

3218

TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED



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Chapter - I: PROJECT INFORMATION

1.0

FRAMEWORK AGREEMENT FOR HIRING OF INDUCTION HEATING EQUIPMENT (IHE)

Sl. No.	Site Name	Address
01	TALCHER	BHEL Site Office, 2X660 MW NTPC Talcher, STPP EPC Project, Stage-III, AT/POST: TALCHER THERMAL, NEAR TALCHER THERMAL TOWNSHIP, DISTT-ANGUL PIN -759101, ODISHA
02	PVUNL Patratu	BHEL Site office, 3X800MW PVUNL Patratu, Post –PTPS Ramgarh, Jharkhand-829119

Above information are for general guidance of Contractor. However, Contractor has advised to visit the site and appraise himself about the conditions of site and infrastructure available in the area for fulfilling their commitments under the contract.

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Chapter – II: Scope of Works and Technical Specifications

2.0. BROAD SCOPE OF WORK.

Intent of this tender is to finalize a contract for hiring of Induction Heating Equipment (IHE) with all the accessories along with the operator cum technician, on monthly hire basis for carrying out PWHT at BHEL PSWR sites as per the specification/details provided hereunder or elsewhere in this tender specification.

2.1. **Technical details (as in table below) for Induction Heating equipment/machine.**

The offered equipment/machine shall meet the following requirements.

<u>Technical Requirement</u>		
Sl. No.	Description of Parameter/Feature	Details/Requirement
2.1.1	Number of equipment/machines Required	14
2.1.2	Type/Version of equipment/machine	Induction Heating equipment/machine
2.1.3	Power	75KW (Maximum)
2.1.4	Input Voltage	400 V – 460 V
2.1.5	Input Frequency	50 Hz
2.1.6	Output Frequency	Above 3 KHz
2.1.7	Fault Protection	Automatic system shut down in case of any fault in system (Overload, Under Voltage, Short Circuit etc.)
2.1.8	Job Temperature	Induction Heating equipment/machine shall be capable of heating pipes of grade P-91/ P-92/ P-22/ P-23 up to 770°C.

NOTE: - Bidder shall furnish relevant document in support of above-mentioned technical specification like technical catalogue etc.

Technical Evaluation will be done as per particular Make & Model of Induction Heating Equipment. Bidder may deploy any Sl. No. of same Make & Model of Induction Heating Equipment.

2.2 GENERAL REQUIREMENTS

- 2.2.1 Make / Model / Capacity of the IHEs proposed to be provided by the bidder shall be indicated.
- 2.2.2 IHEs shall be engaged in the Project construction work of Thermal Power Plants consisting of Boiler, TG, Power Cycle Piping and other structure / equipment of these plants, as per the instructions of BHEL Site Engineer-in-Charge.
- 2.2.3 IHEs shall be provided with operator cum technician, accessories, consumables and all other spares for carrying out PWHT of P91 Weld Joints in Boiler, TG, Power Cycle Piping and other structure / equipment of these plants, as per the requirement at site from time to time.

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Chapter – II: Scope of Works and Technical Specifications

- 2.2.4** The IHEs shall be suitable to carry out 'Heat Treatment Cycle' for material mentioned in **Annexure-I & Heat Treatment Manual AA/CQ/GL/011/Part II-HTM**. The material mentioned in Annexure-I is tentative only not exhaustive.
- 2.2.5** Power supply for normal operation of the IHE shall be provided by BHEL / BHEL's erection contractor after the services of the IHE is accepted by BHEL till the service are being utilized by BHEL. Spares required for regular and breakdown maintenance of Induction Heating equipment/machine shall be provided by bidder at his own cost.
- 2.2.6** All the IHE deployed at site should be in good working condition & BHEL shall have the right to utilize the IHEs for round the clock operation as per requirement without any extra cost.
- 2.2.7** Interested bidders are requested to visit the site mentioned at **Chapter-I (Project Information)** to see the site conditions before submitting their offer.
- 2.2.8** The offered equipment should have safety devices such as automatic system shut down in case of any fault in system (**Overload, Under Voltage, Short Circuit etc.**).

2.3 OPERATION, MAINTENANCE AND OPERATING CREW CHARGES

- 2.3.1** The price quoted shall be inclusive of operation and preventive as well as breakdown maintenance of the equipment. The bidder shall deploy Operator–cum–Mechanic, to ensure smooth operation and maintenance of the equipment without affecting work. The equipment shall be available for service on all days of the month. Bidder shall carry out preventive maintenance beyond normal working hours or as per schedule agreed with BHEL engineer.
- 2.3.2** Bidder shall provide all spare parts and other necessary consumables that are necessary to fulfil the scope of services under this specification within the quoted rates.

2.4 CALIBRATION OF EQUIPMENT

Contractor shall arrange and submit Calibration Certificate of the equipment at site from the statutory authority as applicable at his own cost.

2.5 HEAT CYCLE TESTING AT SITE

BHEL will provide suitable test piece for carrying out the Heat Cycle Test.

2.6 RELOCATING EQUIPMENT WITHIN SITE PREMISES

IHEs shall be shifted from one location to other location within the same site during the hiring period without any additional cost implication to BHEL.

2.7 Contractor's Obligation on Completion of work

On completion of the work, all temporary buildings, structures, cables etc., shall be dismantled and debris shall be removed by the contractor at his own cost. In the event of failure to do so, the expenditure towards clearance of the same will be recovered from the contractor. The decision of BHEL Engineer in this regard shall be final.

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Chapter – III: Facilities in the Scope of Contractor/BHEL

3.0 Accommodation:

Contractor has to make his own arrangements for residential accommodation for their crew / staff.

3.1 Electricity

3.1.1 Electricity for operation of Induction Heating Equipment for PWHT of P91 Joints, shall be provided by BHEL/Erection agency free of cost.

3.1.2 BHEL shall not be responsible for any loss or damage to the contractor's equipment as a result of variations in voltage / frequency or interruptions in power supply.

3.1.3 Contractor has to make his own arrangements for electricity requirement for his staff colony at his cost. Any duty, deposit involved in getting the Electricity shall be borne by the bidder. As regards to contractor's office shed also, all such expenditure shall be borne by the contractor.

3.2 Construction Water

Construction water to be arranged by Contractor. The bidder shall also arrange for further distribution at his own cost.

3.3 Drinking Water

Bidder shall arrange drinking water at the work spot at his own cost.

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Chapter – IV: T&Ps and MME to be deployed by Contractor

4.0 TOOL & PLANTS

- A Necessary tools, tackles and spares required for normal operation, regular maintenance and to attend the break downs shall be provided by the bidder. Bidder shall ensure the healthiness of the IHEs on all days during contract period, no additional payment will be made for any fault rectification/ maintenance of IHEs.

- B Consumables like Glass Fiber Cloth, Glass fiber cord, Ceramic Fiber Blanket, Ceramic fiber rope, K Type Thermocouple, Compensating Cable, Annealing cables etc., to carry out the work will be provided by Bidder.

- C **MEASURING AND MONITORING DEVICES (MMD):**
AS PER REQUIREMENT.

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Chapter – V: Facilities by BHEL

5.1 Open Space

- 5.1.1** Minimum Open space as made available by customer will be provided at free of charges to the contractor, for construction of temporary office shed, contractor's stores shed(s).
- 5.1.2** Location and area requirement for storage sheds shall be discussed and mutually agreed to.

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Chapter – VI: Time Schedule

6.1 TIME SCHEDULE & MOBILIZATION

6.1.1 INITIAL MOBILIZATION AND TENTATIVE SCHEDULE FOR DEPLOYMENT OF EQUIPMENT

- i. Equipment shall be deployed and made operational at site within 15 (Fifteen) days from the written intimation for deployment of equipment. A separate written notice asking to deploy the equipment shall be issued by BHEL. Deployment/mobilization days shall be counted from the date of intimation or date of LOA, whichever is later (Excluding the day of intimation/date of LOA).
- ii. Delay in deployment shall attract penalty at the rate of 0.5% of the work order value of individual machine (without any extension period), per week of delay or part thereof subject to a maximum of 10% of the work order value of individual machine (without any extension period). In case work order is cancelled by BHEL (reason not attributable to contractor) before expiry of regular period as mentioned in particular work order (i.e. without any extension), then work order value shall be the executed value till such time.

Example:

(A) Monthly Hiring Charges of one equipment = ₹10,000/-.

(B) Monthly O&M Team Charges (2 operators per machine for 24 hours operation) = ₹5000/-.

(C) Regular Deployment Period as per individual work order = 12 Months

(D) Mobilization-Demobilization Charges per equipment = ₹20,000/-

(E) Work Order Value of Individual equipment = (A + B) *C + (D) = (10000 + 5000) x 12 + 20000 = ₹2,00,000/-

(F) Penalty for Deployment Delay for 1 week = 0.005 x 2,00,000 = ₹1000/-.

6.1.2 COMMENCEMENT OF CONTRACT, TERMINATION & FORECLOSING

(A) Commencement of Contract Period:

Validity of the Rate Contract shall be for a period of 24 (Twenty Four) months counting from the date of issue of original LOA.

(B) The contract may be extended at the discretion of BHEL for a further period of 03 (Three) months on the existing terms and conditions in writing. Any further extension shall be with the consent of both the parties in writing.

(C) Commencement of Hiring period: Hiring Period of individual IHEs shall commence from successful trial heat treatment cycle of the concern IHE at Project Site up to the period of last operation of the equipment prior to releasing the equipment for demobilizing as certified by BHEL Site Engineer and acceptance by BHEL.

(D) Any Work Order issued within the Contract validity period shall fall within the scope of the Contract, irrespective of the actual date of deployment of Induction Heating Equipment. However, deployment under the Contract shall be limited to a maximum period of Three (03) years from the date of issue of the original LOA

(E) Delay in commissioning of equipment shall attract penalty at the rate of 0.5% of the work order value of individual machine (without any extension period), per week of delay or part thereof subject to a maximum of 10% of the work order value of individual machine (without any extension period). In case work order is cancelled by BHEL (reason not attributable to contractor) before

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expiry of regular period as mentioned in particular work order (i.e. without any extension), then work order value shall be the executed value till such time.

- (F) If the performance/services of the contractor or the deployed equipment are not to the satisfaction of BHEL, the contract is liable for termination without prior notice.
- (G) BHEL reserves the right of foreclosing the Contract or foreclosing of hiring period of concern IHE within the initial hiring period or extended hiring period with 15 days' advance notice, without assigning any reason and no payments & no compensation will be made for the period of foreclosure (i.e. after the 15 days' notice period). Hiring charges of the IHEs, in such case shall be paid on pro rata basis of the monthly rate for the number of days worked at site as per Clause No. 7.6 & 7.7. In addition to this Mob-demob charges shall be paid.

6.1.3 REGULAR WORKING HOURS

- (A) The services of the IHE shall be made available to BHEL for round the clock operation (i.e. Twenty-Four hours a day) including on Sundays / Weekly holidays as per the site requirement.
- (B) O&M Team shall be available for the operation of the IHE round the clock on normal working days as well as on holidays as per the site requirement/exigency.
- (C) BHEL reserve the rights to decide number of operators per IHE or for multiple IHEs as per nature & exigency of work for round the clock operations.
- (D) However, the normal / required working hours and Timings shall be fixed and communicated by BHEL Site Engineer as per the requirement / operational convenience.
- (E) For recording the days of availability of services, vendor is required to maintain a separate register or log sheets at site, which shall be certified by BHEL Site Engineer.

6.1.4 Price Variation: Agreed monthly hire charge shall remain **firm** throughout the **Regular Duration** (Including **Extension Period**) indicated against the equipment. In case of extension period, if any, the Monthly Hire Charges will be paid only and no changes will be made in mobilization & Demobilization charges.

6.1.5 HOLIDAYS AND OTHER BENEFITS: BHEL holidays (including Sundays) shall be treated as holidays for the operation of this contract.

Once the job is started, machine can not be stopped till the completion of job (Approximately 72 hours). Therefore, activities are likely to be carried out on Sundays and other holidays as well.

1. In case services are availed on BHEL holidays (including Sundays), the same shall be treated as overtime and shall be paid as per clause 7.7.

Or

2. Working on BHEL holidays (including Sundays), can be compensated by availing holiday/off on other days when machine is not in use with the permission of BHEL executive. In such case overtime charges shall not be applicable/paid.

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Chapter – VII: Terms of Payment

7.0 PAYMENT TERMS

- 7.1 The contractor shall submit his Running Account (RA) Bills towards mobilization, monthly charges, de-mobilization charges and GST etc., with all the details required by BHEL on or before the specified date every month. Payment of Monthly Hire Charges as certified by the BHEL Engineer-in-Charge will be made once in a calendar month at BHEL Site. Billing cycle may be as per mutually agreed cut-off dates.
- 7.2 Payment for RA Bills will normally be released in around 30 days of submission of the bill with measurement/log sheets. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile.
- 7.3 Progressive Monthly hiring period shall be considered for payment purpose from the date of successful load testing of the equipment and till the equipment withdrawn for de-mobilization from the site. Mobilization/demobilization shall be paid separately.
- 7.4 No advance payments shall be made by BHEL for this contract.
- 7.5 Payment towards mobilization and de-mobilisation of equipment shall be made in the manner as specified below.
- 7.5.1 First 50% of the specified amount for mobilization and demobilization will be paid after 1st successful Heat Cycle Test of equipment at project site location and its written acceptance by BHEL.
- 7.5.2 Remaining 50% of the specified amount for mobilization and demobilization will be paid after removing the equipment from the project site and clearing the site premises in all respect.
- 7.6 **PRO RATA DAILY & HOURLY HIRE CHARGES:** In case services are availed for part of a calendar month, pro-rata payment of Hire Charges for the utilized number of days shall be made by BHEL as follows.
- 7.6.1 Pro Rata Daily Hire Charges = Monthly Hire Charges divided by 26
- 7.6.2 Pro Rata Hourly Hire Charges = Monthly Hire Charges divided by 312
- 7.7 **HOURLY OVERTIME CHARGES:**
- Hourly Overtime charges = Pro Rata Hourly Hire charges (as in 7.6.2)
- 7.8 **BREAK IN SERVICES DUE TO BREAKDOWN, ABSENCE OF OPERATING CREW ETC. DISALLOWANCE OF RENTAL/ OFFSETTING OF LOST HOURS**
- 7.8.1 The contractor shall ensure 100% availability of the services of equipment. If, however there is any breakdown of the equipment, the services shall be restored at the earliest so as not to affect the work at project site.
- 7.8.2 Regular/Breakdown Maintenance Period of one day per month shall be permitted. The same shall be decided in consultation with BHEL Engineer. Bidder shall carry out preventive maintenance beyond normal working hours or as per schedule agreed with BHEL Engineer.
- 7.8.3 The bidder must maintain and operate the IHEs regularly at site with their manpower.
- 7.8.4 Breakdown/repair should be immediately attended by the bidder. The bidder shall maintain a log book giving full operation, routine / preventive maintenance and breakdown details and obtain signature of BHEL Site Engineer on a daily basis or as per the site procedure. Original log

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sheets shall be submitted to BHEL at the end of every month and before submission of monthly bills at site.

- 7.8.5 The cost of any repair arising during the operation should be borne by the bidder.
- 7.8.6 Necessary tools and tackles and IHE spares should be made available by the bidder immediately to attend the break downs at their cost.
- 7.8.7 In case of absence of operator, the bidder should make an alternative arrangement for the continuation of work to meet the erection requirement of site.
- 7.8.8 If the IHEs could not be utilized due to any fault/failure of the machine, over and above the regular/Breakdown maintenance period of one day per month, the proportional amount towards IHE Hire charges, for the total number of days taken for making the IHE operational shall not be paid. Additionally, O&M Team charges also shall not be paid for those days. Charges shall be paid as per **Clause No. 7.6**.

Example:

- Monthly Equipment Hire Charge is = ₹1,00,000/-.
 - Monthly O&M Team Charges (2 Operator per machine) = ₹30,000/-.
 - Monthly Equipment and O&M Team charges = ₹1 30,000
 - Per day Hire Charge (Equipment and O&M Team) is = ₹1,30,000/26 days = ₹5,000/-.
 - Equipment idle for the reasons not attributable to BHEL = 07 days
 - Period considered for non-payment = 7 – 1 (Regular/Breakdown Maintenance Period of one day per month shall be permitted) = 6 Days.
 - Pro rata payment for 6 days = 6 x ₹5000 = ₹ 30,000.
 - Revised Monthly Payment (Equipment and O&M Team) = ₹1,30,000 - ₹30,000 = ₹1,00,000/-.
- 7.8.9 If the non-availability of the IHE extends beyond seven days, then apart from non- payment for the period of non-availability, additional Penalty will be charged at the rate of 10% of the Daily Hire Charges including O&M Team charges (Excluding mob-demob charges), for every day of non-availability (including intervening Sundays and holidays) over & above seven days, limited to 10% of the awarded Work Order Value (Without any extension) or Executed Work Order value, whichever is lower.

Example:

- Monthly Equipment Hire Charge is = ₹1,00,000/-.
- Monthly O&M Team Charges (2 Operator per machine) = ₹30,000/-.
- Monthly Equipment and O&M Team charges = ₹1 30,000.
- Per day Hire Charge (Equipment and O&M Team) is = ₹1,30,000/26 days = ₹5,000/-.
- Equipment idle for the reasons not attributable to BHEL (over & above seven days) = 02 days

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- Total Period considered for non-payment = 7 + 2 - 1 (Regular/Breakdown Maintenance Period of one day per month shall be permitted) = 8 Days
- Pro rata payment for 8 days = 8 x ₹5000 = ₹ 40,000
- Penalty for 02 days = 0.1*5000*2= ₹1000/-.
- Revised Monthly Payment (Equipment and O&M Team) = (₹ 1,30,000 – ₹ 40,000 - ₹ 1000) = ₹ 89,000/-.

7.8.10 In case of total failure of the IHE at site, the contractor should substitute a similar IHE within 15 days. Time taken in replacement of equipment will be treated as idle period and hire charges for this period shall be paid as per clause 7.8.9. mobilization/demobilization charges shall not be paid for the replacement IHE. In case, the contractor fails to substitute faulty IHE within 15 days, BHEL may engage a suitable IHE as per Clause 2.7 of GCC. The decision of BHEL in this regard shall be final and binding on the contractor.

7.8.11 When additional operator is required, bidder has to arrange the operator within 48 hours of intimation. **If work is held up due to non-availability of operator, hiring charges of that particular IHE shall be paid as per clause 7.8.8.**

7.8.12 BHEL may also choose to utilize the services of the equipment in extended hours or on holidays to offset the lost hours due to breakdown in lieu of disallowance (deduction from monthly bills) as stipulated above. Construction Manager BHEL shall permit offsetting of lost hours only after the incidence of such breakdown and usually within the remaining period of the concerned calendar month of breakdown. Carrying forward to subsequent months shall be at the sole discretion of BHEL construction manager.

Offsetting shall be done with express prior permission of BHEL Construction Manager by availing the services in extended hours or on holidays. Depending on the actual project requirement, BHEL may opt to offset the lost hours due to breakdown either partly or fully. In the event of partial offsetting, disallowance as in relevant clause shall be applicable for the remaining lost hours.

7.8.13 PERFORMANCE OF THE VENDOR

Performance of the vendor shall be measured as per attached Annexure. Reports shall be received from site against each job and the same shall be communicated to the vendor. In case the performance of the contractor is not satisfactory (i.e. below 60%), BHEL reserves the right to initiate suitable action against the contractor which may lead to suspension/termination/banning and delisting in accordance with procedure in vogue.

Performance of the Service Provider will be evaluated **annually** on the following parameters:

Sl. No.	Parameter	Marks (A)	Criteria	Marks Obtained or Performance Score
01	Timeliness of equipment Deployment	30	Deployment within agreed timeline	
02	Equipment Uptime	25	Availability during scheduled hours	

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Chapter – VII: Terms of Payment

03	Safety Compliance	20	Adherence to BHEL safety guidelines	
04	Documentation & Reporting	10	Accurate and timely submission of logs/invoices	
05	Operator Competency	15	Trained/licensed personnel	
	Total Marks			

- A **performance score of 75 or above** is required for continuation of the contract.
- Scores below 60 for two consecutive years may result in **termination or withholding of further orders**.

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Chapter-VIII: Taxes and Other Duties

8.0 TAXES, DUTIES, LEVIES (Rev 14 dated 09/10/2020)

1. All taxes excluding GST, GST Cess & BOCW Cess **but including, Royalties, fees, license, deposits, commission, any State or Central Levy and other charges whatsoever, if any, shall be borne by you and shall not be payable extra.**
2. Any increase of the taxes excluding GST, GST Cess & BOCW Cess, at any stage during execution including extension of the contract shall have to be borne by the contractor. Quoted/ accepted rates/ price shall be inclusive of all such requirements. Please note that since GST on output will be paid by BHEL separately as enumerated below, your quoted rates/ price should be after considering the Input Credit under GST law at your end.
3. **GST** :
The successful bidder shall furnish proof of GST registration .GST along with Cess (as applicable) legally leviable & payable by the successful bidder as per GST Law, shall be paid by BHEL. Hence Bidder shall not include GST along with Cess (as applicable) in their quoted price.
4. GST charged in the Tax Invoice/Debit note by the contractor shall be released separately to the contractor only after contractor files the outward supply details in GSTR-1 on GSTN portal and input tax credit of such invoice is matched with corresponding details of outward supply of the contractor and has paid the GST at the time of filing the monthly return
5. E-invoicing under GST has been implemented with effect from 1st October 2020 for all the taxable persons having turnover more than the threshold limit in any preceding financial year from 2017-18 onwards. Therefore, for all the taxable persons falling under the purview of E-invoice, it is mandatory to mention a valid unique Invoice Reference No. (IRN) and QR code as generated from E-Invoicing portal of the Government for the purpose of issuing a valid Tax Invoice. Only an E-invoice issued in the manner prescribed under rule 48(4) of CGST Rules shall be treated as valid invoice for reimbursement of GST amount.
If the successful Bidder is not falling under the purview of E-Invoicing then he has to submit a declaration in that respect along with relevant financial statements.
6. Bidder shall note that the GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred there under) wherein the 'Bill To' details will as below:
BHEL GSTN – As per **Annexure -1**
NAME -- Bharat Heavy Electricals Limited
ADDRESS – Site address
7. Bidder to immediately intimate on the day of removal of Goods (in case of any supply of goods) to BHEL along with all relevant details and a scanned copy of Tax Invoice to below email ids to enable BHEL to meet its GST related compliances :-
Email id ---- to be intimated later on.
In case of delay in submission of the abovementioned documents on the date of dispatch, BHEL may incur penalty /interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from the successful bidder, if such delay is not attributable to BHEL.
8. In case of raising any Supplementary Tax Invoice (Debit / Credit Note) Bidder shall issue the same containing all the details as referred to in Section 34 read with Rule 53.

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Chapter-VIII: Taxes and Other Duties

9. 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 the vendor along with interest levied / leviable on BHEL, as the case may be.
10. 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 bidder along with interest levied / leviable on BHEL.
11. Way Bill: Successful Bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract.

The 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 the contractor and BHEL will not supply any Road Permit/ Way Bill for this purpose.

12. **New taxes and duties:-**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.

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.

In case any new tax/levy/duty etc. becomes applicable after the date of bidder's offer but before opening of the price bid, the bidder must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of the price bids. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

13. For transportation work, bidder shall declare in his quotation whether he is registered under GST, if yes, whether he intends to claim GST on forward charge basis. In absence of this declaration, BHEL will proceed further with the assumption that bidder intends not to claim GST on forward charge basis. However, in case of GST registered transporter, the amount to the extent of goods and service tax will be retained till BHEL avails the credit of GST. Further, transporter shall issue tax invoice which inter alia includes gross weight of the consignment, name of the consigner and the consignee, registration number of vehicle in which the goods are transported, details of goods transported, details of place of origin and destination, GSTIN of the person liable for paying tax whether as consigner, consignee or goods transport agency, and also containing other information as mentioned under rule 46.

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Chapter-VIII: Taxes and Other Duties

14. TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills unless exemption certificate from the appropriate authority/ authorities is furnished.
15. TDS under GST shall be deducted at prevailing rates on applicable value from the running bills.
16. TCS under Income Tax 1961 has been implemented with effect from 1st October 2020 for every seller having turnover more than threshold limit during financial year immediately preceding financial year in which the sale of goods is carried out, who receives any amount as consideration for sale of any goods of the value or aggregate of such value exceeding threshold limit other than export of goods or who is already covered under other provision of section 206C, collect from the buyer, TCS as per applicable rates of the sale consideration exceeding threshold limit subject to following conditions
 - i. Buyer shall be as per clause (a) of section 206C- (1H)
 - ii. Seller shall be as per clause (b) of section 206C- (1H)
 - iii. No TCS is to be collected, if the seller is liable to collect TCS under other provision of section 206C or the buyer is liable to deduct TDS under any provision of the Act and has deducted such amount.

If Successful Bidder is falling under the purview of TCS then he has to submit a declaration in that respect along with relevant financial statements before the start of work or if bidder is falling under preview of TCS during the work in progress then bidder is compulsorily required to submit relevant financial statement in the beginning of the respective FY.

For TCS claim, vendor has to submit relevant documents required as per Income Tax Act.
17. Refer Annexure – 2 for BOCW Act & Cess Act.

ANNEXURE-1

State wise GSTIN no.s of BHEL

Sl. No	Projects under state	GSTIN
1	Andhra Pradesh	37AAACB4146P7Z8
2	Bihar	10AAACB4146P1ZU
3	Chhattisgarh	22AAACB4146P1ZP
4	Gujarat	24AAACB4146P1ZL
5	Jharkhand	20AAACB4146P5ZP
6	Madhya Pradesh	23AAACB4146P1ZN
7	Maharashtra	27AAACB4146P1ZF
8	Orissa	21AAACB4146P1ZR
9	Telangana	36AAACB4146P1ZG

ANNEXURE-2

BOCW Act & Cess Act

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Chapter-VIII: Taxes and Other Duties

Bidder may please note that the sub-contractor/bidder of BHEL engaging building or construction worker in connection with building or other construction work, are required to follow the procedures enumerated below:

1. It shall be the sole responsibility of the contractor as employer to ensure compliance of all the statutory obligations under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
2. It shall be sole responsibility of the contractor engaging Building Workers in connection with the building or other construction works in the capacity of employer to apply and obtain registration certificate specifying the scope of work under the relevant provisions of the Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 from the appropriate Authorities.
3. It shall be responsibility of the contractor to furnish a copy of such Registration Certificate within a period of one month from the date of commencement of Work.
4. It is responsibility of the contractor to register under the Building and other Construction Workers' Welfare Cess Act, 1996 and deposit the required Cess for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 at such rate as the Central Government may , by notification in the Official Gazette, from time to time specify. However, before registering and deposit of Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, the contractor will seek written prior approval from the Construction Manager.
5. It shall be sole responsibility of the contractor as employer to get registered every Building Worker, who is between the age of 18 to 60 years of age and who has been engaged in any building or other construction work for not less than ninety days during the preceding twelve months as Beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996.
6. It shall be sole responsibility of the contractor as employer to maintain all the registers, records, notices and submit returns under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
7. It shall be sole responsibility of the contractor as employer to provide notice of poisoning or occupation notifiable diseases, to report of accident and dangerous occurrences to the concerned authorities under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the rules made thereunder and to make payment of all statutory payments & compensation under the Employees' Compensation Act, 1923.
8. It shall be the responsibility of the sub-contractor as employer to make payment/deposit of applicable cess amount on the extent of work involving building or construction workers engaged by the sub-contractor within a period of one month from the receipt of payment. It shall also be

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

responsibility of the Contractor to furnish BHEL on monthly basis, Receipts/ Challans towards Deposit of the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder along with following statistics :

- (i) Number of Building Workers employed during preceding one month.
- (ii) Number of Building workers registered as Beneficiary during preceding one month.
- (iii) Disbursement of Wages made to the Building Workers for preceding wage month.
- (iv) Remittance of Contribution of Beneficiaries made during the preceding month

9. BHEL shall reimburse the contractor the Cess amount deposited for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. However, BHEL shall not reimburse the Fee paid towards the registration of establishment, fees paid towards registration of Beneficiaries and Contribution of Beneficiaries remitted.
10. It shall be responsibility of the Building Worker engaged by the Contractor and registered as a beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 to contribute to the Fund at such rate per mensem as may be specified by the State government by notification in the Official Gazette. Where such beneficiary authorizes the contractor being his employer to deduct his contribution from his monthly wages and to remit the same, the contractor shall remit such contribution to the Building and other construction Workers' Welfare Board in such manner as may be directed by the Board , within the fifteen days from such deduction.
11. Bidders may please note that though the quoted price is exclusive of BOCW (which will be reimbursed by BHEL as per sub-clause 9 above) , however, If at any point of time during the contract period, non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder is observed, BHEL reserves the right to deduct the applicable cess (1%) on the contract value and penalty (if any, imposed by Cess Authorities) from the payables on account of non-compliance.
12. The contractor shall declare to undertake any liability or claim arising out of employment of building workers and shall indemnify BHEL from all consequences / liabilities / penalties in case of non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.

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CHAPTER IX – TRIAL HEAT TREATMENT CYCLE

Annexure-I

'A trial Heat Treatment Cycle' shall be carried out BHEL Site as a means to demonstrate the suitability of concern Induction Heating equipment being offered, as per the details furnished below.

WELD JOINT DETAILS

General:

JOB Material Specification / Grade: SA335P91/SA234WP91

Material OD / Thickness:

- ID 345 MM X 98 MM thickness
- ID 270 MM X 94 MM Thickness
- OD 457 MM X 42 MM Thickness
- ID 345 MM X 83 MM Thickness
- ID 550 MM X 38 MM Thickness
- ID 535 MM X 30 MM Thickness
- ID 425 MM X 135 MM Thickness

Detailed Sketch of the Weld Joint: Sketch depicting the joint dimensions along with the number & location of thermocouples (**Refer figure 1.1 and 1.2**).

PREHEAT REQUIREMENT:

220°C Temperature for 3-4 HRS Duration. Location of temperature measurement on PARENT METAL (**Refer figure 1.1 and 1.2**).

During Welding:

Pre-Heat Requirement: 220°C Temperature for 10-16 HRS Duration. Location of temperature measurement on PARENT METAL (**Refer figure 1.1 and 1.2**) (Maximum Inter-pass temperature - 350°C).

POST WELD HEAT TREATMENT REQUIREMENT (AFTER WELDING):

- (i) Post-Heat Requirement: Temperature to be decreased from 350°C TO 80-100°C / 4-5 HRS Duration / ON PARENT METAL/JOINT. (**Refer figure 1.1 and 1.2**) Location of temperature measurement & any other specific instructions (such as maximum time within which PWHT is to be carried out from completion of welding / post heating etc. Post Weld Heat Treatment has to be carried out immediately after 1 hour of holding of temperature at Post Heat i.e. 80-100°C).
- (ii) PWHT Requirement: 740°-770°C Temperature / 3-5 HRS Soaking Time / ON PARENT METAL/JOINT. (**Refer figure 1.1 and 1.2**) Location of temperature measurement & any other specific instructions (such as Maximum Rate of Heating, Maximum Rate of Cooling, temperature up to which cooling is to be continued etc.)

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER IX – TRIAL HEAT TREATMENT CYCLE

HEATING AND COOLING RATES

Thickness of Material	Maximum Heating Rate Above 300°C	Maximum Cooling Rate Upto 300°C
≤ 25 mm	220°C/hour	220°C/hour
> 25 ≤ 50 mm	110°C/hour	110°C/hour
> 50 ≤ 75 mm	75°C/hour	75°C/hour
> 75mm	55°C/hour	55°C/hour

PRE-HEATING/PWHT: Induction Heating Coil winding and thermocouple location arrangement sketch for Preheating and Post weld heat treatment arrangements.

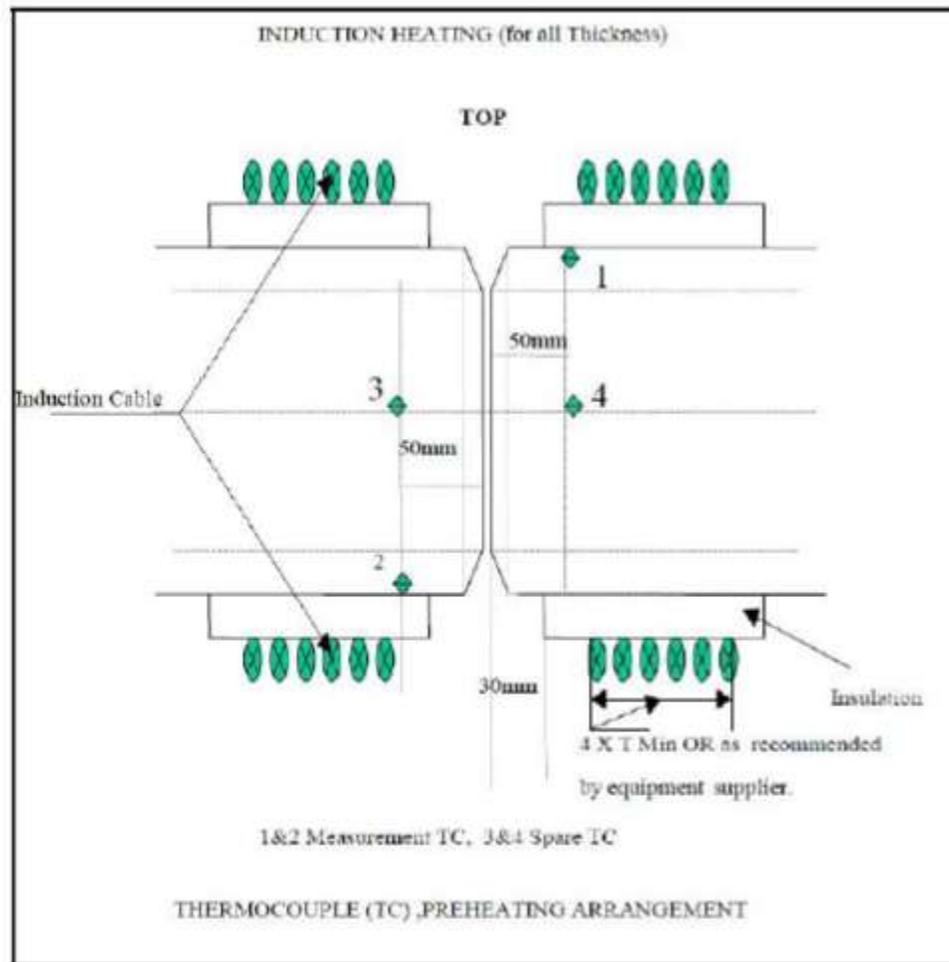


Figure 1.1: Placement of Thermocouples on P91/P92/F91/F92/C12A materials for Preheating

TECHNICAL CONDITIONS OF CONTRACT (TCC) CHAPTER IX – TRIAL HEAT TREATMENT CYCLE

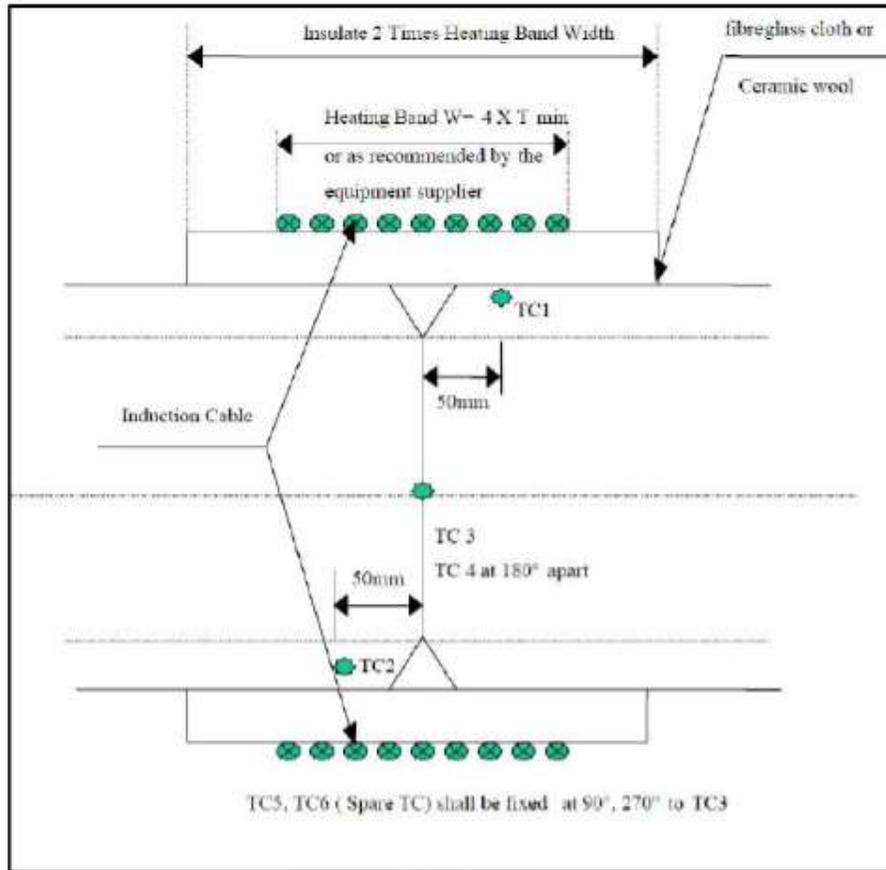


Figure 1.2: Placement of Thermocouples on P91/P92/F91/F92/C12A materials for PWHT

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER X – General

10.0 General

10.1 VOID

10.2 BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also, BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).

10.3 **Road permits, Octroi, GST and Declaration Forms etc., required for deployment of the equipment at the destination sites shall be arranged by the bidder and necessary registration and/or permission as may be applicable in the respective states shall duly be complied with by the bidder. Quoted price/rates shall be inclusive of above. BHEL will neither issue any Road Permit /GST declaration forms for this purpose nor pay any taxes in this regard.**

10.4 General Conditions

10.4.1 In case of any contradiction between “General Condition of Contract” & “Technical Conditions of Contract” of this Tender Specification, the provisions of Technical Condition of Contract shall prevail.

10.4.2 In case of contradictions between Quoted Unit Rate and Total Amount, the quoted Unit Rate shall be taken as correct and total amount recalculated for the intended order quantity.

10.4.3 In case of contradictions between Rates in Figures and Rates Words, the lesser of the two shall be considered as correct.

10.4.4 **In case BHEL finds that any bidder has furnished incorrect information, the offer is liable for rejection.**

10.4.5 **Heavy equipment/Equipments will be tracked with real-time position location for fleet management. Deployment vs planned reports shall be generated. Equipment Condition monitoring data like Service Meter Reading, Operation maps, Loading, fuel levels, operating information, idle time etc. shall be captured. This data shall be captured through Integrated Online Project Monitoring system. All T&P equipment deployed by contractor will be covered/monitored through this system. Minimum 5 signals per equipment should be made available to provide the input to Integrated Online Project Monitoring system. Necessary software/hardware for aforesaid system shall be provided by BHEL (For Talcher Site Only).**

10.4.6 **All manpower hired/deployed by Contractor for this project shall be monitored through Integrated Online Project Monitoring system by BLE beacons & LoRa backhaul. Every personnel entering in to NTPC site premises for carry out any work shall be tracked. [Separate tagging for visitors]. Geo-fencing /BLE beacon based zoning of the erection area shall be done to track workforce deployment and safety purposes. Work force monitoring Dash board (planned vs actual deployment) shall be made available. BLE beacons & LoRa backhaul shall be provided by BHEL on chargeable basis to contractor. BHEL will provide Tags free of cost for maximum 300 workers, additional tags as required shall be provided by BHEL on chargeable basis @ Rs. 1000/- per tag. In case of damage or missing of issued worker tag, Rs. 1000/- per tag will be charged for issuing new worker tag (For Talcher Site Only).**

10.5 STATUTORY REQUIREMENTS

ESI & EPF as applicable shall be obtained by the Contractor within the quoted rates.

10.6 GATE PASS FOR MEN & MATERIALS

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CHAPTER X – General

Contractor shall arrange the entry/out gate pass for their crew and materials for which necessary documents will be forwarded by BHEL. Contractor shall maintain duly endorsed records of all incoming equipments to facilitate grant of outward gate pass.

10.7 INSURANCE COVER FOR MEN & MATERIALS

Bidder shall be required to take Comprehensive Insurance Policy for the IHE with Third Party Liability cover as well as adequate Insurance for Bidder's Crew before deployment at site. If due to negligence and of non-observation of safety and other precautions, any accident/injury occurs to any other persons/public/property, the bidder shall have to pay necessary compensation and other expenses, if so decided by the appropriate authorities/Statutory Authority.

Any loss or damage to BHEL or customer's property due to negligence of the crew employed by the bidder is attributable to the bidder.

BHEL has obtained comprehensive Marine cum Erection All Risks Insurance Policy for the plant under installation and other assets of BHEL. Accidental loss/damage to these materials will be covered under this policy. Contractor shall arrange necessary insurance cover for the assets owned by him.

10.8 ACCOMODATION & LOCAL CONVEYANCE

Contractor has to make their own arrangement for accommodation, local transport and other amenities for their crew at project site.

10.9 DAILY LOG BOOK:

The contractor shall maintain a logbook in duplicate giving full operation details, preventive maintenance and Breakdown records and obtain counter signature of BHEL Engineer in Charge on daily basis. Original log sheets shall be submitted to BHEL at regular intervals as directed by BHEL and before submission of monthly bills.

10.10 RELIEVERS FOR OPERATING CREW

In case any member of the operating crew proceeds on leave or is absent, the contractor shall arrange alternative beforehand for continuation of work to meet BHEL's time-bound erection programme.

10.11 Safety, Occupational Health and Environmental Management

As per "Health Safety Environment Plan" which is part of Volume IC-GCC.

10.12 LIQUIDATED DAMAGES: As per GCC & conditions in this Technical Bid Volume-I

10.13 SECURITY DEPOSIT & BANK GUARANTEE

10.13.1 Security Deposit: Please refer Clause no. 1.10 of Volume-I C GCC

10.13.2 Contract Value for Security Deposit (SD):

At the beginning of contract, the Security Deposit shall be calculated according to the awarded Contract Value. Subsequently amount of SD shall be regulated based on the Contract Value that is arrived at after taking care of time extensions, short closure etc. Accordingly, contractor shall pay additional amount of SD or BHEL will adjust/refund excess SD if any. For further details, refer Clause no. 1.10 of Volume-I C General Condition of Contract (GCC).

TECHNICAL CONDITIONS OF CONTRACT (TCC)

CHAPTER XI – Rate Schedule & Price Bid Related

11.0 RATE SCHEDULE, QUOTED RATES / PRICE & CONTRACT VALUE.

11.1 Bidders shall quote their price in the Rate Schedule furnished in “Price Bid Specification” issued as Volume-II of this tender specification.

UNPRICED RATE SCHEDULE								
Sl. No.	Category of Equipment	Number of machines required (A)	(Months considered for estimation purpose only) (B)	Total tentative requirement (C) = A x B	Total Quoted Price including Mob-Demob and O&M Team charge for 2 Years (D)	Monthly O&M Team Charges (2 operators per Machine) (E)	Monthly Hiring Rate of equipment (F)	Mob-demob Charge per equipment (G)
1	Induction Heating Equipment	14	14	196	D	D x 28.48836% /196	D x 70.14518% /196	D x 1.36646% /14

11.2 Single Lump sum Rate **D** shall be quoted in Rupees by the bidder.

11.3 Mob & de-mob charges for the **Induction Heating Equipment** shall be fixed as per formula mentioned in above table (Mobilization & demobilization includes transportation charges etc.)

11.4 O&M Team Charges shall be fixed as per formula mentioned in above table for two operators (Each operator for 12 hours working time). Since the services of the IHEs with operator shall be made available to BHEL for round the clock operation (i.e. Twenty-Four hours a day) including on Sundays / Weekly holidays as per the site requirement, deputation of number of operators per IHEs or for multiple IHEs shall be decided by BHEL, BHEL sub agencies & IHEs hiring agencies as per exigency & nature of work. The charges for additional operators shall be half of the charges of O&M Team Charges as mentioned in price schedule.

11.5 L-1 bidder shall be evaluated on the basis of Single Lump sum rate **D** in rupees as tabulated above and accordingly LOA/LOI for Two Year Rate Contract shall be placed. However, after placement of Rate contract LOA/LOI, separate work order/s shall be placed as per the actual requirement of equipment/machine.

11.6 Prices shall be inclusive of all applicable taxes (excepting GST), levies, services, consumables (excepting fuel), as per provisions under the Terms & Conditions in scope of contractor mentioned in this Tender Specification.

11.7 **Number of qualified bidders:** BHEL intends to engage maximum two bidders. Work shall be distributed between two bidders in the **approximate** ratio of 60:40 on price matching philosophy.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-XII - INSTRUCTION FOR FILLING UP APPENDICES

12.0 INSTRUCTION FOR FILLING UP APPENDICES

12.1 "Appendix-A Tech Specification Sheet" is issued separately. The bidder(s) must submit the technical details of offered equipment(s).

Instruction for filling up Appendices: -

1. Appendix-A workbook contains several sheets. Blank Formats for technical and other essential details of offered Equipment(s) is provided in this workbook. Bidder may offer more than one equipment model for the tender requirement & submit details in separate sheets provided in Appendix-A as part of Technical cum Commercial Bid.
 2. Bidders shall furnish appropriate supporting documents duly furnishing cross-reference in the Appendices.
 3. In case of insufficient space in the Appendix, bidder shall use additional sheets in order to furnish complete information.
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