidder in writing to BHEL for clarification during pre-bid discussions; failing which most stringent interpretation / clause in favour of BHEL shall be adopted and the same shall be binding to the contractor.

CLAUSE NO	DESCRIPTION
1.0	<p>PROJECT SYNOPSIS AND GENERAL INFORMATION</p> <p>Project name: BARTH SUPER THERMAL POWER PROJECT, STAGE-I</p> <p>No. of Units x capacity: 3 X 660 MW</p> <p>Project setting up by: National thermal Power Corporation</p> <p>Project Location : (i) Place: BARTH : (ii) District: PATNA : (iii) State: BIHAR</p> <p>Nearest Railway station: BARTH</p> <p>Distance of project location from the Railway station: 3.0 KM (Approx.)</p> <p>Nearest town: BARTH</p> <p>Distance of the town from the Project site: 4.0 KM</p> <p>Nearest Commercial Airport: PATNA</p> <p>Distance of airport from the project site: 75 KM.</p> <p>Nearest Road Head: National Highway-31.</p>
	<p>INSTRUCTIONS TO TENDERERS</p> <p>The Tenderer are advised to physically visit the site and fully acquaint themselves with site conditions, transportation routes, various distances and the fact that other contractors would be working in this area and their structures are to be protected. The material brought and stacked for construction should not make hindrance to other contractors. Necessary precaution and arrangements including sprinkling of water during work as acceptable to BHEL for safety & security for the above have to be made by the contractor. No claim will be entertained by BHEL on ground of lack of knowledge and the contractor's rates shall be deemed to have taken this into account.</p> <p>The contractor, in the event of this work awarded to him, shall establish an office at site and keep an authorized, responsible officer with valid Power of Attorney for the purpose of the contract. Any order or instructions of the 'Engineer' or his duly authorized representative, communicated to the contractor's representative at site office will be deemed to have been communicated to the contractor at his legal address.</p>
2.0	<p>SITE VISIT</p> <p>The bidder must visit the work site of 3x660 MW Barh Super Thermal Power Project, Stage-1 site, to acquire full knowledge and information about the conditions prevailing at site as well as, in and around the project site, together with the statutory, obligatory, mandatory requirements of various authorities before submission of the bid.</p>
3.0	<p>SCOPE OF WORK</p>
3.1	Scope of this tender covers Installation of Borosilicate Glass Lining along with all associated work in Flue can of U#2&3 Chimneys & already erected ducts of Unit-1,2 & 3 as per drawing, Instruction of engineer, specification and price schedule.
3.2	Installation of Borosilicate Glass Lining inside MS Flue Cans, ducts including surface preparation, application of primer, adhesive etc. as per the technical specifications and approved erection procedure under the expert supervision of Borosilicate Glass Lining manufacturer /supplier.
3.3	The work to be performed under this specification consists of providing all labour, materials, consumables, supervision scaffolding, power, fuel equipment, tools & plants, measuring, testing instruments, supplies temporary works, temporary storage sheds for contractors own use, temporary colony for labour and staff, temporary site offices, constructional plant's transportation/ handling and all incidental items not shown or specified but reasonably implied or necessary for the completion of subject scope, all in strict accordance with the specifications including revisions and amendments thereto as

	<p>may be required during the execution of work.</p> <p>Borosilicate Glass Lining Materials, Primer, Adhesive (suitable fixing materials) and Expert Supervision of Manufacturer shall be provided by BHEL as Free of Cost (FOC).</p>
3.4	All quality standards, tolerances, welding standards & 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.
3.5	All works under this specification, unless specified otherwise, shall conform to the latest revision or any other Indian Standard Specifications and Codes of Practice. In case any particular aspect of work is not covered specifically by Indian Standard Specification, any other standard practice as may be specified by the Engineer shall be followed.
3.6	The Contractor is to carry out the work as per the drawings issued to him, Approved drawing of Contractor, specification and/or the Engineer's instructions.
3.7	Before start of application one demo application on the area of approx. 500mmx500mm shall be done as per the direction of OEM/ supplier. No any extra payment shall be applicable for this work .Successful bidders should quote accordingly.
3.8	Proper 24V lighting arrangement required for the working inside the flue can and outside flue can shall be in scope of successful bidder within the quoted price.
3.9	For maintaining working atmosphere inside flue can, Dehumidifier and Fan Blower shall be provided by successful bidder free of cost to BHEL within the quoted price.
3.10	Access for moving platform inside the flue can shall be through the centerline axis of flue can from the bottom or through side of flue can at EL(+) 35m. Access for staging materials inside duct portion shall be through existing manhole or by cutting of duct from bottom. Necessary dismantling and restoration of duct and duct supporting structure or flue can to be done accordingly by successful vendor without any extra cost to BHEL within quoted price.
4.0	INSURANCE
4.1	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.
4.2	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.
4.3	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.
4.4	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.
4.5	Other conditions of Insurance shall be as per relevant clause of GCC/SCC.
5.0	DEVIATIONS/CLARIFICATIONS
	The bidder is required to submit with his offer in the relevant schedule / format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied

	<p>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.</p>
6.0	DEWATERING 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.
7.0	LAND
7.1	The contractor has to plan and use the existing land inside the Project Premise considering the use of land by other Civil / Mechanical / Electrical contractors and the storage of plant machineries and materials. The existing land shall be shared by all erections agencies. Land will be allocated with certain time frame and to the extent available / considered necessary, and will be reviewed by BHEL depending upon the area availability.
7.2	Land for labour colony shall be arranged by successful bidder at their own. The contractor shall construct labour colony / hutment as per his requirements after obtaining approval of formalities from statutory body. Further, contractor must ensure minimum HSE norms and hygienic sanitary conditions in his labour colony.
7.3	The contractor will be responsible for handing back all lands, as handed over to him by BHEL/NTPC.
7.4	Area within plant premises for fabrication, office, storage area etc. for construction purpose shall be provided as per availability free of cost as per approval of customer.
8.0	WATER
8.1	Contractor has to make his own arrangement for water for drinking and required to carry out the entire scope of work under this tender specification at his own cost. BHEL shall not be responsible, for providing any source of water to the contractor. The contractor may have to carry out the job even during the night. Hence all necessary arrangements may be deployed to ensure 24 hour working to ensure timely completion of the job.
9.0	ELECTRICITY
9.1	<p>CONSTRUCTION POWER & GENERAL ILLUMINATION NET WORK: -</p> <p>BHEL Shall Provide Construction Power free of charges at 415V level at two points for Batching Plant and Power House area (within 500 M from his work places as mentioned) and bidders has to make his own distribution arrangement to draw electricity.</p> <p>General illumination system shall be provided by BHEL. However, provision of suitable temporary lights at various working areas for execution of the work & safety of workmen shall be provided by the vendor, within the quoted rate. The illumination should be such that minimum illumination requirement as specified by Indian standards for general illumination is maintained.</p> <p>However, Contractor has to make his own DG stand by arrangement for power supply, as shall be required to carry out the entire scope of work under this tender specification at his own cost. BHEL shall not be responsible, for failure of power supply. The contractor may have to carry out round the clock. Hence all necessary arrangements may be deployed to ensure 24 hour working to ensure timely completion of the job.</p>
9.2	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 Indian 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 deviation from normally accepted norms is observed, BHEL will reserve the right to impose penalty as deemed fit for such cases
9.3	The bidder shall have to provide earth leakage circuit breaker at each point..
9.4	Bidder will have to arrange sufficient illumination at their own work areas for execution of the work & safety of workmen.
9.5	The contractor shall have to make arrangement at their own cost for illumination/ in their labor colony
10.0	CONSUMABLE
10.1	All consumables, like gas, electrodes, chemicals, lubricants etc. required for the scope of work, shall be arranged by the contractor at his cost from approved brand / make of NTPC/ BHEL unless otherwise specifically mentioned in the contract prior to use.
10.2	In the event of failure of contractor to bring necessary and sufficient consumables, BHEL may arrange for the same at the risk and cost of the contractor. The entire cost towards this along-with overhead shall be deducted from the contractor's bills.
11.0	TEST CERTIFICATES
	Necessary test certificates of all materials supplied by contractor are to be produced to BHEL/NTPC prior to use of materials.
12.0	IMTE
	The contractor shall ensure deployment of reliable and calibrated instrument, measuring, and test Equipment (IMTE). The IMTE shall have test calibration certificate from authorized / Govt approved agencies. The contractor shall also keep provision of alternate engagement for such IMTE so that the work does not suffer when a particular IMTE is sent for calibration. Re-testing/ re-calibration shall also be arranged by the contractor at their own cost at regular interval during the period of use as advised by BHEL.
13.0	QUALITY CONTROL & QUALITY ASSURANCE
13.1	INSPECTION & FIELD QUALITY ASSURANCE
13.1.1	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.
13.1.2	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.
13.1.3	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.
13.1.4	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.
13.1.5	The contractor has to take prior permission / approval before deployment of NDE & Heat Treatment agencies at site as per BHEL document no. PP-QLY-AA-DC-106/01-

	<p>20.</p> <p>The contractor's employees involved in NDE & Heat treatment job must be qualified & experienced as per the requirement of the above document.</p>
13.1.6	<p>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. Currently, BHEL follows online Welder Performance Monitoring System. Contractor shall extend necessary support, as deemed fit by BHEL site-in-charge, regarding data entry into the system. 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.</p>
13.1.7	<p>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.</p> <p>High Pressure welders and welders of special material viz. C276, Ti, etc., must be trained & tested by experts from BHEL-WRI/ other units. Necessary infrastructure for welder training & testing, as per BHEL's instruction, to be arranged by the contractor without any extra cost to BHEL.</p>
13.1.8	<p>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. Weekly Quality Review Meeting at site shall be organised by BHEL to discuss quality issues and next weeks 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.</p>
13.1.9	<p>Weekly Quality Review Meeting at site shall be organised by BHEL to discuss quality issues and next weeks 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.</p>
13.2	REQUIREMENT OF ISO 9001
13.2.1	BHEL: PSER is accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements.
13.2.2	<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>
13.2.3	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.
13.2.4	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.
13.3	MMEs / MMRs
13.3.1	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. Retesting / re-calibration shall also be arranged at regular

	<p>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.</p>
13.3.2	<p>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.</p>
13.3.3	<p>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.</p>
13.3.4	<p>Re-work necessitated on account of use of invalid MMEs shall be entirely to the 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.</p>
13.3.5	<p>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.</p>
13.4	INSPECTION BY TS / FES / QA ENGINEERS OF BHEL UNITS / ENGINEERING CENTRES
13.4.1	<p>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.</p>
13.4.2	<p>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.</p>
13.5	CONFORMANCE TO THE STATUTORY REQUIREMENTS (AS APPLICABLE UNDER THE SCOPE OF THE CONTRACT)
13.5.1	<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> <ol style="list-style-type: none"> 1) Inspectorate of Steam Boilers and Smoke Nuisance 2) Electrical Inspector 3) Factory Inspector, Labour Commissioner, PF Commissioner and other authorities connected to this project work. <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>
13.5.2	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.			
13.5.3	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 applicable, for the conducting of any work which comes under the purview of these authorities, at his cost.			
13.5.4	<p>The following fees shall be excluded from scope of Contractor:</p> <ol style="list-style-type: none"> 1. Registration Fee as per Regulation 385 of Chapter IX of Indian Boiler Regulations- 1950 or Registration Fee as per prevailing statutory boiler regulations. 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. <p>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.</p>			
13.6	STORAGE & PRESERVATION OF WELDING ELECTRODES & OTHER BHEL-ISSUED MATERIAL			
13.6.1	The contractor shall be responsible for storage & preservation of welding electrodes & other BHEL-issued materials as per BHEL Storage & Preservation Guidelines / Instructions.			
13.7	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				
13.7.1	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
13.7.2	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
13.7.3	Not attending quality meeting of BHEL by nominated member of vendor / sub-contractor	Rs. 2,000.00	\$32.00	Per meeting
CALIBRATION				
13.7.4	Use of MMEs without valid calibration certificate	Rs. 1,000.00	\$16.00	Per equipment per instance
13.7.5	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				

13.7.6	Unqualified welders carrying out welding / tack welding	Rs. 1,000.00	\$16.00	Per welder per instance. (Gatepass of the person shall be withheld)
13.7.7	Not using portable oven for welding consumables	Rs. 500.00	\$8.00	Per welder per instance. (The consumables in the oven shall be confiscated)
13.7.8	Not using electrodes pre-baked in baking oven	Rs. 500.00	\$8.00	Per instance. (The subject consumables shall be confiscated)
13.7.9	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)
13.7.10	Non-removal of welding slag and spatters after welding	Rs. 500.00	\$8.00	Per joint
13.7.11	Not using NDT equipment as prescribed in the manual / FQP / guidelines / Contract	Rs. 1,000.00	\$16.00	Per equipment per instance
13.7.12	Welder doing welding without valid job card	Rs. 500.00	\$8.00	Per instance
13.7.13	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				
13.7.14	Non-maintenance of grid pillar marking	Rs. 200.00	\$3.00	Per location week
13.7.15	Mismatch of location of material in store area w.r.t. location mentioned in stock register	Rs. 500.00	\$8.00	Per instance
13.7.16	Non-compliance of Preservation of material as per storage & preservation manuals	Rs. 1,000.00	\$16.00	Per equipment
13.7.17	Not offering received material for verification within stipulated time as per contract	Rs. 500.00	\$8.00	Per instance

PAINTING & ALLIED WORKS				
13.7.18	Not using primer / paints of approved make and as per Specifications	Rs. 1,000.00	\$16.00	Per instance
13.7.19	Painting without proper surface preparation as per approved schedule / drawing / FQP	Rs. 500.00	\$8.00	Per instance
PROTOCOLS & LOG SHEETS				
13.7.20	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
INSPECTION OF BOUGHT-OUT ITEMS / CONSUMABLES				
13.7.21	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
13.7.22	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, which ever is higher.				
14.0	WORK AND SAFETY REGULATIONS			
14.1	General			
14.1.1	The contractor shall comply with all the requirements of "The Building and Other Construction Workers (Regulation of Employment, Conditions of Service) Act," 1996 and its Central Rule 1998 / State Rules and any other statutory requirements as applicable.			
14.1.2	The Contractor shall follow NTPC Safety Rules as issued from time to time with respect to safety in construction & erection.			
14.1.3	The contractor shall have the approved Safety, Health and Environment (SHE) Policy in respect of Safety and health of Building Workers and it shall be circulated widely and displayed at conspicuous place in Hindi and local language understood by the majority			

	of the workers. A copy of the safety policy should be submitted to Engineer in charge.
14.1.4	<p>The contractor shall submit the safety plan comprising of methods to implement the Safety Policy/ Rules, Risk assessment and ensuring Safety at work areas, Safety audits, inspections and its compliance, Supervision and Responsibility to ensure Safety at various levels, Safety training to employees, review of Safety and accident analysis, ensure Health and Safety Procedures to prevent accidents to Engineer I/c for approval as per the format of Safety plan as annexed at Annexure - I.</p>
14.1.5	The Contractors shall ensure proper safety of all the workmen, materials, plant and equipment belonging to him or to the Employer or to others, working at the Site.
14.1.6	All equipments used in construction and erection by the contractor shall meet BIS I International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipments shall be strictly operated and maintained by the contractor in accordance with manufacturer's operation manual. The contractor should also follow Guidelines/Rules of the Employer in this regard.
14.1.7	The Contractors shall provide suitable latest Personal Protective Equipments of prescribed standard to all their employees and workmen according to the need. The Engineer I/c shall have the right to examine these safety equipments to determine their suitability, reliability, acceptability and adaptability. The contractor should also ensure these before their use at worksite.
14.1.8	The Contractor shall provide safe working conditions to all workmen and employees at his workplace including safe means of access, railings, stairs, and ladders, scaffolding, work platforms, toe boards etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection of scaffolds, access, work platforms etc. shall be good and the contractor shall use standard quality of material.
14.1.9	The Contractor shall follow and comply with all the Safety Rules, standards, code of practices of NTPC and relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any protest or contest or reservation. In case of any nonconformity between statutory requirement and the Safety Rules of the Employer referred above, the latter shall be binding on the Contractor unless the statutory provisions are more stringent. As and when required he can refer / obtain copy of NTPC safety documents as stated above.
14.1.10	<p>The contractor shall have his own arrangements with nearby hospitals for shifting and treatment of sick and injured.</p> <p>The medical examination of the workers employed in hazardous areas shall be conducted as per Rule 223 Of The Building and Other Construction Worker (Regulation of Employment and Condition of Service) Central Rule 1998 Their health records shall be maintained accordingly and to be submitted to Engineer 1/c when asked for. If any worker found suffering from occupational health hazard, the worker should be shifted to suitable place of working and properly treated under intimation to Engineer I/c. The medical fitness certificate to be submitted to Engineer (I/c).</p>
14.1.11	First Aid boxes equipped with requisite articles as specified in the Rule 231 of The Building and Other Construction Worker (Regulation of Employment and Condition of Service) Central Rule 1998 shall be provided at construction sites for the use of workers. Training has to be provided on first aid to workmen & office bearers working at site.
14.2	<p>Emergency Action Plan</p> <p>The contractor shall prepare an emergency action plan approved by his competent authority to handle any emergency occurred during construction work. Regular mock drills shall be organized to practice this emergency plan. The Emergency Action Plan should be widely circulated to all the employees and suitable infrastructure shall be provided to handle the emergencies.</p>
14.3	<p>Scaffolding</p> <p>The contractor shall take all precautions to prevent any accidental collapse of scaffolding or fall of persons from scaffolding. The contractor should ensure that scaffolding are designed by a competent person and its erection and repairs should be done under the expert supervision. The scaffolding shall meet the required strength and other</p>

	requirements for the purpose for which the scaffold is erected. The material used for scaffold should conform to the BIS / International standards.	
14.4	Opening	The contractor shall take all precautions while handling, using, storing or transporting of all explosives. Before usage of any explosive necessary warning / danger signals be erected at conspicuous places to warn the workers and general public. The contractor should strictly ensure that all measures and precautions required to be complied for use, handling, storing or transportation of explosives under the rules framed under the Explosives Act, 1884.
14.5	Fencing of Machinery	The contractor shall provide suitable fencing or guard to all dangerous and moving parts of machinery The contractor shall not allow any of the employees to clean, lubricate, repair, adjust or examine during machinery in motion, which may cause injury to the person.
14.6	Overhead Protection	The contractor shall ensure that any area exposed to risk of falling materials, articles or objects is roped off or cordoned off or otherwise suitably guarded from inadvertent entry of any person. Wherever there is a possibility of falling of any material, equipment or construction workers while working at heights, a suitable and adequate safety net should be provided. The safety net should be in accordance with BIS Standards.
14.7	Working at Heights	All working platforms, ways and other places of construction work shall be free from accumulations of debris or any other material causing obstructions and tripping. Wherever workers are exposed to the hazard of falling into water, the contractor shall provide adequate equipment for saving the employees from drowning and rescuing from such hazards. The contractor shall provide boat or launch equipped with sufficient number of life buoys, life jackets etc. manned with trained personnel at the site of such work. Every opening at elevation from ground level through which a building worker, vehicle, material equipment etc. may fall at a construction work shall be covered and/or guarded suitably by the contractor to prevent such falls. Wherever the workers are exposed to the hazards of falling from height, the contractor shall provide full harness safety belts fitted with fall arresting systems to all the employees working at higher elevations and life line of 8 mm diameter wire rope with turn buckles for anchoring the safety belts while working or moving at higher elevations. Safety nets shall also be provided for saving them from fall from heights and such equipment should be in accordance with BIS standards. Wherever there is a possibility of falling of any material, equipment or construction workers while working at heights, a suitable and adequate safety net should be provided. The safety net should be in accordance with BIS Standards. The contractor shall provide standard prefabricated ladders on the columns where the workers are required to use them as an access for higher elevations till permanent staircase is provided. The workers shall be provided with safety belts permanent staircase is provided. The workers shall be provided with safety belts fitted with suitable fall arresting system (Fall arrestors) for climbing/getting down through ladders to prevent fall from height.
14.8	Handling of Hazardous Chemicals	The Contractor will notify well in advance to the Engineer I/c of his intention to bring to the Site any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals which may involve hazards. NTPC shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and the Contract shall strictly adhere to and comply with such instructions. The Engineer I/c shall have the right at his sole discretion to inspect any such container or such construction plant / equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. No claim due to such prohibition shall be entertained by

	<p>NTPC and NTPC shall not entertain any claim of the Contractor towards additional safety provisions / conditions to be provided for / constructed.</p> <p>Further, any such decision of the Engineer I/c shall not, in any way, absolve the Contractor of his responsibilities and in case, use of such a container or entry thereof into the Site area is forbidden by NTPC, the Contractor shall use alternative methods with the approval of the NTPC without any cost implication to the NTPC or extension of work schedule.</p> <p>Where it is necessary to provide and / or store petroleum products or petroleum mixtures and explosives, the Contractor shall be responsible for carrying-out such provision and / or storage in accordance with the rules and regulations laid down in Petroleum Act 1934, Explosives Act 1948, and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the Engineer I/c. In case any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, the Contractor shall be responsible for obtaining the same.</p> <p>The Contractor shall be fully responsible for the safe storage of his and his Sub-contractor's radio-active sources in accordance with BARC/DAE (Bhabha Atomic Research Centre/ Department of Atomic Energy, Govt. of India) Rules and other applicable provisions. All precautionary measures stipulated by BARCDAE in connection with use, the contractor would take storage and handling of such material.</p> <p>The contractor shall provide suitable personal protective equipments to the workers who are handling the hazardous and corrosive substances including alkalis and acids.</p> <p>As a precautionary measure the contractor should keep the bottles filled with distilled water in cupboard / Boxes near work place for emergency eye wash by worker exposed to such hazardous chemicals.</p>
14.9	<p>Eye Protection</p> <p>The contractor shall provide suitable personal protective equipment to his workmen depending upon the nature of hazards and ensure their usage by the workers engaged in operations like welding, cutting, chipping, grinding or similar operations which may cause injuries to his eyes.</p>
14.10	<p>Excavation</p> <p>The contractor shall take all necessary measures during excavation to prevent the hazards of falling or sliding material or article from any bank or side of such excavation which is more than one and a half meter above his footing by providing adequate piling, shoring, bracing etc. against such bank or sides.</p> <p>Adequate and suitable warning signs shall be put up at conspicuous places at the excavation work to prevent any persons or vehicles falling into the excavation trench. No worker should be allowed to work where he may be stuck or endangered by excavation machinery or collapse of excavations or trenches.</p>
14.11	<p>Electrical Hazards</p> <p>The contractor should ensure that all electrical installations at the construction work comply with the requirements of latest electricity acts / rules.</p> <p>The contractor shall take all adequate measures to prevent any worker from coming into physical contact with any electrical equipment or apparatus, machines or live electrical circuits which may cause electrical hazards during the construction work. The contractor shall provide the sufficient ELCBs / RCCBs for all the portable equipments, electrical switchboards, distribution panels etc. to prevent electrical shocks.</p> <p>The contractor should ensure use of single I double insulated hand tools or low voltage i.e., 110 volts hand tools.</p> <p>The contractor should also ensure that all temporary electrical installations at the construction works are provided with earth leakage circuit breakers.</p>
14.12	<p>Vehicular Traffic</p> <p>The contractor should employ vehicle drivers who hold a valid driving license under the Motor Vehicles Act, 1988.</p>

14.13	Lifting Appliances, Tools & Tackles, Lifting Gear And Pressure Plant & Equipment etc. The contractor shall ensure all the lifting appliances, tools & tackles including cranes etc., lifting gear including fixed or movable and any plant or gear, hoists, Pressure Plant and equipment etc. are in good condition and shall be examined by competent person and only certified shall be used at sites. Periodical Examination and the tests for all lifting / hoisting equipment & tackles shall be carried out. A register of such examinations and tests shall be properly maintained by the Contractor and will be promptly produced as and when desired by the Engineer I/c or by the person authorized by him.
14.14	Excessive Noise, Vibration The contractor shall take adequate measures to protect the workers against the harmful effect of excessive noise or vibration. The noise should not exceed the limits prescribed under the concerned rules, Noise Pollution (Regulation and Control) Rules, 2000.
14.15	Electrical Installations The contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the Employer or other contractors under any circumstances, whatsoever, unless expressly permitted in writing by the Engineer I/c to handle such fuses, wiring or electrical equipment. Before the contractor contacts any electrical appliances to any plug or socket belonging to the other contractor or the NTPC, he shall <ul style="list-style-type: none"> i) Satisfy the Engineer I/C that the appliance is in good working condition; ii) Inform the Engineer I/C of the maximum current rating, voltage and phases of the appliances; iii) Obtain permission of the Engineer I/C detailing the sockets to which the appliances may be connected. The Engineer I/C will not grant permission to connect until he is satisfied that: <ul style="list-style-type: none"> The appliance is in good condition and is fitted with suitable plug; having earth connection with the body. Wherever armored / metallic sheathed multi core cable is used, the same armored / sheathed should be connected to earth. <ul style="list-style-type: none"> iv) No repair work shall be carried out on any live equipment. The Engineer I/c must declare the equipment safe and a permit to work shall be issued by the NTPC / contractor as the case may be to carry out any repair / maintenance work. While working on electric lines / equipments whether live or dead, suitable type and sufficient quantity of tools will have to be provided by the contractor to electricians / workmen / Officers. v) The contractor shall employ necessary number of qualified, full time Electricians / Electrical Supervisors to maintain his temporary electrical installation. The installations are provided with suitable ELCBs and RCCBs wherever required
14.16	Safety Organisation
14.16.1	The contractor employing more than 250 workmen whether temporary, casual, probationary, regular or permanent shall employ at least one full time safety officer exclusively to supervise safety aspects of the equipments and workmen, who will coordinate with the NTPC Safety Officer. Further requirement of safety officers, if any, shall be guided by Rule 209 of The Building and Other Construction Worker (Regulation of Employment and Conditions of Service) Central Rule 1998. In case the work is being carried out through subcontractor, the employees / workmen of the sub contractor shall also be considered as the contractor's employees/workmen for the

	<p>above purpose.</p> <p>In case of contractor deploying less than 250 workmen he should designate one of his Engr / supervisor or the contractor himself (if he is directly supervising the work) as safety officer in addition to his existing responsibilities. The Engr./ supervisor should get atleast 2days safety training from any reputed organization or from NTPC before resuming the work. If already trained in past the declaration along with trg. certificate to be furnished to NTPC safety officer</p>
14.16.2	The name and address of such Safety Officer of the Contractor will be promptly informed in writing to the EIC with a copy to the Project Safety Officer before he starts work or immediately after any change of the incumbent is made during currency of the Contract.
14.17	Reporting of Accident and Investigation
14.17.1	The Engineer VC shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and / or property, and / or equipments. In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury / accident and he shall comply to remove shortcomings promptly. The Contractor after stopping the specific work can, if felt necessary appeal against the order of stoppage of work to the Project Manager within 3 days of such stoppage of work and decision of the Project Manager in this respect shall be conclusive and binding on the Contractor.
14.17.2	The Contractor shall not be entitled for any damages / compensation for stoppage of work, {Sub-Clause XVIII (I)} due to safety reasons and the period of such stoppage of work shall not be taken as an extension of time for Completion of the Facilities and will not be the ground for waiver of levy of liquidated damages.
14.18	<p>Fire Protection</p> <p>The contractor shall provide sufficient fire extinguishers at place /s of work. The fire extinguishers shall be properly maintained as per relevant BIS Standards. The employees shall be trained to operate the fire extinguishers / equipment.</p>
14.19	<p>Penalties</p> <p>I. If the Contractor fails in providing safe working environment as per the Safety Rules of NTPC or continues the work even after being instructed to stop the work by the Engineer I/C as provided in Clause XVIII (1) above, the Contractor shall be penalized at the rate of Rs. 25,000/- per day or part thereof till the instructions are complied with and so certified by the Engineer I/C. However, in case of accident, the provisions contained in Sub-Clause XX (II) below shall also apply in addition to the penalties mentioned in this sub-clause.</p> <p>II. If the Contractor does not take all safety precautions and / or fails to comply with the Safety Rules as prescribed by the Employer or under the applicable law for the safety of the plant and equipment and for the safety of personnel and the contractor does not prevent hazardous conditions which cause injury to this own employees or employees of other contractors, or NTPC's employees or any other person who are at the Site or adjacent thereto, the Contractor shall be responsible for payment of penalty to NTPC as per the following schedule:-</p> <p>a) Fatal injury or accident causing death: Penalty @10% of contract value or Rs. 5,00,000/- per person, which ever is less.</p> <p>b) Major injuries or accident causing 25% or more permanent disablement to workmen or employees: Penalty @2.5% of contract value or Rs. 1,00,000/- per person which ever is less</p> <p>Permanent disablement shall have the same meaning as indicated in The Workmen's Compensation Act' 1923. The penalty mentioned above shall be in addition to the compensation payable to the workmen / employees under the relevant provisions of the Workmen's Compensation Act' 1923 and rules framed there under or any other applicable laws as applicable from time to</p>

	<p>time.</p> <p>III. If any contractor worker found working without using the safety equipment like safety helmet, safety shoes, safety belts, etc. or without anchoring the safety belts while working at height the Engineer 1/c / Safety Officer of NTPC shall have the right to penalize the contractor for Rs. 200/- per person per day and such worker shall be sent out of the workplace immediately and shall not be allowed to work on that day. Engineer 1/c / Safety Officer of NTPC will also issue a notice in this regard to the contractor.</p> <p>IV. If two or more fatal accidents occur at same NTPC site under the control of contractor during the period of contract and he has</p> <ol style="list-style-type: none"> (1) not complied with keeping adequate PPEs in stock or (2) defaulted in providing PPEs to his workmen (3) not followed statutory requirements / NTPC safety rules (4) been issued warning notice/s by NTPC head of the project on non observance of safety norms (5) not provided safety training to all his workmen, the contractor can be debarred from getting tender documents in NTPC for two years from the date of last accident. <p>The safety performance will also be one of the overriding criteria for evaluation of overall performance of the contractors by NTPC. The contractor shall submit the accident data including fatal / non-fatal accidents for the last 3 years where he has undertaken the construction activities Projects-wise along with the tender documents. This will also be considered for evolution of tender documents. If the information given by the contractor found incorrect, his contract will be liable to be terminated.</p>
14.20	The Contractor will make available minimum quantity of all safety equipments and safety personal protection equipments (PPEs) of required specifications as per suggestive list included bidding documents as a part of "List of minimum T & P". Further Contractor will ensure availability of additional requirement for individual worker and safety equipment as per site requirement during execution of the contract till its completion.
14.21	<p>Award</p> <p>If the Contractor's performance on safety front is found satisfactory i.e. without any fatal/reportable accident in the year of consideration; he may be considered for suitable award "ACCIDENT FREE SAFETY MERITORIOUS AWARD" as per scheme of the employer.</p>
14.22	Further details of applicable HSE norms shall be as per HSE Doc. No.: HSEP:14-ER, Rev-01 Dated 08/05/2020, OPERATIONAL CONTROL PROCEDURE, Doc. No.: HSEOCP: 61A , Rev. No.: 00 dated 27.04.2020 & of Tender OPERATIONAL CONTROL PROCEDURE , Doc. No.: HSEOCP: 61 , Rev. No.: 01 dated 01.06.2020 & of Tender
15.0	<p>PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT</p> <p>To meet the need of construction management at site, contractor shall provide the following services within quoted/ accepted rates.</p>
15.1	PLANNING & MONITORING
15.1.1	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 sub-systems / components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), 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.
15.1.2	The bidder shall also prepare progress report indicating progress on key activities, management summary for critical activities, 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.

15.1.4	The contractor's site office must have facilities of communications like E-mail, and telephone with STD facility within a month from LOI.	
15.2	PROGRESS REPORTING	
15.2.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (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.	
15.2.2	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.	
15.2.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.	
15.2.4	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.	
15.2.5	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 Calcutta/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.	
15.2.6	During construction contractor shall take an average twenty colour soft copies of 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 Rs. 10,000/- per month shall be deducted from contractor's RA bill.	
15.2.7	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.	
15.3	SITE ORGANIZATION	
15.3.1	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 of LOI.	
15.3.2	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.	
15.3.2.1	Qualified safety officers with assistants (exclusive for safety supervision for project jobs).	Officer – One No.
15.3.2.2	Engineer & Supervisors for quality inspection.	Two nos Engineer Two nos Supervisor
15.3.2.3	Site supervising engineer and supervisors for works & planning	One no Engineer/Supervisor
15.3.2.4	Qualified Blaster for Blast cleaning of Flue Can	06 Nos. at the time of shot blasting
15.3.3	Deputation of above man-power shall be jointly decided at site in line with construction schedule.	
15.3.4	Engineer/ supervisor for other functions like store & purchase, material management,	

	fin, admin etc are to be provided as per site requirement and not considered above .
15.3.5	In the event of non deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct Rs. 50,000.00 per man-month for engineer, Rs. 35,000.00 per man-month for the supervisor/ safety officer/chemist and Rs. 30,000 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.
15.3.6	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.
15.3.7	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.
15.3.8	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.
15.3.9	The contractor should also submit network programs for the erection of various items. These networks shall show the NTPC/ BHEL hold points, which have to be cleared by NTPC/ BHEL, or their authorized representatives before further erection can take place. These programs for the erection would clearly identify responsibilities of the contractor and NTPC/ 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 of LOI.
15.4	CONSTRUCTION MANAGEMENT
15.4.1	Based on the approved program, the contractor shall submit a program of construction/ erection. These programs would be amplified showing start of erection and subsequent activities and shall form the basis for site execution and detail monitoring. The three monthly rolling program with the first month's program being tentative based on the site condition would be prepared based on these programs. The contractor shall also be involved along with NTPC / BHEL to tie up detailed resources mobilization plan over the period of the contract matching with the performance targets.
15.4.2	The program would be jointly finalized by the site in-charge of the contractor with BHEL / NTPC's project coordinator as well as the site-planning representative. The erection program will also identify sequential events matching financial turnover.
16.0	TEST CERTIFICATE FOR T&P
	All T&P, lifting tackles and pulling devices to be deployed by the contractor must bear valid / latest test certificates for their suitability, and the documents shall be preserved at site.
17.0	T&P TO BE PROVIDED BY BHEL
17.1	Automatic mixing machine for the mixing of Adhesive membrane shall be provided by BHEL free of cost to the successful bidder.
17.2	No any other T&P except mentioned at clause no 17.1 above shall be provided by BHEL.
18.0	MATERIAL HANDLING (BHEL ISSUED MATERIAL)
18.1	Borosilicate glass liners and required adhesives / membrance and primer for installation of Borosilicate Glass Blocks 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.
18.4	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 / trailor 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.
18.5	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.
18.6	It would be the responsibility of the contractor to sign on the delivery book acknowledgement slip of supplier/ transport authorities etc.
18.7	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.
18.8	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.
18.9	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, cements etc shall be arranged by contractor within quoted/accepted rates.
18.10	It will be the responsibility of the contractor to submit computerized account of all such consignments of materials received by them, daily to BHEL.
18.11	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.
18.12	<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. 70mx70m). 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>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>
18.13	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.
18.14	No material shall be issued to the contractor except as those indicated above, i.e. Borosilicate glass liners and required adhesives / membrance and primer for installation of Borosilicate Glass Blocks 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.
18.16	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.
18.17	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.								
18.18	The contractor shall solely be responsible for the safety & quality of material after it is handed over and issued to contractor by BHEL.								
18.19	BHEL issued materials shall not under any circumstances be taken out of the project site unless otherwise permitted by BHEL.								
18.20	All the necessary lifting tackles, cranes, 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.								
18.21	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.								
19.0	ISSUE OF MATERIALS								
19.1	ISSUE OF BOROSILICATE GLASS BLOCK(Free Issue item) Borosilicate Glass block shall be issued as received vide challan of the transporter in sqm worked out by multiplication of block sizes by no of block.								
19.2	ADHESIVES / MEMBRANCE(Free Issue item) Shall be issued in Kg/Litre as received in drum								
19.3	PRIMER PAINT (Free Issue item) Shall be issued in Litre as received in drum								
19.4	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.								
20.0	RETURN OF MATERIALS								
20.1	BOROSILICATE GLASS BLOCK All unused Borosilicate blocks shall be taken back by BHEL in sqm worked out by multiplication of block sizes by no. of block								
20.2	ADHESIVES / MEMBRANCE All unused untampered adhesive / membrance drum shall be taken back by BHEL in Kg as received during issue. Open drum / partially used drum shall not be taken back								
20.3	PRIMER PAINT All unused untampered drum containing paint shall be taken back by BHEL in litre as received during issue. Open drum / partially used drum shall not be taken back								
21.0	CONSUMPTION AND WASTAGE								
21.1	Consumption & Wastage shall be controlled by the Supervisor of Borosilicate Glass Lining materials supplier however if it is found that supervisor is not able to control the wastages due to repeated negligence by the successful bidder then recovery of such wastage shall be made from monthly RA bill at the penal rate stipulated below.								
22.0	RECONCILIATION OF BHEL ISSUED MATERIALS								
22.1	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 materials are available with contractor's custody at site.								
23.0	RECOVERY OF MATERIAL								
23.1	PENAL RATE OF MATERIALS <table border="1"> <tr> <td>ITEM</td><td>Penal rate (Rs)</td></tr> <tr> <td>BOROSILICATE GLASS BLOCK</td><td>Actual cost of procurement+5% overhead.</td></tr> <tr> <td>ADHESIVES / MEMBRANCE</td><td>Actual cost of procurement+5% overhead.</td></tr> <tr> <td>PRIMER PAINT</td><td>Actual cost of procurement+5% overhead.</td></tr> </table>	ITEM	Penal rate (Rs)	BOROSILICATE GLASS BLOCK	Actual cost of procurement+5% overhead.	ADHESIVES / MEMBRANCE	Actual cost of procurement+5% overhead.	PRIMER PAINT	Actual cost of procurement+5% overhead.
ITEM	Penal rate (Rs)								
BOROSILICATE GLASS BLOCK	Actual cost of procurement+5% overhead.								
ADHESIVES / MEMBRANCE	Actual cost of procurement+5% overhead.								
PRIMER PAINT	Actual cost of procurement+5% overhead.								
24.0	CONSTRUCTION OF TEMPORARY OFFICE, STORES ETC								
24.1	The contractor shall arrange at his own cost cleaning of area allotted, construction of his temporary office, stores, etc. and also the watch and ward of all the above. Materials								

	required for the same shall be provided by contractor at his own cost.	
25.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)	
25.1	Tentative list of Major T&P to be deployed by contractor for successful completion of work is detailed below.	
	Major T&P items	Tentative Mobilizing time from date of intimation by BHEL for each T&P
25.1.1	DG set 62.5 KVA or above	01 no- Within 15 days Balance as per requirement.
25.1.2	02 Nos moving platform arrangement with safety device for working inside flue can. Rope Suspended Annular Circular Platform for Borosilicate application with 4no. rope climbing machine and other accessories and having self-operating facility from the platform / WINCH FROM GROUND LEVEL with Safe Working Load OF 8 MT (MINIMUM) or equivalent reputed manufacturer make to be approved by BHEL.	Within 15 days
25.1.3	04 Nos. Material cum passenger lift (minimum 1 Ton capacity)	Within 15 days
25.1.4	02 Nos. double drum winch arrangement (Lift & Misc Lifting activities) of capacity matching with the dead & live load of the lift.	Within 15 days
25.1.5	01 no Truck /Tractor with Trailer (14 Ton)	As required.
25.1.6	03 no Air Compressor (Capacity 340 CFM minimum) WITH HOPPER & HOSE	Within 15 days
25.1.7	Welding Machines (As required)	As per Site requirement
25.1.8	Heating Oven(As required)	As per Site requirement
25.1.9	Portable Oven(As required)	As per Site requirement
25.1.10	Pipe Cutting Machine	As per Site requirement
25.1.11	Portable fire extinguishers as below: Soda acid – 4 sets. Dry chemical powder – 4 sets CO2 – 4 sets. Water & sand bucket (4 buckets in one stand) – 4 sets. Fire hose with nozzle (50 M length) – 4 sets.	Within 30 days
25.1.12	Staging material for borosilicate lining works in duct portion	As per Site requirement
25.2	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 CM, 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.	
25.3	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.	
25.4	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.		
25.5	If any one of T&P mentioned above is not needed for proper execution of scope of work, provided contractor has not utilized BHEL free issued T&P for completing such work, no recovery from contractor shall be applicable.		
25.6	In case deployment of T&P w.r.t requirement, is delayed or deployed for a shorter period or abnormal down time of T&P or in case T&P w.r.t requirement was not deployed by the contractor as per instruction of BHEL and BHEL had to deploy either its own T&P or from outside, the recovery shall be done from the contractor as under:		
25.6.1	In case BHEL had to deploy its own T&P, hire charges of T&P applicable for outside agencies as per extant guidelines for "Hire Charges on issue of Capital Tools & Plants" shall be recovered.		
25.6.2	In case BHEL had to deploy the T&P from outside, actual hiring cost plus applicable overheads shall be recovered.		
26.0	CONSTRUCTION SCHEDULE		
26.1	The bidder shall strictly adhere to the time schedule furnished below and mobilise resources accordingly so as to complete the entire scope of the work under this contract within the stipulated time of 10 Months from date of start of work as per intimation of BHEL (to be issued by Project Manager, BHEL or Construction Manager, BHEL).		
26.2	SI no.	Major Milestone	Months from date of start of work
	M1	Completion of Borosilicate lining work including installation of associated items U#3	8
	M2	Completion of Borosilicate lining work including installation of associated items U#2	10
27.0	COMPLETION PERIOD The entire work under this scope shall be successfully completed in all respect within 10 (Ten) months from the date of start of work. Mobilisation period is 15 days from date of LOI by BHEL.		
28.0	CERTIFICATE TOWARDS COMPLETION The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by BHEL/ NTPC. The decision of BHEL in this regard shall be final and binding on the contractor.		
29.0	REVISION ON ACCEPTED CONTRACT RATE Not applicable in this tender.		
30.0	LIQUIDATED DAMAGES/ PENALTY		
30.1	Penalty for Intermediate Milestones		
30.1.1	M1 and M2 shall be intermediate Milestones for this work. Refer Clause No. 26.2 above for M-1 & M-2.		
30.1.2	In case of slippage of these identified Intermediate Milestones, Delay Analysis shall be carried out on achievement of each of these two Intermediate Milestones in reference to Form 14.		
30.1.3	In case delay in achieving M1 milestone is solely attributable to the contractor, 0.5% per week of executable contract value* limited to Maximum 2% of executable contract value will be withheld.		
30.1.4	In case delay in achieving M2 milestone is solely attributable to the contractor, 0.5% per week of executable contract value* limited to maximum 3% of executable contract value will be withheld.		
30.1.5	Amount already withheld, if any, against slippage of M1 milestone, shall be released only if there is no delay attributable to contractor in achievement of M2 milestone.		

30.1.6	Amount required 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.
30.1.7	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 intermediate milestones shall be adjusted against LD or released as the case may be.
30.1.8	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 in to recovery.
	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.
30.2	LIQUIDATED DAMAGE/ PENALTY FOR OVERALL DELAY
30.2.1	If the contractor fails to maintain the required progress of work which results in delay in the completion of the work 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 10% of the contract value. 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 on Manday rate basis, Supplementary/Additional Items and PVC.
30.3	In case of LD recovery, the applicable GST shall also be recovered from the contractor.
31.0	CONTRACT PRICE
31.1	The bidder shall quote their rates strictly in accordance with prescribed Price schedule of Volume-III.
31.2	Unless otherwise specified in price schedule, contractor shall obtain prior approval from BHEL/ owner regarding manufacturer / make of all brought out items under contractor's scope of supply.
32.0	TAXES AND DUTIES
32.1	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. 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.
32.2	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.
32.3	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.
32.4	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.
32.5	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.
32.6	TDS under GST shall be deducted at applicable rates on gross invoice value from the running bills (RA bills).
32.7.1	You may collect TCS under section 206C(1H) of Income Tax Act, 1961 if applicable.
32.7.2	In case, you collect TCS under section 206C(1H) of Income Tax Act, 1961, following compliance is required.
32.7.2.1	TAN and PAN of vendor should appear in all invoices/claims. Copy of TAN /TCS registration is to be submitted.
32.7.2.2	Amount of TCS and Assessable value on which TCS has been calculated should be specified clearly in the invoice.

32.7.2.3	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.
32.7.3	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: - "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.
32.7.4	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 applicable interest.
32.7.5	You shall comply with all statutory amendment/notifications in this respect.
32.8	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. BHEL GSTN – Refer attached GSTN code table of BHEL. Name - BHARAT HEAVY ELECTRICALS LIMITED Address - Shall be intimated later. Specific details of BHEL GSTN, Name and Address as stated above, have been specified elsewhere in the tender.
32.9	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. Portal address. and Email address – Shall be intimated later. Specific details of above shall be intimated to successful bidder by BHEL at appropriate juncture.
32.10	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.
32.11	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.
32.12	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.
32.13	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/ leivable on BHEL, as the case may be.
32.14	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 / leivable on BHEL.
32.15	Way Bill: Successful bidder to arrange for way bill / 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.
32.16	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.
32.17	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.
33.0	TERMS OF PAYMENTS
33.1	RETENTION AMOUNT

33.1.1	Retention Amount shall be 5% of executed contract value and shall be recovered at the rate of 5% from each Running Bill admitted, including PVC Bills. Refer GCC clause no 2.22.1.
33.1.2	Retention Amount shall be refunded as per clause no 2.22.2 of GCC.
33.1.2.1	Deleted.
33.1.2.2	Deleted.
33.2.1	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. 5% of gross value of each RA bill shall be retained from each RA bill as 'rentention Amount' as described in clause no 34.1 above. All admissible recovery / adjustments etc. shall be made from the interim payable amount.
33.2.2	Out of this 95 %, 1.5 % of gross bill amount shall be paid in the following manner on certification by Engineer-in-charge 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.
33.2.2.1	0.7 % shall be paid on compliance of house keeping of vendor's working area and store/ office areas.
33.2.2.2	0.3 % shall be paid on compliance of general illumination of vendor's working area and stores, office area.
33.2.2.3	0.2 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL/ PSER and as specified in the tender.
33.2.2.4	0.3 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.
33.2.3	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.
33.2.4	The contractor shall submit his running bill, once in a month at the end of each month. The RA bill complete in all respect, accompanied by Engineer-in-charge certified measurement sheets, jointly signed, will be paid after 45 days of submission of bill, subject to completeness and correctness. Income Tax at the prevailing rates on gross value of work done & applicable surcharge shall be deducted from contractor's bill, unless exempted by Income Tax Authority.
33.2.5	Applicable GST, which can be claimed at any point, shall be released to you upon compliance of following:
33.2.5.1	You declaring such Invoice in your GSTR-1
33.2.5.2	Receipt of Goods / services and Tax Invoice by BHEL
33.2.5.3	Confirmation of payment of GST thereon by you on GSTN Portal
33.2.6	Above is subject to receipt of goods / service and tax invoice thereof along with you declaring invoice in your return and paying GST within timeline prescribed for availing ITC by BHEL.
34.0	PRICE VARIATION COMENSATION (PVC)
	Not applicable for this tender.
35.0	OVER RUN CHARGES (ORC)
	Not applicable for this tender.
36.0	METHOD OF MEASUREMENT
	Method of measurements shall be as per standard specifications included in the tender. For other items measurements shall be as per relevant IS Codes.
37.0	EXTRA/ ADDITIONAL ITEMS OF WORK
	It shall be as per relevant clause of GCC.
38.0	GUARANTEE
	Even though the work will be carried out under supervision of BHEL & supplier of Borosilicate Glass Block lining system, the successful bidder will be responsible for the quality of workmanship, quality of materials/ items and design for which the successful bidder is responsible.
	Guarantee period shall be 12 months from the date of 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.

	Other provision shall be as per the GCC.
39.0	MOBILISATION ADVANCE Not applicable for this tender.
40.0	EXCLUSION
40.1	Supply of Borosilicate lining block, Adhesive membrane and epoxy primer is excluded from the scope of successful Bidder.
40.2	Mixing machine shall be provided by BHEL to the successful bidder free of cost on returnable basis.
41.0	OTHER TERMS
41.1	Contractor shall provide temporary barricade all round the working area to avoid any untoward incident.
41.2	Any other non-conformity in safety noticed not mentioned elsewhere will also be fined. The decision of BHEL engineer is final on the above. The amount will be deducted from bills of the contractor.
41.3	The contractor shall comply with all state and central laws, various labour laws, statutory rules and regulations, etc.
41.4	The payment of wages act, minimum wages act, workman compensation act, Employers Liability act, Industrial Dispute Act, Employees Provident Fund Scheme, Employees State Insurance, Contract Labour (Regulation and abolition) Act and other acts, rules & regulation for labour as may be enacted by the Government during the tenure of the contract and having force or jurisdiction at site. The contractor shall give to the local government body police and other relevant authorities all such notices as may be required by law.
41.5	While bidder's scope includes deployment of all resources, like T&P, materials, consumables, manpower including supervision etc for proper completion of the subject job and no sub-contracting for execution of the job is allowed by BHEL, depending on project's requirement and on prior acceptance of BHEL, bidder may associate agencies for deployment of skilled/ unskilled manpower only for site execution. Bidder should arrange all resources, like T&P, materials, consumables, supervision etc directly for the subject job.
41.6	Drawing showing enough details for the construction as per the specification shall be furnished to the contractor in a phased manner as far as possible.
41.7	All other term & conditions of this specification, not mentioned above shall be governed by the pertinent provisions of GCC, Volume-IB.

ANNEXURE-I

SAFETY PLAN

01. Safety Policy of the Contractor to be enclosed:
02. When was the Safety Policy last reviewed:
03. Details of implementation procedure / methods to implement Safety Policy / Safety Rules:
04. Name, Qualification, experience of Safety Officer
05. Review of Accidents Analysis Method, Methods to ensure Safety and Health:
06. Unit executive responsible to ensure Safety at various levels in work area:
07. List of employees trained in safety employed before execution of the job. Give the details of training:
08. Safety Training Targets, Schedules, methods Adopting to providing safety training to all employees:
09. Details of checklist for different jobs / work and responsible person to ensure compliance (copy of checklist to be enclosed):
10. Regular Safety Inspection Methods and Periodicity and list of members to be enclosed:
11. Risk Assessment, Safety Audit by Professional Agencies, Periodicity:
12. Implementation of Recommendations of Audit / Inspections. Procedures for implementation and follow up:
13. Provision for treatment of injured persons at work site:
14. Review of overall safety by top Management and Periodicity:
15. System for implementation of Statutory legislations:
16. Issue of PPEs to employees, Periodicity / stock on hand etc:

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MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

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Project	Vendor			Package/Unit		
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#1.01	Cumulative number of days in the month, the nominated Quality Officer or his authorised nominee was not available	QUALITY	1.5		Quality Officer or his authorised nominee should be available for all the days of working at site	Daily Log Book entry/Incident Registers/letter references
#1.02	Number of instances of non- compliance wrt FQP, Standard Drawings, Specifications, E&C Manuals etc.	QUALITY	1.5		No deviation from FQP, Standard Drawings, Specifications, E&C Manuals etc. is allowed without BHEL Engineer's approval.	Daily Log Book entry/Incident Registers/letter references
#1.03	Percentage submission of test certificates for batches of welding electrodes, cement, sand, aggregate, consumable, Paints etc. as applicable for this month OR In case of MM & MH package, monthly checks for Storage/Preservation of material.	QUALITY	1		Submission of 100% Test certificates for materials as per FQP is mandatory. MM & MH package: Storage/Preservation as per manual/procedure.	Daily Log Book entry/Incident Registers/letter references
#1.04	Number of incidences of improper storage & preservation (not in accordance to the guidelines of BHEL MUs or approved FQP) of materials, consumables (viz. gases, welding electrodes & fluxes, fuel etc.) & bought-out items (paints, fasteners etc.) under the custody of the contractor	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#1.05	Rework/ Rejection instances in a month necessitated due to deviation from Standard Drawings /Specifications /Manuals /E&C procedures /FQPs or due to Poor Workmanship by contractor	QUALITY	2		Reworks/ Rejection should be as minimum as possible. Total number of reworks/ rejections due to reasons attributable to contractor.	Daily Log Book entry/Incident Registers/letter references
#1.06	Delay in preparation & submission of signed protocols / log sheets / site register / NDT test reports as per approved FQP/ Qualified Welder List along with photocopies of Welder ID cards / Welder Performance Evaluation records etc. in the month OR in case of MM / MH package reconciliation statement / verification report.	QUALITY	1		Within 2 days of measurements taken or within first 3 working days of next month, as advised by BHEL Engineer	Daily Log Book entry/Incident Registers/letter references
#1.07	Number of instances for Major equipment/product failure due to negligence/improper work/poor workmanship by contractor	QUALITY	1		No such event should happen	Daily Log Book entry/Incident Registers/letter references
#1.08	Total number of complaints received in the month on the quality of finish / aesthetics	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package In-charge

Name and Signature of Contractor

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Project	Vendor			Package/Unit		
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.01	Cumulative number of days of delay in submission of Plan FOR THE MONTH supported by deployment plan of Major T&Ps and Manpower (as per Form F-14) and relevant construction/layout drawings - like A4 plan / elevation views of plan status for structures / pressure parts/Civil Works, Piping isometrics for piping, Layout / PID / System reference sketch, Unloading / storage plans etc.as applicable.	PERFORMANCE	5		Number of days delayed from second working day of the month	Daily Log Book entry/Incident Registers/letter references
#2.02	Percentage of timely submission of Daily Reports for Progress of work, Resources, Consumables etc.	PERFORMANCE	1.5		Percentage of timely submission of daily reports/ Scheduled date is successive next day for each day	Daily Log Book entry/Incident Registers/letter references
#2.03	Number of days delayed for submission of FQP log sheets / protocols / Monthly Progress Reports for the work executed during the month under measurement	PERFORMANCE	1.5		Number of days delayed/Scheduled date is first 2 working days of next month	Daily Log Book entry/Incident Registers/letter references
#2.04	Percentage Shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month as per Form-14	PERFORMANCE	35		As per Part-A of Form-14	Progress review formats
#2.05	Number of days delayed in submission of Running bills with complete supporting documents (including updated reconciliation statement of BHEL issued material) for the month	PERFORMANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#2.06	Number of times the Top Management of contractor did not respond to critical issues of site, for the month	PERFORMANCE	1		Total number of instances	Daily Log Book entry/Incident Registers/letter references
#2.07	Cumulative number of days in the month the works were stopped / refused on interpretation of contract clauses/scope due to tendency of taking undue advantage by interpreting contract clauses in their favour	PERFORMANCE	2		Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#2.08	Number of times rework was refused by contractor	PERFORMANCE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package In-charge

Name and Signature of Contractor

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Project	Vendor			Package/Unit		
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.09	Cumulative number of days in the month recording / logging was not done in daily log / history register / hindrance register / soft form in a PC maintained at BHEL Site Office	PERFORMANCE	1		Cumulative number of days recording or logging was not done / all days of the month	Daily Log Book entry/Incident Registers/letter references
#3.01	Percentage of Manpower Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B2 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.02	Percentage of T&P Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B1 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.03	Cumulative number of major instances in the month hampering / affecting progress of work due to breakdown or non-availability of major T&P and MME for the work, under the scope of Contractor	RESOURCES	3		Cumulative number of instances	Daily Log Book entry/Incident Registers/letter references
#3.04	Cumulative number of major instances in the month hampering / affecting progress of work due to non-availability of Consumables/ use of improper consumables under the scope of contractor	RESOURCES	3		Cumulative number of instances	Daily Log Book entry/Incident Registers/letter references
#4.01	Number of non-compliances during the month for Statutory requirements like validity of Labour Licence, Insurance Policy, Labour Insurance, PF, BOCW Compliance etc. and any other applicable laws/ Regulation, Electrical Licence, T&P fitness certificate, Contractors' All Risk Policy etc. as applicable	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#4.02	Cumulative number of days in a month poor illumination is reported at storage area, erection area, pre-assembly area and other designated areas by BHEL site.	SITE INFRASTRUCTURE & SERVICE	0.5		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.03	Cumulative number of days of non-availability of well-maintained toilets facilities for workers (separate for men and women) and non-availability of potable drinking water stations for workers in specified areas.	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package In-charge

Name and Signature of Contractor

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Project	Vendor			Package/Unit		
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#4.04	Total number of instances in the month, Housekeeping NOT attended to in spite of instructions by BHEL -i.e. removal / disposal of surplus earth / debris / scrap / unused / surplus cable drums / other electrical items / surplus steel items / packing materials, thrown out scrap like weld butts, cotton waste etc. from the working area to identified locations	SITE INFRASTRUCTURE & SERVICE	2		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.05	Total number of instances in a month, Site Office with reasonably good facilities including enough nos. of computers and printers etc. for use by office and supporting staff was not made available/maintained.	SITE INFRASTRUCTURE & SERVICE	0.5		No discrepancy during regular or surprise visits	Photograph and report of the Engineer
#5.01	Number of days delayed in making labour payments for the last month	SITE FINANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#5.02	Number of complaints from labour/ sub supplier/ sub-contractor for non-receipt of payments from contractor	SITE FINANCE	1.5		Total number of complaints or reporting	Daily Log Book entry/Incident Registers/letter references
#5.03	Number of times the site operations were hampered for want of funds at the disposal of site-in-charge.	SITE FINANCE	1.5		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#6.0	Performance against HSE Parameters (as per Annexure-AA)	HSE	10		Score as per Safety Performance Evaluation System, scaled down to 10	Safety Performance Evaluation System
Total		100				

Less Deduction in Score Due to Fatal Accidents attributable to the Contractor @ 20 points/ accident	
Less Deduction in Score Due to Major Accidents (Permanent Disability or bodily injury by which person injured is prevented to resume to work within 48 hours or more after accident,, Major Damage to Equipment etc.) attributable to the contractor @ 15 points/ accident	
Less Deduction in Score Due to Minor Accidents attributable to the contractor @ 2 points/ accident	
Less Deduction in Score Due to not Maintaining of Labour Colony (if applicable) as per BHEL HSE policy @3 points in a month on verification any day	
Final Score	

Name and Signature of BHEL Package In-charge

Name and Signature of Contractor

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Project	Vendor			Package/Unit		
Sl. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents

Performance Score Summary for the Month	Total Score	Score Obtained
QUALITY	10	
PERFORMANCE	50	
RESOURCES	20	
SITE INFRASTRUCTURE & SERVICE	5	
SITE FINANCE	5	
HSE	10	
OTHERS (deductions if any)	0	-
TOTAL	100	

Note:

- 1) It is only indicative and shall be as per the online format issued by BHEL time to time.
- 2) No request will be entertained after specified date of current month w.r.t. changes requested in the scores of immediate previous month.

Name and Signature of BHEL Package In-charge

Name and Signature of Contractor

Monthly Safety Performance Evaluation of Contractor

SL	Parameter for Measurement	M/O	Wt	Supporting Documents
1a	Induction training for new workers conducted through audio-visual medium & documented ?	M	1	Induction Training Records
1b	Tool box talk conducted regularly as per plan, and documented?	M	1	Toolbox Talk Records
1c	Contractor in charge and safety in charge attended safety meetings?	M	2	Minutes of Meeting
1d	Whether observations in safety meetings are complied before next meeting?	M	2	-do-
1e	Preparation and submission of Monthly HSE report within stipulated time	M	1	Report submission date
1f	Preparation and submission of Incident/near-miss report and RCA Report (as applicable) within stipulated time	M	1	Incident/ Near Miss Records
1g	Carrying out Inspections and submission of Inspection reports within stipulated time	M	1	Inspection Records
1h	Regular Job Specific Training ensured for High Risk Workers (through audio-visual medium) as per plan	M	1	Training & Attendance Records
2a	Whether the contractor is registered under BOCW	M	2	BOCW Registration Certificate
2b	Availability of Qualified safety officer (1 for every 500 labour)	M	2	Safety Officer qualification & experience records
2c	Availability of Qualified safety supervisor (1 for every 100 labour)	M	2	Safety Officer qualification & experience records
2d	All the workers are provided and using safety helmets and safety shoes/gum boots	M	2	PPE Issue Records, Inspection/ non-conformity records
2e	Housekeeping done on regular basis and scrap removal at site	M	1	Housekeeping records, Inspection/ non-conformity records
2f	Usage of Goggles/Face shields and Hand gloves for gas cutter and grinders		1	PPE Issue Records, Inspection/ non-conformity records
2g	Wall openings & floor openings are guarded?		1	Inspection/ non-conformity records
2h	Adequate illumination provided in all working area?		1	Inspection/ non-conformity records
2i	Safety posters, sign boards and emergency contact numbers in all prominent location are displayed?		1	Inspection/ non-conformity records
2j	Availability of automatic reverse horns, Main horn, hook latches for Vehicles, mobile cranes, Hydras		1	Inspection/ non-conformity records
2k	Ban of carrying mobile phones to work place is implemented for workers		1	Inspection/ non-conformity records
2l	Availability of Tags & Inspection Certificates for Cranes of all capacities		1	Master T&P List with internal & external test details
2l.2	Availability of Tags & Inspection Certificates for Winches of all capacities		1	Master T&P List with internal & external test details
2l.3	Availability of Tags & Inspection Certificates, colour coding for Chain pulley blocks		1	Master T&P List with internal & external test details
2l.4	Availability of Tags & Inspection Certificates for Vehicles - Trailers, Dozers, Dumpers, Excavators, Mixers etc.		1	Master T&P List with internal & external test details
2l.5	Availability of Tags & Inspection Certificates for Welding machines, grinders, Drilling machines, etc.		1	Master T&P List with internal & external test details

2l.6	Availability of Tags & Inspection Certificates, colour coding for Wire rope slings etc.	1	Master T&P List with internal & external test details
2l.7	Availability of Tags & Inspection Certificates for Batching plants	1	Master T&P List with internal & external test details
2m.1	Use of Lifting Permit as per requirement	1	Permit Records
2m.2	Use of Height Permit as per requirement	1	Permit Records
2m.3	Use of Hot Work Permit as per requirement	1	Permit Records
2m.4	Use of Excavation permit as per requirement	1	Permit Records
2m.5	Use of Confined space work permit as per requirement	1	Permit Records
2m.6	Use of Grating removal and safety net removal permit as per requirement	1	Permit Records
2m.7	Use of Lockout-Tag out permit as per requirement	1	Permit Records
2m.8	Use of Radiography permit as per requirement	1	Permit Records
2m.9	Use of Night/ Holiday Work Permit as per requirement	1	Permit Records
2m.10	Use of Any other Applicable Permit as per requirement	1	Permit Records
3a	Material safety data sheet(MSDS) available for all chemicals and displayed in usage and storage area?	1	Inspection/ non-conformity records
3b	Spillages of oil/concrete and other chemical is controlled and cleaned by proper method in case of spill?	1	Inspection/ non-conformity records
3c	Availability of adequate number of urinals in workplace and in elevations and maintained	M	1
3d	Availability of rest rooms for workers at site	M	1
3e	Availability of Drinking water facility at work spot		1
3f	Hygienic Labour colony is provided for workers.		1
4a	Is heavy/complex critical lifting permit obtained for heavy, complex materials before handling/erection activity?		1
4b	Whether area below lifting activities barricaded		1
4c	Availability of experienced rigging foreman		1
4d	Is agency is following proper storage and handling procedure as per manufacturer standard for all hazardous material?		1
4e	Are oxygen and acetylene cylinders are transported to work place from storage area in trolleys		1
5a	Whether all deep excavation has been protected by barrier		1
5b	Sloping/benching & shoring provided for excavation as per requirement?		1
5c	Proper access and egress provided for excavations?		1
5d	Blasting is done in controlled manner?		2
6a	Whether Electrical booth is equipped with Co ₂ fire extinguishers and fire buckets filled with sand?		2
6b	Availability of Illumination lamp in electric booth?		1
6c	whether Caution Boards have been displayed?		1
6d	Usage of Metal Plug top for all hand power tools ?		1
6e	Usage of Insulated welding cables.		1
6f	Electrical Booth/Distribution Board to be covered by proper Canopy.		1
6g	Availability of functional & individual 30ma ELCB / RCCB and MCB for protection and conducting periodical check-up?		1
6h	Double earthing for panel boards and all machinery & proper earth pit with regular inspection available?		1
6i	Whether Electrician is qualified and experienced		1
6j	Availability and usage of Rubber hand gloves by electrician?		1

7a	Whether Scaffolding pipes made with steel or aluminium, are being used and checked periodically by experienced/ certified scaffolder?	2	Inspection/ non-conformity records	
7b	8mm Stainless Steel wire rope with plastic cladding is provided for life line (Vertical / Horizontal) during height work?	2	-do-	
7c	Availability of emergency lighting in case of power failure	1	-do-	
7d	Whether all the openings are covered with Safety Nets made of fire proof Nylon?	1	-do-	
7e	Whether MS pipe rails around staircases & platforms in usage are provided with top, middle rails and toe guard ?	1	-do-	
7f	Whether Ladder with vertical life line /Fall arrestor is available to climb?	1	-do-	
7g	Whether all workers deployed for working at height have been issued height pass after undergoing vertigo test?	1	Height Pass records	
7h	Whether all workers deployed for height work / climbing ladder are provided and using Double lanyard safety belt?	1	PPE Issue records, inspection/ non-conformity reports	
7i	Is all hand tools/Small material used by height workers is tied firmly to prevent fall?	1	-do-	
8a	Flash back arrestors for all gas cutting sets is available on Torch side and cylinder side	1	Inspection/ non-conformity records	
8b	Oxygen/Acetylene/LPG cylinders not in use have caps in place and stored separately?	1	-do-	
8c	Availability of Face screen, Hand gloves, and Apron, for welders	1	-do-	
8d	Protection from falling hot molten metal during metal cutting / welding at height by providing GI sheet below the cutting area especially in fire prone areas	1	-do-	
9a	Pre-employment medical check-up done for all workers and submitted?	1	Medical check records	
9b	Availability of first aid centre, with MBBS doctor(Own or Sharing basis)	M	2	Attendance records
9c	Availability of Ambulance facility 24 hours (Own or sharing basis)	M	2	-do-
9d	Is First aid trained personnel's are available and their names are displayed at site?	M	1	-do-
9e	Availability of Emergency vehicle at site		1	
9f	Periodical medical check-up is conducted for all the workers and submitted?		1	Medical check records
9g	Availability of sufficient number of first aid box as per standard list and maintaining record		1	Inspection records
10a	Availability of Fire extinguishers, buckets at all vulnerable points		2	Fire extinguisher records
10b	Periodic fire mock drill conducted?		1	Fire, Mock drill records
10c	Are all flammable materials are stored separately?		1	
10d	Periodic grass cutting is done in material storage area?		1	
10e	Availability of 24V DC lighting in confined space work area		1	
10f	Availability of exhaust fan in confined space work area		1	

Note:

- M: Mandatory; O: Optional. Points other than mandatory can be excluded with appropriate justification (scope etc.) by BHEL. Score obtained in selected parameters divided by maximum possible score of selected parameters shall be multiplied by 10 for use in as per point Sl. no. # 6.0 as detailed at page 4 of Form F-15.
- There shall be deduction of marks from overall score for Fatal/ Major/ Minor Accidents and for not maintaining labour colony, as detailed at page 4 of Form F-15.

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	APPLICATION OF BOROSILICATE GLASS BLOCK LINING SYSTEM INSIDE THE MS FLUE CAN OF EXISTING CHIMNEY & ALREADY ERECTED TRANSITION DUCTS OF FGD UNIT-1, 2 & 3 AT 3x660 MW BARH STPP, STAGE-I.	
Ref	1.0	Tender no PSER:SCT:BAR-C2110:21
	2.0	BHEL's NIT, vide reference no PSER:SCT:BAR-C2110:WFH-12, Date: 15-07-2021
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:BAR-C2110:TCN-01, Date: 27-07-2021.
	4.0	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/uploaded offer/documents in accordance with tender instructions with acceptance of the terms & conditions of the tender by us and as per aforesaid references.

Thanking you,

Yours faithfully,

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

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION DJ-9/1, SECTOR-II, SALTLAKE CITY, KOLKATA - 700 091
 फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : (033) 23398000