

Bharat Heavy Electricals Limited
High Pressure Boiler Plant
Tiruchirappalli – 620 014. India
Civil Engineering Department (Factory)

TENDER DOCUMENT (PRICE BID)

Name of work : **Operation and Maintenance of
Coolant and Metal Recovery
System at BHEL, Trichy.**

Value of work : **Rs. 38.25 Lakh**

Tender Notice No. : **05 / 12-13**

Tender Schedule No. : **10 / 12-13**

Period of Contract : **15 (Fifteen) Months**

Issued to M/s / S/Shri :

**BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI – 620 014**

CIVIL ENGINEERING DEPARTMENT (FACTORY)

PREAMBLE

Name of work: **Operation and Maintenance of Coolant and Metal Recovery System at BHEL, Trichy.**

1. The tenderers are advised to visit the existing Coolant Recovery System and Metal Recovery System Plants at BHEL, Trichy in order to assess the nature of work, man power requirement etc., before submitting their offer.
2. **SCOPE OF COOLANT RECOVERY SYSTEM:**
 - 2.1 The contractor should engage skilled labourers and supervisors for two shift operations as per the man power deployment scheme to be submitted by the tenderer for operation & treating the waste coolant and for transporting the waste coolant from various buildings like Building No.1, 5, 6, 50, SSTP etc. to the centralised treatment plant located near Heat Treatment shop, transporting the treated Coolant back to machine shops, cleaning the coolant pits and filling the sump, etc. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.
 - 2.2 The tenderer should submit details of manpower deployment scheme to be employed per shift like supervisor and other supporting labourers, etc., along with the tender.
 - 2.3 Operation and maintenance is to be carried out in **Two shifts a day**. For want of coolant, Power supply, etc., the system can be operated in one shift occasionally, only with the prior approval of the Engineer-in-charge.
 - 2.4 If the labourers, supervisors etc., are not employed as per the manpower deployment scheme the recovery will be made from the payment at pro-rata basis.
 - 2.5 The work is to be executed on all BHEL working days.
 - 2.6 If the system is not operated for more than 24 hours due to break-down on account of other than Power Supply, non-availability of Coolant, Spares, etc., recovery will be made on pro rata basis **as per the approved and awarded rate as in SI.No.1** per month from the date of break down to the date of putting back the system to perform effectively.
 - 2.7 If any additional shift is felt required by BHEL and operated on any day of the month, payment will be made on pro rata basis **as per the approved and awarded rate in SI.No.1** per month.
 - 2.8 Required minimum space, Compressed air, water and power for the operation of the system will be provided by BHEL free of charges.
 - 2.9 **Raw coolant, processed coolant and the permeate discharge should be tested for pH, Conductivity, Temperature and Volume for every batch taken for processing and a record should be maintained and produced to BHEL for its verification.**
 - 2.10 Bacteriological Analysis for TBC using Bactaslide once in a week or as and when required by BHEL on Raw and Processed coolant should be conducted at the site. The number of tests will be limited to five per month i.e 4 (four) for checking the Treated Coolant and 1 (one) per month for checking the Raw waste coolant. The used Bactaslides will be burn / destroyed in the presence of Engineer - in- charge and disposed with out affecting the environment.

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- 2.11 The composite sample of the permeate discharged and the raw coolant water shall have to be analysed for BOD, COD, Suspended Solids and Total dissolved solids, Oil & Grease, Chlorides, Sulphates etc., at the agency's laboratory established at BHEL Trichy Complex or in any of the approved lab (King's Institute, Chennai, NIT, Trichy, TNPCB labs in TamilNadu, etc.) as directed by BHEL, in line with the laid down procedures of BIS. One sample of raw waste coolant and one sample of permeate once in a month has to be collected, analysed and the report of analysis should be submitted to BHEL for verification.
- 2.12 The contractor should maintain proper logbook for the performance of the system and the log book should contain the details of the quantity of collection of the waste coolant, Point of collection, quantity treated, quantity handed over, name of work centre, etc., complete.
- 2.13 **The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.**

The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.

a)	Unskilled Worker	Rs. 2000 per month
b)	Semi-skilled Worker	Rs. 2300 per month
c)	Skilled Worker / Supervisor	Rs. 2500 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference. Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.

- 2.14 The workmen should be covered by PF & ESI Act as applicable and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.
- 2.15 The spent Activated Carbon shall have to be dumped in the coal yard by the agency.
- 2.16 The treated Coolant will be collected and accounted separately and handed over to machine shops as and when required.
- 2.17 The collected tramp oil should be handed over by the contractor to the Stores of BHEL at his own cost.
- 2.18 Hand trolleys are to be arranged by the contractor for collection of coolant.
- 2.19 The spares listed in Sl.No.;2 of Bill of Quantities are tentative. Any other spares not listed, if supplied and provided will be reimbursed as per BHEL norms.
- 2.20 Spares like UV lamps, Ultra Filtration Membrane, High Pressure Pump etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost
- 2.21 If the spares supplied by the contractor found defective during the guarantee period, it should be serviced / replaced at the contractor's risk and cost to the satisfaction of the Engineer-in-charge. 50% of Security Deposit will be released only after the guarantee period is over.

- 2.22 The contractor should submit the list and quantity of consumables and spares used every month for the verification by BHEL.
- 2.23 The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes and waste cloths, etc by the Contractor.
- 2.24 The Contractor should supply and use the monitoring equipments such as pH meter, Conductivity meter, Thermometer, Glass beakers, etc.
- 2.25 The Replacement of inter connecting HDPE pipes, indicator bulbs, tubings, Sensors with cables, etc are in the scope of the Contractor
- 2.26 The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.

3. SCOPE OF METAL RECOVERY SYSTEM :

- 3.1 The contractor should engage skilled labourers and supervisors for two shift operations as per the man power deployment scheme to be submitted by the tenderer for operation & maintenance of Metal recovery system located at Heat Treatment shop. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.
- 3.2 The tenderer should submit details of manpower deployment scheme to be employed per shift like supervisor other supporting labourers, etc., along with the tender.
- 3.3 Operation and maintenance is to be carried in two shifts a day. For want of effluent power supply, etc., the system can be operated in one shift occasionally. Only with the prior approval of the Engineer-in-charge
- 3.4 The work is to be executed on all BHEL working days.
- 3.5 If the labourers, supervisors etc., are not employed as per the manpower deployment scheme the recovery will be made from the payment at pro-rata basis.
- 3.6 If the system is not operated for more than 24 hours due to break-down on account of other than Power Supply, non availability of effluent, Spares, etc., recovery will be made on pro rata basis as per the approved and awarded rate in Sl.No.1 per month from the date of break down to the date of putting back the system to perform effectively.
- 3.7 If any additional shift is felt required by BHEL and operated on any day of the month, payment will be made on pro rata basis as per the approved and awarded rate in Sl.No.1 per month
- 3.8 Required minimum space, Compressed air, water and Power for the effective functioning of the system will be provided by BHEL free of charges.
- 3.9 Rinse water and the concentrate should be tested for pH, Conductivity, Temperature and Volume for every batch taken for processing and recorded for BHEL's verification.
- 3.10 The composite sample of the permeate discharge and the Reject (concentrate) shall have to be analysed for BOD, COD, Suspended Solids Total dissolved solids, Chromium (hexavalent/Trivalent), Cadmium/Copper / Nickel / Iron / Chlorides / Sulphates, etc at the agency's laboratory at BHEL Trichy Complex or in any of the approved lab (King's Institute, Chennai, NIT, Trichy, TNPCB labs in TamilNadu, etc.) as directed by BHEL, in line with the laid down procedures of BIS once in a month The permeate and the Reject samples are to be tested once in a month

- 3.11 The contractor should maintain proper log book for the performance of the system for the scrutiny by BHEL. The log book should contain the details of the quantity of collection of the rinse water, Point of collection, concentrate and permeate recovered, point of handing over etc.
- 3.12 **The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.**

The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.

a)	Unskilled Worker	Rs. 2000 per month
b)	Semi-skilled Worker	Rs. 2300 per month
c)	Skilled Worker / Supervisor	Rs. 2500 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference. Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.

- 3.13 The workmen should be covered by PF & ESI Act as practiced and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.
- 3.14 The spares listed above are tentative. Any other spares not listed, if supplied and provided will be reimbursed as per BHEL norms.
- 3.15 Spares like UV lamps, RO membrane, High Pressure Pump etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost.
- 3.16 If the spares supplied by the contractor found defective during the guarantee period, it should be serviced / replaced at the contractor's risk and cost to the satisfaction of the Engineer-in-charge. 50% of Security Deposit will be released only after the guarantee period is over.
- 3.17 Every month the contractor should submit the list for the quantity of consumables and spares used for the verification by BHEL.
- 3.18 The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes, and waste cloths etc., by the contractor.
- 3.19 The Contractor should supply and use the monitoring equipments such as pH meter, Conductivity meter, Thermometer, Glass beakers, etc.
- 3.20 The Replacement of inter connecting HDPE pipes, Indicator bulbs, Tubings, Sensors with cables, etc are in the scope of the Contractor
- 3.21 The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.
- 3.22 The permeate and the reject will be collected and accounted separately and handed over to user department.

4. Time is the essence of the contract. Being a time bound work on maintenance nature, the contractor should make all efforts to complete the work in the stipulated time.
5. **The following eligibility criteria shall be complied to fulfill the Qualification Bid:-**

Contractor should have separate Registration Code No. for EPF, ESI, Sales Tax and Service Tax, Proof of IT Returns submitted for the last three financial years (2009-10 to 201112) and Profit & Loss Account and Balance Sheet certified by the Auditor.

Average annual turnover in the last 3 financial years shall be minimum of Rs. 11.48 Lakh

During last seven financial years should have successfully completed works either

Three similar works each not less than Rs. 15.30 Lakh (or)

Two similar works each not less than Rs. 19.13 Lakh (or)

One similar work not less than Rs. 30.60 Lakh

Latest Solvency certificate (obtained within six months) from Nationalised / Scheduled Bank shall be atleast for Rs. 15.30 Lakh
6. The norms for qualification with prescribed score is attached in the Qualification Bid Document. Evaluation will be done accordingly. Minimum score required for qualification is 60.
7. The works executed in the own name of the tenderer only will be considered for eligibility criteria.
8. Dissimilar / irrelevant works will not be considered for eligibility criteria.
9. The details on turnover, works experience, P.F, ESI registration etc., all as furnished by the tenderer shall have to be supported with documentary evidences. (Xerox copies-attested)
10. Documentary evidences (Xerox copies - attested) for turnover, works experience, P.F, ESI, Sales Tax and Service Tax registration etc., all as indicated & required in the tender document should be furnished without which it will not be taken into account.
11. Tender Value is only approximate and liable for variation without entitling the tenderer to any compensation, provided the total value of contract does not vary by more than 20% (twenty percentage).
12. **Quoted rate shall be firm throughout the contract period of 15 months and extended contract period if any and no cost escalation is allowed on any account.**
13. The offered rate is for finished item of work as per Bill of Quantities and shall provide for the complete cost towards labour, materials, levies, taxes, transport, lay-out, repairs, rectifications, maintenance, supervision, establishment, services, overheads, profits & all other incidentals etc., complete. **The rate quoted shall not include service tax. The applicable Service Tax can be claimed from BHEL along with their monthly bills for further payment to be made for the authorities concerned.**
14. For any item of work not covered in Bill of Quantities, the rate will be arrived at based on the conditions given in BHEL General Conditions of Contract.
15. **After award of work the contractor has to furnish the security deposit, as per Clause 13 of Tender Notice, attached in the Price Bid. Also it is to be noted that after award of work the contractor has to furnish security deposit before the commencement of work.**

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16. The decision of Engineer-in-charge shall be final and binding on the contractor regarding clarification of items in this tender schedule.
17. The contractor shall strictly adhere to various labour laws in force.
18. The contractor shall follow norms of BHEL security system for movement of men & materials within the complex including biometric system.
19. Daily labour report for the manpower engaged on previous day area wise shall have to be submitted next day.
20. Since the responsibility for the quality, workmanship and accuracy of any work being carried out under this contract lies with the contractor, the contractor should ensure that no work is done without the presence of contractor's representative at the work spot.
21. The tenderer shall carry out health performance test at his cost for all the workmen engaged in the work through a registered medical practitioner and produce certificate on demand.
22. It shall be the responsibility of the contractor to see that the workmen do not utilize the departmental canteen facilities. Contractor has to make his own arrangements to provide refreshment for the workmen.
23. The works contract to be entered into with the successful tenderer will be governed by the BHEL Revised General Conditions of Contract in force.
24. All materials brought by the Contractor for incorporation in the work shall be got inspected and approved by the Engineer-in-charge before they are incorporated in the work.
25. The contractor should extend fullest co-operation with the third party agencies engaged, if any by BHEL to adhere the Quality Control Procedures ensuring quality.
26. At the written request from the contractor **Water required for the work and labour colony will be provided by this organization at only one point near the site of the work at free of cost.** In case of failure of water supply, the Contractor will have to make his own arrangements for water without any extra claims until supply is restored. BHEL does not accept any liability whatsoever for non-supply or delay in the supply of water under any circumstances. The contractor shall ensure that there is no wastage of water otherwise supply of water is liable to be stopped at contractor's risk and cost.
27. At the written request from the contractor **Electrical energy required for the work will be given by this organization at any one point near the site of work at free of cost.** BHEL does not accept any liability whatsoever for non-supply, delay in supply or failure of supply of electrical energy. Contractor shall ensure that there is no wastage of electrical energy otherwise supply is liable to be stopped at contractor's risk and cost. The contractor shall make leak proof / fire proof shed and provide control panel board of required capacity and lay the required cables at their own cost for further distribution.
28. At the written request from the contractor **Compressed air for the work will be provided by this organization at only one point near the site of work at free of cost.** The contractor should be in a position to make his own arrangement for compressed air without any extra claim for the uninterrupted operation of jackhammer with silencer wherever BHEL is not in a position to supply compressed air.
29. BHEL reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at another project/unit awarded against a different enquiry.

30. BHEL reserves its right to accept/reject any or all the tenders.
31. Also BHEL reserves its right to finalize the contract through reverse auction for which only qualified tenderers will be provided with necessary documents containing reverse auction rules, terms and conditions for this purpose.
32. **No advance / mobilization advance will be given.**
33. LD/Penalty clause is applicable as per General Conditions of Contract. All the terms & conditions in the documents are binding on the tenderers.

**Bharat Heavy Electricals Limited
Tiruchirappalli - 14**

No.BHE:POW:340
Date : 17/04/2012

CIRCULAR

All Contract Awarding/Executing Officials

Sub : Minimum Wages Act 1948 – Tamil Nadu State Government Minimum Wages - Reg.
Ref : 1. Letter No.Z3/7638/2012 dt.13/03/2012 from the Comm. of Labour, Chennai - 600006
2. Tamil Nadu Govt. Gazette No.8 dated 29/02/2012

Consequent upon the increase in Basic Wages and Dearness Allowance payable under the Minimum Wages Act to those employed in "General Engineering and Fabrication Industry", the Minimum Wages payable by the Contractors to their workmen engaged in the following categories would be as follows with effect from 01/04/2012 :

SI No	Category	Minimum Basic wages per day	Minimum DA per day	Total Minimum wages per day	Minimum Basic wages per month	Minimum DA per month	Total Minimum wages per month
1	Unskilled	Rs.123.00	Rs.86.00	Rs.209.00	Rs.3690.00	Rs.2238.00	Rs.5928.00
2	Semi - Skilled working as Helpers for not less than 2 years in a particular trade	Rs.129.00	Rs.86.00	Rs.215.00	Rs.3870.00	Rs.2238.00	Rs.6108.00
3	Semi - Skilled - All Trade Certificate holders	Rs.133.00	Rs.86.00	Rs.219.00	Rs.3990.00	Rs.2238.00	Rs.6228.00
4	Skilled	Rs.139.00	Rs.86.00	Rs.225.00	Rs.4170.00	Rs.2238.00	Rs.6408.00
5	Supervisor				Rs.3956.00	Rs.2238.00	Rs.6194.00

Contract Awarding/Executing Executives are requested to ensure that the contractors make payment to their workmen not less than Minimum Wages as stated above.


17/04/12
Manager/HR/Welfare

Cc. : All HR Executives thro' Email
Manager/HR/PC
DGM/Finance/W & R

REVERSE AUCTION

BHEL reserves the right to go for a Reverse Auction (RA) instead of Opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions governing RA are given below.

GENERAL TERMS AND CONDITIONS OF RA

Against this tender for the subject work/system with detailed scope of work as per tender specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING ON INTERNET.

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
3. BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained.
4. Reverse Auction rules like event date, time, Start price, bid decrement, extensions etc. also will be communicated through service provider for compliance.
5. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to Participate in the event.
6. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Taxes and Duties, Freight charges, Insurance and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.

However if the service tax is applicable for this contract, the same will be reimbursed on production of valid document proof for having paid service tax by the tenderer.

7. Reverse auction will be conducted on scheduled date & time.
8. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
9. The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
10. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
12. BHEL reserves the right to negotiate if need be, with the "L1" vendor of the Reverse Auction

Force Majeure clause: If at any time during the continuance of this contract the performance in whole or in part by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events) then provided notice of happening of any such events is given by either party to other within twenty one days from the date of occurrence thereof neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by BHEL subject to prompt notification by the tenderer to BHEL of the particulars of the events and supply to the BHEL if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

The correspondence exchanged against the tender from both tenderer and BHEL through email are considered as valid document legally though it is not signed. It is treated as valid confirmations made on behalf of the respective company and very much comes under the legal ambit of the business transaction and hence it is binding on both the parties to the business.

Any transaction pertaining to the tender from both the parties of business done round the clock irrespective of the office or business hours of the companies, are valid legally and binding on both the parties. This applies to the extent only in such cases where deadline time for transaction is not specifically declared by either or both the parties to the business.

In case Letter of Intent (LOI) is issued through email, the PC generated time and date of mail shall be construed as the official time and date of release of LOI. In as much as this date is within the last date of validity given by the bidder the LOI is said to have been issued within the validity period and shall be binding on both the parties to the business.

Tenderers participating in the tender should declare in their technical bid that whether they have been black-listed / kept on hold for a specified period / given Business holiday for a specified period by any Public sector undertaking or Government departments. The reasons for such action with details and the current status of such hold shall be clearly furnished to BHEL. If no such details are mentioned in the offer then it will be construed that the subject bidder is not under any such hold. But at a later date if it comes to the notice of BHEL about any such hold under enforcement on the subject bidder, BHEL will have every right to reject the offer of such vendors at any point of time and also under any stage of the finalisation of the subject tender irrespective of the status of the subject bidder in that tender. Such bidders will not be permitted to participate in the further tender proceedings and will be communicated suitably. They will not be also considered for any on going tenders even if participated till the hold is officially lifted and confirmed in writing.



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Unit : TIRUVERUMBUR, BOILER PROJECT, P.O.
TIRUCHIRAPALLI - 620 014.

CIVIL ENGINEERING DEPARTMENT

NOTICE INVITING TENDER

01. Name of work : **Operation and Maintenance of Coolant and Metal Recovery System at BHEL, Trichy.**
02. Estimated Cost : **Rs. 38.25 Lakh**
03. Earnest Money Deposit : **Rs. 1,00,000/-**
04. Completion Time : **FIFTEEN (15) Months**
(From the date of commencement of the work which will be reckoned from the date of handing over to the Contractor)
05. Cost of Tender Document : **Rs.750/-** (Rs. 825/- if required by post) including Sales Tax in DD form
This amount will not be refunded under any circumstances
06. Last Date for Receipt of Tenders : **14.55 Hrs. on 15.03.13**
07. Date of Tender Opening : **15.00 Hrs. on 15.03.13**
08. Maintenance Period : 6 (Six Months from the date of actual completion of the entire work and handing over to Bharat Heavy Electricals Limited)

Tender document contains **88** pages in Qualification Bid and **43** pages in Price Bid including Bill of Quantities, Drawing etc.

Issued to Messrs. / Thiru :

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ISSUING OFFICER

CONTRACTOR

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ACCEPTING OFFICER

INSTRUCTIONS TO TENDERERS

1. The tender is open to all Contractors. The Contractors not borne on the approved list of contractors of this Organization must submit the following testimonials simultaneously with their tenders.
 - i. A Certificate to establish that the tenderer is an independent contractor working on his own
 - ii. At least two certificates from responsible Officers of Government of Firms of repute, regarding the tenderer's capacity to undertake to undertake and carryout the work tendered for or similar work satisfactorily

NOTE :

- a) Copies of testimonials unless attested a Gazetted Officer will not be accepted
- b) Non – Submission of the above testimonials simultaneously with the tenders may result in the tender being rejected
2. The tenders should be accompanied by a list of contracts already held by the contractor at the time of submitting the tender and giving the following particulars
 - a) Value of each contract
 - b) The balance value of work to be done on the same
3. The tenderer is advised to obtain the tender documents in person or by a messenger duly authorized to do so. The BHARAT HEAVY ELECTRICALS LIMITED will not under any circumstances accept responsibility for the non – receipt of delay in the receipt of the tender documents by the tender.
4. Rate for each item of the tender schedule should be quoted in FIGURES and in WORDS. In case of any difference in the rates quoted in figures and in words, the lower of the two rates will be taken as the tendered rate. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any arithmetic deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.
5. Rate quoted shall include all royalties, terminal taxes, Octroi duties, Central or Provincial Excise Tax, Sales Tax, cess on Building and other construction workers Act 1996 and any other taxes leviable under the State or Central Government rules. The Bharat Heavy Electricals Ltd., will not entertain any claim whatever in this respect. **The rate quoted shall not include service tax. The applicable Service Tax can be claimed from BHEL along with their monthly bills for further payment to be made for the authorities concerned.**
6. Tender Value is only approximate and liable for variation without entitling the tenderer to any compensation, till the total value of contract vary by more than 20% (Twenty Percentage)
7. Quoted rate shall be firm throughout the contract period of **15 months** and no cost escalation is allowed on any account including extended period if any.
8. The works contract to be entered in to with the contractor will be governed by the BHEL Revised General Conditions of contract in force.
9. Should a tender find discrepancies or omissions in the drawings or any of the tender documents or should be in doubt as to their meaning, he should at once address the authority inviting the tender for clarification. Every Endeavour is made to avoid any error which can materially affect the basis of the tender but the successful tenderer shall take upon himself to provide for the risk of any error which may be subsequently by discovered and shall make no subsequent claim on account thereof.

10. Tenders submitted by post should be sent "Registered Post with Acknowledgement due". These should be posted with due allowance for any delay in postal delivery. Tenders received after the due date and time of opening, tenders are liable to be rejected.
11. Where the tender called for covers only the building work and excludes internal services such as sanitary and water supply installations, electrification etc., the building contractor will have to leave pockets, holes, etc., as required for other works and will have to phase his work to ensure smooth progress of the work of the other agencies also as directed by the Engineer – in – charge.
12. Where the tender schedule contains special items of work such special floor finishes, foam concrete for insulation, special water proofing treatment to roofs etc., it will be entirely at the discretion of the Project Authorities to allot these items of work to other contractors specialized in these works. In such cases, the main building Contractor will have to tender all necessary co-operation to the agencies involved so as to ensure the smooth progress of all work.
13. The contractor's responsibility under this shall commence from the date of receipt of the contract order of acceptance of his tender. The scheduled period of completion for this work will be as mentioned in page No. 14, and the Contractor will have to plan his work accordingly.
14. Generally, the maintenance period for any work under BHEL Organization will be Six (6) months.

15. Earnest Money Deposit:

Earnest Money is to be paid by each tenderer to ensure that the tenderer does not refuse to execute the work after it is awarded to him. EMD be furnished only in the form of Pay Order or Demand Draft in favour of BHEL, Trichy, EMD in any other form will not be accepted. The rate of earnest money deposit shall be as under:

Works costing up to Rs. 2 lakhs	NIL
Works costing more than Rs.2 lakh and up to Rs. 5 lakhs	Rs. 10000/-
Works costing more than Rs.5 lakhs and up to Rs.10 lakhs	Rs. 20000/-
Works costing more than Rs.10 lakhs and up to Rs.20 lakhs	Rs. 40,000/-
Works costing more than Rs.20 lakhs and up to Rs.30 lakhs	Rs. 60,000/-
Works costing more than Rs.30 lakhs and up to Rs.50 lakhs	Rs.1,00,000/-
Works costing more than Rs.50 lakhs and up to Rs.100 lakhs	Rs.1,50,000/-
Works costing more than Rs.100 lakhs	Rs. 2,00,000/-

One time EMD will also be Rs.2.00 lakhs.

EMD by the Tenderer will be forfeited as per tender Documents if:

- a) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates,
 - b) The tenderer does not commence the work within the period as per LOI / Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.
 - c) EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of acceptance of award of work by the successful tenderer.
 - d) EMD shall not carry any interest.
16. Should a tenderer or a contractor on the list of approved Contractors have a relative, or in the case or a firm or Company of contractors any of its share holders or shareholder's relative, employed in a gazetted capacity in the Engineering Department of the Bharat Heavy Electricals Limited, the authority inviting tenders shall be informed of this fact at the time of submission of the tender, failing which tender, may be disqualified or if such fact subsequently comes to light, the contract may be rescinded in accordance with the relevant provisions in the General Conditions of Contract.

17. If tenderer expires after the submission of his tender or after the acceptance of his tender the BHEL may, at their discretion, cancels such tender. If a partner of a firm expires after submission of tender or after the acceptance of the Tender, BHEL may cancel such Tender at their discretion unless the firm retain its character.
18. The Bharat Heavy Electricals Limited will not be bound by any power of attorney granted by the tenderer or by changes in the composition of firm made subsequent to the execution of the contract. They may however recognize such power of attorney and changes after obtaining proper legal advice the cost of which will be chargeable to the contract concerned.
19. If the tenderer deliberately gives wrong information in his tender or creates conditions favorable for the acceptance of his tender, the Bharat heavy Electricals Limited, reserves the right to reject such tender at any stage.
20. Words importing the singular number shall also be deemed to include the plural number and vice versa where the context so requires.
21. The expenses for competing and stamping the agreement shall be paid by the contractor.
22. The General and special conditions are complementary to each other and where they are conflict the Special Conditions shall prevail. In regard to matters not covered by the General and Special Conditions of Contract, those contained, those contained in the Tamil Nadu Building Practice Standard Specifications or other specifications approved by the Bharat Heavy Limited, Shall apply.
23. Tenderers shall not increase their quoted rates in case the Bharat Heavy Electricals Limited, negotiates for negotiation for reduction of rates. Such negotiation shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted shall be binding on the tenderes for a period of three months from the date of opening of tenders.
24. Canvassing in any form in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection
25. All contractors will have to produce Income tax Clearance Certificate from the Income Tax–Officer concerned along with their tenders. Those Contractors whose income is not taxable will be required to give an affidavit of their income on the prescribed form. If the successful tenderer fails to produce the Income – tax clearance certificate within the stated period the Earnest Money Deposit and Security Deposit of the tenderer may be forfeited and the contract terminated.

TENDER NOTICE

NAME OF WORK : Operation and Maintenance of Coolant and Metal Recovery Systems at BHEL, Trichy.

ESTIMATED COST : Rs. 38.25 LAKHS

1. SEALED TENDERS for the above noted work are hereby invited from contractor experienced in works of similar kind and magnitude. Tenders will be received by **SR MANAGER/CIVIL/PLANNING(FACTORY)** Bharat Heavy Electricals Limited, Tiruchirappalli – 620 014. Up to 14.55 Hrs. on **15.03.13** and will be opened on the same day at 15.00 Hrs. at the **Office of the SR.MANAGER /CIVIL/ PLANNING (FACTORY)** in the presence of such of those tenderers. Or their agents who may choose to attend.
2. TENDER FORMS and other particulars regarding the proposed work can be obtained on any working day from 8.00 A.M. to 4.30 P.M. up to **14.03.13** on payment of the prescribed sum of Rs. **750 / -** per set in person (Rs. 825/- if required by post) including Sales Tax in the form of Demand Draft Amount nor refundable.

In case of tender documents downloaded from website, tender shall accompany the tender cost of Rs.750/- in the form of Demand Draft (separate) in addition to the EMD amount in the form of Demand Draft. Tenders without tender cost will also be summarily rejected.
3. TENDERS must be submitted in sealed covers and should be addressed to the with full name and address of the tenderer and the name of work being noted on the cover
4. All entries in the tender documents should be in the one ink. Erasers and over writings are not permitted. All cancellations and insertions should be duly signed by the tenderer concerned.
5. TENDERERS should fill in all the required particulars in the blank spaces provided for this purpose in the tender documents and also sign each and every page of Tender Documents including the drawings attach there to before submitting their tender.
6. UNIT rate should be quoted in figures as well as in words with reference to each item and for all the items shown in the attached schedule. These rates shall be for the finished work in site. Amount of each item and the total page by page and also the grand total amount of the whole contract should be filled in by the tenderers. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any arithmetic deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.
7. QUANTITIES shown in the attached schedule are only approximate and are liable to variation without entitling the Contractors to any compensation, provided the total value of the Contract does not vary by more than 20% (twenty percent)
8. In quoting their rates, the tenderers are advised to take account all factors including any fluctuations in the market rates etc. No claim will be entertained on this account after acceptance of the tender or during the currency of the contract.
9. Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other prevalent conditions position of materials and labour, General and Special Conditions of Contract. Instructions to tenders, drawings and Specifications and all other documents which form part of the Agreements to be entered into.

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10. The rates quoted in the tender shall remain valid for a period THREE MONTHS from the date of opening of tenders.
11. In the event of tender being submitted by firm the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of attorney on behalf of the firm concerned in the latter case a copy to the power of attorney duly attested by a Gazetted Officer must accompany the tender.
12. Every tender must be accompanied with EMD for the amount as specified in Page No. 14 in any of the form mentioned in Para 15 of the "Instruction to Tenderers". This Earnest Money will be refunded to the unsuccessful tenderers within fifteen days of finalization of the award of work. In case of the successful tenderer, the Earnest Money will be retained as part of the Security Deposit for satisfactory completion of the work in accordance with Clause 16 of the General Conditions of Contract

NOTE : Cheques, Currency Notes and Money Orders will not be accepted in lieu of the deposit receipt referred to above

13. Security Deposit

13.1 Security Deposit should be collected from the successful tenderer . The rate of Security Deposit will be as below:

Up to Rs. 10 lakhs	: 10%
Above Rs. 10 lakhs up to Rs.50 lakhs	: 1 lakh + 7.5% of the amount exceeding Rs. 10 lakhs.
Above Rs. 50 lakhs	:Rs.4 lakhs + 5% of the amount exceeding Rs. 50 lakhs.

The security Deposit should be collected before start of the work by the contractor.

13.2 Security Deposit may be furnished in any one of the following forms

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order, Demand Draft in favour of BHEL.
- iii) Local cheques of scheduled banks, subject to realization.
- iv) Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc.
(Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- v) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- vi) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- vii) Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.
- viii) EMD of the successful tenderer shall be converted and adjusted against the security deposit.
- ix) The security deposit shall not carry any interest.

NOTE: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

14. Unless the contractor whose tender is accepted signs the Contract Agreements and makes the necessary security deposit specified in Para 13 above within Seven days of the date of the order directing him to do so the amount of Earnest Money Deposit already deposited by him will be forfeited and acceptance of his tender withdrawn.
15. If after opening of tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instruction of the Engineer-in-charge, the Earnest Money deposited by him will be forfeited and acceptance of his tender withdrawn. If only a part of the work included in the tender had been awarded to the tenderer, the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.
16. The Bharat Heavy Electricals Limited reserve the right to reject any or all the received or accept any tender or part there of without assigning any reason thereof. In the case acceptance of part of tender, time for completion may also be reduced to the extent considered appropriate by the Accepting Authority.
17. Conditional and Unwitnessed tenders, tender containing absurd rates and amounts tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions laid down by the Accepting Officer are liable to be rejected.
18. Tenders not submitted on the prescribed form are liable to be rejected
19. The work must be completed within a period as mentioned in Page No.14.
20. The Chairman / General Manger / Deputy General Manager / Deputy Manager / Senior Engineer shall be Accepting Officer, herein after referred to as such for the purpose of this contract.
21. This tender notice shall be deemed to form an integral part of the contract to be entered into for this work.
22. The tenderers are advised to go through the condition stipulated in Tender document & code of conduct for 'Health & Safety of Contract Labourer' in details. Any violation thereof will invite punitive action being taken against them. While quoting the rate all the above factors are to be taken into account.

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GENERAL SAFETY PRECAUTIONS TO BE FOLLOWED AT WORK SITE DURING EXECUTION

The following safety measures should be strictly adhered to during execution of works at sites.

1. Providing the working platform with toe board and handrail for continuous working at heights.
2. Providing safety belt and life line at all times for men working at heights.
3. Providing dust or fume respirator in places where dust and fume concentration exists.
4. Providing goggles and welding screens.
5. Providing acid and alkali proof rubber gloves for handling acid and alkali and chemical which are corrosive.
6. Providing rubber gloves for working on electrical works.
7. Ensuring proper lashing of the components while being transported in vehicles.
8. The vehicles must have side supports or have body to support the materials conveyed.
9. The materials should not be allowed to extend or overflow the sides of the vehicles.
10. Materials should not be allowed to overhang from the rear edge of the body of the vehicle.
11. Driver of the vehicle must possess license.
12. Vehicle must not be overloaded prescribed limits.
13. Red flags and lights for parts projecting from the body of vehicle must be provided.
14. The speed restrictions within the factory premises must be strictly adhered to.
15. The gas cylinders must be always handled on trolleys or kept tied down not in use. They should never be rolled as Roller for conveying.
16. Cylinders should not be used without regulators.
17. All excavations must be barricaded and red lamps must be provided.
18. All electrical connections must be properly earthed.
19. No work should be taken up for execution inside shop floor, without obtaining necessary work permit.
20. Providing helmet, safety belt, etc., for high level work and sufficient number of Industrial Safety nets at appropriate level to safeguard the persons working at high level particularly in trusses, girders, roofing etc., of industrial and high roof buildings.
21. The contractor should maintain a register regarding the driver license particulars.
22. All personal protective equipment conform with standard specification as per the details given in the code of conduct.

Contractor including their sub contractors, agents and labour engaged on the work are required to scrupulously adhere to the safety regulations, safety precautions and measures. Any violation thereof will invite punitive action being taken against them. Also contractors with frequent violations of safety regulations will not be entrusted with further work in this organization.

SAFETY PRECAUTIONS TO BE OBSERVED WHILE TRANSPORTING MATERIALS

I. VEHICLE

1. Vehicles carrying material should have proper registration documents and must be produced on demand by our Security Staff.
2. The light on right side, i.e., over the drivers cabin shall be in working condition.
3. Both the head lights as well as park lamps must be in working conditions.

II. MOVEMENT OF VEHICLE

1. The vehicle should not travel at more than 20 km.ph in our premises.
2. The Driver of the vehicle must possess heavy duty licence and produce on demand by the Security Staff.
3. Vehicles carrying inflammable liquids in the tank containers should have grounding chain or the tank should be coated with insulating material also to avoid Static Electricity.
4. In road junctions, speed breakers and railway crossing, the speed should be lowered and vehicle should proceed cautiously.
5. The driving should 'KEEP TO THE LEFT' at all places.
6. The vehicle should not be parked in road which could obstruct the vehicular traffic.
7. No person other than driver should be allowed to sit or stand on the prime mover or trailer.
8. The vehicle should pass only through the approved routes. Short cuts should be forbidden.
9. There must be a safe distance behind another moving truck.
10. The driver should avoid making quick starts, jerky stops or quick turns at excessive speed.

III SHIPPING

1. Strong side supports should be provided on both sides of the trailer. The side supports should be fixed in such a way that it cannot be removed even temporarily.
2. Adequate packing must be given for easy slinging operation. The packing materials should be good enough to withstand the load.
3. The stacking of loads in the truck should be evenly placed. The load should not be heaped together or dumped over the chassis.
4. The loaded materials should be fastened tightly with 'WIRE ROPE'. Manila rope or coir rope should not at all be used. There must be side packing such as gunny or rubber tyre between the sharp edge of the job and wire rope in order to avoid cut in the wire rope.
5. There must be minimum two fastenings and it should be more in case of lengthier loads.
6. The wire rope should be in sound conditions i.e, there should not be links, knots or bristles etc.,
7. The wire rope ends should be clamped with 'U' clamps.
8. The load on the truck should not be beyond its standard capacity. The carrying capacity must be clearly marked on the trailer also.
9. The loose pieces should be bundled before loading on the truck.
10. There must be red flags or red lamps for the lengthy loads which extend beyond chassis.
11. The load should not be over hanging more than 3 ft. from the end of the body.
12. The materials should not be stacked too high to avoid hitting against live electric lines.
13. While transporting the scraps, there must be wire knitting cover to prevent falling of scrap.

IV GENERAL

The vehicles should not be moved directly inside the production building in case the materials are to be unloaded there. But the vehicle should be parked outside the building and the driver should ascertain the passage as well as the unloading points with the help of shop officials. This will avoid the congestion of blocking of traffic in the gangway.

**TERMS AND CONDITIONS REGARDING COMPLIANCE WITH VARIOUS LABOUR LAWS BY
THE CONTRACTORS FOR BHEL**

1. The Contractor shall not employ in connection with the work any person who has not completed 18 years of age.

2. The Contractor shall in respect of labour employed by him either directly or through subcontractors, comply with or cause to be complied with the following statutory provisions and rules and in regard to all matters provided therein.
 - a) The Contract Labour (Regulation & Abolition) Act 1970 and the related Tamil Nadu Rules.
 - b) The Minimum Wages Act 1948 and the related Tamil Nadu Rules.
 - c) The Payment of Wages Act 1936 and the related Tamil Nadu Rules.
 - d) The Factories Act 1948 and the related Tamil Nadu Rules.
 - e) The Employee's Provident Fund & Miscellaneous Provisions Act 1952.
 - f) The Employees State Insurance Act 1948.
 - g) The Workmen Compensation Act 1923.
 - h) The Industrial Disputes Act 1947.
 - i) **The Payment of Bonus Act 1965.**and any other law or modifications to the above or to the Rules made thereunder from time to time.

REGISTRATION AND LICENSING

3. Every Contractor shall register his name with the Welfare Section of BHEL before taking up the work awarded to him by giving the following information and getting a Code Number :
 - a) The Name of the Contractor
 - b) Nature of Contract Work
 - c) Period of work
 - d) Number of maximum labour employed by him on any one day
 - e) License No. & Date (Applicable in case of contractor employing 20 or more workers)
 - f) Whether enrolled for PF, ESI, etc., and enrolment No.This information is called for, for the purpose of informing the Inspectorate of Factories whenever they call for information regarding contracts.

4. The Contractor employing 20 or more workmen is required to obtain license from the authorities (The Deputy Chief Inspector of Factories / Assistant Commissioner of Labour as the case may be). The license shall be amended and / or renewed wherever, there is an increase in the workmen employed by him or in the event of contract being extended or renewed. The Contractor shall inform the licence number to the BHEL Management before taking up the work.

5. The Contractor (Licensed or unlicensed) shall promptly furnish every information and document required by BHEL authorities for the purpose of fulfilling their obligations as Principal Employer and / or Occupier of the Factory and shall render all necessary assistance for the same.

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WAGES

6. The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.

The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.

a)	Unskilled Worker	Rs. 2000 per month
b)	Semi-skilled Worker	Rs. 2300 per month
c)	Skilled Worker / Supervisor	Rs. 2500 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference (Ref. Page No.11). Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.

7. The Contractor shall fix wage periods in respect of which wages shall be payable. No wage period shall exceed one month.
8. The Contractor shall ensure payment of wages to the contract labour employed by him within three days from the end of wage period in case the wage period is one week or a fortnight and in all other cases before 10th day of the following month.
9. All Payment of wages shall be made on working days at the work site and during the working time and on date notified in advance. In case the work is completed before the expiry of the wage period final payment shall be made within 48 hours of the last working day.
10. Where the employment of any worker is terminated by or on behalf of the Contractor, the wages earned by him shall be paid before the expiry of the second working day from the day on which his employment is terminated.
11. Wages due to every worker shall be paid to him direct or to the person authorized by him in this behalf. All wages shall be paid in current coin or currency in both.
12. The Contractor shall ensure the disbursement of wages in the presence of such authorized representative of BHEL Management.
13. The above payment shall be verified by the authorized officer / representative of BHEL with the following certificate of the payment sheet "Certified that the amount shown in Column No..... has been paid to the workmen concerned in my presence onat....."
14. A certificate of payment shall be furnished in duplicate by the Contractor to the Engineer in charge each month in Form 'A'.

15. A notice showing the wage period and the place and time of disbursement of wages shall be displayed at the place of work and a copy to be sent to the Welfare Department by the Contractor under acknowledgement.
16. Notices showing the rate of wages, weekly rest days, hours of work, wage period, date of payment of wages, names and addresses of the Inspector having jurisdiction, the date of unpaid wages shall be displayed in Tamil and English in conspicuous places at the establishment and at work site by the Contractor. The Contractor shall inform the BHEL Management every month the details of contract labour engaged for contract in this following form :
 - a) Serial Number
 - b) Location
 - c) Period of work
 - d) No. of contract labour engaged during the month
 - e) No. of days worked
 - f) No. of men worked
 - g) Wages paid to workersThe above statement shall be furnished to BHEL Management at the end of every month.

REGISTERS AND RECORDS AND COLLECTION OF STATISTICS

17. The following documents / formats under Contract Labour (Regulation & Abolition) Act 1970 and Tamil Nadu Rules thereunder shall be maintained by each contractor.
 - a) Register of persons employed by the Contractor
 - b) Employment Card
 - c) Service Certificate
 - d) Muster Roll, Wage Register, Deduction Register, Wage slip, Overtime Register, Register of Fines, Register of Advances etc.,
18. The Contractor shall display the abstract of the Contract Labour (Regulation&Abolition) Act and the Rules thereunder both in English and Tamil.
19. Half yearly Return shall be sent by the Contractor in duplicate to the Licensing Officer.
20. The Contractor shall submit the returns required under the Contract Labour (Regulation & Abolition) Act 1970 periodically to BHEL Management.
21. The Contractor shall without fail give upto date information in writing of the attendance of the workers employed by him.
22. The Contractor shall ensure that his workers keep and produce their Employment Card when coming to duty and take them back when leaving duty.
23. All the above registers and records shall be preserved in original for a period of three years. All the registers, records and notice maintained under the Act and rules shall be produced on demand by Inspector or any authority under the Act.

WORKING HOURS AND WORKING CONDITIONS

24. No worker shall be required or allowed to work on Sunday unless he has or will have a holiday on anyone of the three days before or after the said day.
25. The Contractor shall inform BHEL Management in the prescribed form details of the contract workers scheduled to work on Sunday, the day of rest and also indicate the substituted holiday in lieu thereof. This shall be intimated two days in advance before his workmen are booked for work on Sunday.
26. The contract labour working for more than nine hours in any day or for more than 48 hours in any week shall be paid wages at the rate of twice the ordinary rate of wages in accordance with the provisions of Sections 59 of the Factories Act 1948.
27. The Contractor shall provide all safety devices and personal protective equipment to his workmen at his own cost and shall ensure that his workmen wear / use such devices or equipment provided to them while doing the work and there should not be any relaxation on this.
28. The Contractor shall give four paid National Holidays to his workers, viz., 26th January, 1st May, 15th August and 2nd October.
29. The Contractor shall ensure that his workmen vacate the premises after the shift is over.
30. The Contractor shall give leave with wages to his workmen who have worked for a period of 240 days or more in the Factory premises during a calendar year. This leave shall be allowed during the subsequent calendar year at the rate of one day for every 20 days of work performed by the worker during the previous calendar year. The worker whose services commences on a day other than the first of January shall be entitled to leave with wages at the above rate (One day for every 20 days of work) only if he had worked for a minimum of 2 /3 of the total number of days in the remainder of the calendar year. This leave will be admissible only during the subsequent calendar year.
31. No woman worker shall be required or allowed to work in the Factory except between the hours of 6.00 A.M. and 7.00 P.M.
32. The Contractor shall comply with the provisions relating to Welfare and Health facilities as provided in the Contract Labour (Regulation and Abolition) Act 1970 read with the Tamil Nadu Contract Labour Rules 1975.

NOTICE OF ACCIDENTS

33. Notwithstanding anything contrary to this, in the event of accident the contractor shall be required to fill injury report and submit the Engineer in charge immediately and ensure the compliances of ESI / Workmen's compensation Act, Factories Act and Rules made thereunder. He shall also maintain a register of accident as per the Act.
34. The Contractor shall get the contract labour engaged by him insured under Workmen's Compensation policy from General Insurance Corporation of India before actually starting the work of contract. The insurance coverage should be for the entire period of Contract. The Contract shall comply with the provisions of the Workmen's Compensation Act 1923. (This should be read in conjunction with the provisions of ESI Act)

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COVERAGE UNDER THE ESI ACT / PF AND MISCELLANEOUS PROVISIONS ACT

35. The contractor shall ensure that all his workmen are covered under the Employee's State Insurance Act and produce to BHEL such Registration Number / Enrolment Number before executing the contract work.
36. The Contractor shall regularly pay the amount of contribution. i.e., employer's contributions as well as employees' contribution pursuant to the above scheme as fixed from time to time. The Contribution payable presently is 1.75% wages to be recovered from his workmen and 4.75% of wages to be contributed by the Contractor. Contributions recovered from employee and contribution made by the contractor may be rounded to the next higher multiples of five paise.
37. The Contractor shall take note of any amendment that may be brought forth in the above contribution rate and act accordingly.
38. The contractor shall ensure that his workmen are covered under the EPF & Miscellaneous Provisions Act 1952 and accordingly produce to the BHEL Management the registration / enrolment number before awarding of contract work. As per the existing provisions every worker shall be entitled and required to become a member of the fund. The employee's contribution payable at present is 12% of wages which will be recovered by the contractor from the wages of his workmen and the contractor should pay equal contribution. The contractor is also liable to pay any administrative charges in this behalf that may be decided from time to time. It will be the responsibility of the contractor to ensure such contribution payable in respect of workmen employed through sub-contractors also.
39. The Contractor shall take note of any amendment in the rate of contribution payable under the scheme from time to time.
40. The Contractor shall within seven days of the close of every month submit to BHEL a statement showing the amount of contribution payable / paid for employees engaged by him or through him and shall also furnish to BHEL such information as Principal Employer is required to furnish under the provisions of the ESI Act and PF as well as the schemes made thereunder to the authorities concerned.
41. Whenever any sum of money is found to be recoverable from or payable by the contractor under the above Act, the sum shall be deducted from any sum that may be due or which at any time thereafter may become due to the Contractor under this contract or under any other contract or from his security deposit. In case the recoveries are not sufficient to satisfy the claim, the contractor shall pay the balance thereof on demand. In case any recoveries are made under this clause from security deposit, the contractor shall immediately thereafter pay such further sums as may be required to replenish the shortage caused by such recoveries in amount of security deposit.
42. The Contractor shall abide by all the labour and other laws applicable to contract labour / worker under this contract and shall at all times keep BHEL indemnified against all losses, claims, prosecutions under any law.
43. In case of non-compliance of any of the provisions of the Acts and in case BHEL having complied with the same, BHEL will be entitled to recover the same from the contractor / sub-contractor.

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44. Non-exercise of any of the powers or rights available to BHEL hereunder or under any law, shall not in any way operate as waiver thereof.

Note : The Specimen forms for the following are available in BHEL.

- | | | | |
|----|-----------|---|--|
| 1) | Form 'A' | - | Payment Certificate |
| 2) | Form IV | - | Application for License |
| 3) | Form XIII | - | Register of Workmen employed by contractor |
| 4) | Form XIV | - | Employment Card |
| 5) | Form XV | - | Service Certificate |
| 6) | Form XVI | - | Muster Roll |
| 7) | Form XVII | - | Register of wages |
| 8) | Form XIX | - | Wage slip |

SCHEDULE 'A'

LIST OF WORKS AND PRICES

DETAILS & QUANTITIES of each item of work shown in the BILL OF QUANTITIES are only approximate. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the corresponding rate quoted by the contractor in the BILL OF QUANTITIES

Sl.No.	Description of work / supplied	Total amount of work / supplies (in figures and words) Rs.	Period of contract Ps.
1.	Operation and maintenance of Coolant and Metal Recovery Systems at BHEL, Trichy.	Rs. 38,25,000/- (Rupees thirty eight lakh and twenty five thousand only)	Fifteen (15) months

BILL OF QUANTITIES

Sl.No.	Appx.Qty.	Description of work	TNBP No.	Rate (Both in Unit fig & Words	Amount Rs.	Ps.
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AS PER SEPARATE SHEETS ATTACHED CONTAINING**13**...PAGES

FROM SERIAL No.....**29**..... to.....**41**.....

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**BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI – 14**

BILL OF QUANTITIES

NAME OF WORK: Operation and Maintenance of Coolant & Metal Recovery systems at BHEL, Trichy.

PART - A: COOLANT RECOVERY SYSTEM

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount Rs. P.
1.	15 Months	Operation and maintenance of existing Coolant Recovery plant at BHEL, Trichy-14. The scope of work covers Operating the Coolant Recovery plant for two shift in a day , as convenient to BHEL and on all BHEL working days including collection of the waste coolant from the machine shops within Main Factory complex, Conveying in the barrels/carboys to the centralised Coolant Treatment Plant near Heat Treatment Shop, Storing in syntax tanks or M.S barrels and processing it to make it fit for recycling, transferring the processed coolant to the machine shop and pouring in Coolant sumps after cleaning the pits where ever required etc. complete. The scope also includes mechanical & electrical maintenance of the coolant recovery system including periodical preventive maintenance, replacement of all spares (as indicated in Sl.No.2 and other spares supplied by BHEL), supply of required quantity of chemicals and consumables for uninterrupted maintenance & operation of the system, testing of Raw and Treated Coolant etc., complete vide details listed in the annexure-A. The quoted rate includes cost of all labour, chemicals, consumables, spares (other than spares listed in Sl.No.2 and other spares supplied by BHEL) testing charges, Tax & duties if any and all other incidental charges, etc., complete.		Month	

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount Rs. P.
2.		Supply of the following spares for the operation of the equipment. The quoted rate shall include cost of spares, Taxes, duties, packing, forwarding, conveyance and all other incidentals, etc., complete. The spares supplied shall be guaranteed for not less than one-year wherever not specified.			
a)	8 Nos.	Bag Filter consists of filter media made of HDPE woven with 10-25 microns pore size bag stitched for 200mm dia. with flanged end.		Each	
b)	15 Nos.	Cartridge Filter consists of 5/10-micron resin bonded 10" long cartridge (Ametek make).		Each	
c)	250.00 kg.	Activated carbon with Iodine No.1200 mg/gm (Min.) and apparent density 0.45 gm/cc(Min.)		Kg.	
d)		<u>Spares for Photo Chemical Reactor.</u>			
i)	6 Nos.	Ballast – Electronic ballast duplex for 2 lamps - 22 watts each.		Each	
ii)	16 Nos.	Glass Tubes – coated with UV Reflector– 340mm long, 20mm dia.		Each	

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount Rs. P.
3	1 Set	Photo Chemical Reactor of capacity 500 lph comprising 6 Nos. of UV lamps, Polymer tubes, ballast and Glass tubes covered in powder coated M.S metal leak proof Box with inlet and outlet arrangements, etc. complete.		Per Set	
	(i)	The imported UV Lamp – 22 watts and 425mA, single ended 4-pin type low pressure and High intensity with a UV dosage of 50,000 to 60,000 Micro watts/cm ² /sec. – 435mm long and 19mm dia. With Ozone and UV resistant ceramic base. The life of UV lamp should be guaranteed for 7000 hrs. working.			
	(ii)	For other items like polymer tube, glass tube, ballast, etc., the specification shall be as indicated above in this bill of quantities.			
TOTAL for Part – A				

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PART - B: METAL RECOVERY SYSTEM

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount Rs. P.
1.	15 Months	Operation and maintenance of existing Metal Recovery Plant at BHEL, Trichy-14 for two shifts a day , as convenient to BHEL and on all BHEL working days including collection of the effluent from the rinse tanks of Chromium, treating the same in the metal recovery plant to achieve the permeate meeting the Pollution Control Board standards and make it fit for reuse. The scope also includes mechanical & electrical maintenance of the Metal recovery system including periodical preventive maintenance, replacement of the defective parts / spares (as indicated in Sl.No.2 and other spares supplied by BHEL), supply of required quantity of chemicals and consumables for uninterrupted maintenance & operation of the system, testing of permeate and the reject etc., complete, vide details listed in the annexure-B, complete. The quoted rate includes cost of all labour, consumables, chemicals, materials, spares (other than spares listed in Sl.No.2) testing charges, duties if any and all other incidental charges, etc., complete.		Month	
2.		Supply of the following spares for the operation of the equipment. The quoted rate shall include cost of spare, Taxes, duties, packing, forwarding, conveyance and all other incidentals, etc., complete. The spares supplied shall be guaranteed for not less than one year wherever not specified.			

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount Rs. P.
a)	5 Nos.	Micron Filter made of Polypropylene material with 10 Micron rating, having a capacity 500 lph (Millipore or equivalent make as approved by BHEL).		Each	
NOTE:	1	The quoted rate shall be firm throughout the contract period and extended period also, if any. No cost escalation will be paid on any account.			
	2	The above coolant and metal recovery systems are to be operated in two shifts in a day as mentioned in item No. 1 of part A & item 1 of Part B.			
	3	The contractor has to deploy minimum labourers individually for each system as mentioned below for the smooth operation of the systems..			
	a	Supervisor (Skilled) 1 No. / day / shift (i.e. 1 No. for coolant recovery system & 1 No. for metal recovery systems. Total- 2 man days for each day.			
	b	Operator (Semi- skilled) 1 No. / shift / system (i.e. 1Nos. x 2 shifts x 2 systems = 4 Man days each day)			
	c	Workers (Unskilled) - 6 Nos. / shift/ coolant recovery system alone (i.e. 6 Nos. x 2 shifts x 1 system= 12 Man days each day)			
	4	The labourers shall be paid additional payment as mentioned below in addition to the payment of minimum wages, Bonus to the workmen employed by him at the rates which shall not be less than the minimum wages applicable from time to time .(Un Skilled Worker - Rs. 2000/ pm, Semi Skilled Worker Rs. 2300/pm & Skilled worker Rs. 2500/pm.)			
	5	If both the the coolant Recovery system and metal recovery systems are not operated for more than 24 hours due to break down on any unforeseen account of other than power supply,non availability of raw effluents,spares,etc., recovery will be made on pro rata basis as per the approved and awarded rate in Sl.No.1 of Part A & Sl.No.1 of Part B per month from the date of stoppage to the date of putting back in to operation effectively.			
	6	In case of any eventuality for not operating any of the systems as stated above, the man power shall be suitably redeployed. No separate compensation will be paid for non operation of the systems.			
			TOTAL for Part - B		
			TOTAL for Part - A		
			GRAND TOTAL		
(RUPEES					ONLY)

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ANNEXURE – A

SPECIAL CONDITIONS OF CONTRACT FOR OPERATION AND MAINTENANCE OF COOLANT RECOVERY SYSTEM:

- 01 The tenderers are advised to visit the existing Coolant Recovery System Plant at BHEL, Trichy in order to assess the nature of work, man power requirement etc., before submitting their offer..
- 02 The contractor should engage skilled labourers and supervisors for two shift operations as per the man power deployment scheme to be submitted by the tenderer for operation & treating the waste coolant and for transporting the waste coolant from various buildings like Building No.1, 5, 6, 50, SSTP etc. to the centralised treatment plant located near Heat Treatment shop, transporting the treated Coolant back to machine shops, cleaning the coolant pits and filling the sump, etc. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.
- 03 The tenderer should submit details of manpower deployment scheme to be employed per shift like supervisor other supporting labourers, etc., along with the tender.
- 04 Operation and maintenance is to be carried out in **Two shifts a day**. For want of coolant, Power supply, etc., the system can be operated in one shift occasionally, only with the prior approval of the Engineer-in-charge.
- 05 If the labourers, supervisors etc., are not employed as per the manpower deployment scheme the recovery will be made from the payment at pro-rata basis.
- 06 **The work is to be executed on all BHEL working days.**
- 07 If the system is not operated for more than 24 hours due to break-down on account of other than Power Supply, non availability of Coolant, Spares, etc., recovery will be made on pro rata basis **as per the approved and awarded rate as in SI.No.1** per month from the date of break down to the date of putting back the system to perform effectively.
- 08 In case of any eventuality for not operating any of the systems as stated above, the man power shall be suitably redeployed. No separate compensation will be paid for non operation of the systems.
- 09 If any additional shift is felt required by BHEL and operated on any day of the month, payment will be made on pro rata basis **as per the approved and awarded rate in SI.No.1** per month.
- 10 Required minimum space, Compressed air, water and power for the operation of the system will be provided by BHEL free of charges.
- 11 **Raw coolant, processed coolant and the permeate discharge should be tested for pH, Conductivity, Temperature and Volume for every batch taken for processing and a record should be maintained and produced to BHEL for its verification.**
- 12 Bacteriological Analysis for TBC using Bactaslide once in a week or as and when required by BHEL on Raw and Processed coolant should be conducted at the site. The number of tests will be limited to five per month i.e 4 (four) for checking the Treated Coolant and 1 (one) per month for checking the Raw waste coolant. The used Bactaslides will be burn / destroyed in the presence of Engineer - in- charge and disposed with out affecting the environment.

- 13 The composite sample of the permeate discharged and the raw coolant water shall have to be analysed for BOD, COD, Suspended Solids and Total dissolved solids, Oil & Grease, Chlorides, Sulphates etc., at the agency's laboratory established at BHEL Trichy Complex or in any of the approved lab (King's Institute, Chennai, NIT, Trichy, TNPCB labs in TamilNadu, etc.) as directed by BHEL, in line with the laid down procedures of BIS. One sample of raw waste coolant and one sample of permeate once in a month has to be collected, analysed and the report of analysis should be submitted to BHEL for verification.
- 14 The contractor should maintain proper logbook for the performance of the system and the log book should contain the details of the quantity of collection of the waste coolant, Point of collection, quantity treated, quantity handed over, name of work centre, etc., complete.
- 15 **The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.**

The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.

d)	Unskilled Worker	Rs. 2000 per month
e)	Semi-skilled Worker	Rs. 2300 per month
f)	Skilled Worker / Supervisor	Rs. 2500 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference. Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.

- 16 The workmen should be covered by PF & ESI Act as applicable and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.
17. The spent Activated Carbon shall have to be dumped in the coal yard by the agency.
18. The treated Coolant will be collected and accounted separately and handed over to machine shops as and when required.
19. The collected tramp oil should be handed over by the contractor to the Stores of BHEL at his cost.
20. Hand trolleys are to be arranged by the contractor for collection of coolant.
21. The spares listed in SI.No.;2 of Bill of Quantities are tentative. Any other spares not listed, if supplied and provided will be reimbursed as per BHEL norms.
22. Spares like UV lamps, Ultra Filtration Membrane, High Pressure Pump etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost

23. If the spares supplied by the contractor found defective during the guarantee period, it should be serviced / replaced at the contractor's risk and cost to the satisfaction of the Engineer-in-charge. 50% of Security Deposit will be released only after the guarantee period is over.
24. The contractor should submit the list and quantity of consumables and spares used every month for the verification by BHEL.
25. The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes and waste cloths, etc by the Contractor.
26. The Contractor should supply and use the monitoring equipments such as pH meter, Conductivity meter, Thermometer, Glass beakers, etc.
27. The Replacement of inter connecting HDPE pipes, indicator bulbs, tubings, Sensors with cables, etc are in the scope of the Contractor
28. The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.

COOLANT RECOVERY SYSTEM

ROUTINE MAINTENANCE & OPERATION

- 1) The existing system is capable of treating about 750 litres of waste coolant per shift.
- 2) All the chemicals required for routine maintenance and operation shall be supplied by the contractor.
- 3) Bag filter and Cartridge filter are cleaned not less than twice in a week by rinsing in caustic soda solution and washing it with fresh water.
- 4) The Activated Carbon Filter is washed with caustic soda solution and fresh water at the end of week's operation (Saturday) and filled with fresh water and kept for 24 hours or up to starting of next shift. The entire Activated Carbon will be replaced with fresh materials once in 45 days. The spent activated carbon shall be disposed at the coal yard of PG Plant or as directed by the Engineer-in-charge.
- 5) Ultra filtration, Disinfection unit and process tank are to be cleaned daily after the end of the shift.
- 6) Monitoring and maintaining the pressure shall be done at inlet and outlet of the Membrane System.
- 7) The Ultra filtration unit is cleaned daily by circulating DM water for about 20 minutes and saturated with fresh water by proper closing of inlet and outlet valves.
- 8) At the end of week's operation, the Ultra filtration unit is filled with soap water and kept in until further usage of system.
- 9) Surface Disinfection unit is to be cleaned with surf water (200gms of Aerial powder in 25 lit. water) circulated for 30 minutes and washed with fresh water. This is carried out twice in week.
- 10) The pH, TDS, and Temperature of the raw coolant are checked and recorded before treatment.
- 11) After 30 minutes of circulation again pH, TDS and Temperature are checked and the treated coolant is handed over for recycling.
- 12) TDS of the treated coolant shall be corrected if it exceeds 1000 ppm, by adding fresh water and disinfected on repeated cycles.
- 13) Bactaslide is used to find the bacterial content of the coolant before and after disinfection. The number of tests will be limited to not more than five per month i.e.4 (four) for checking the treated coolant and 1 (one) for checking the raw coolant once in a month.
- 14) The treated and disinfected coolant shall have a bacterial count not more than 10^2 .
- 15) The contract agency has to fix all the spares supplied by him and also the spares supplied by BHEL at his own cost.
- 16) The contractor should put up his Bill for his month wise payment along with, (a) Production Report, (b) Test Report of the Raw waste and coolant water Permeate, (c) Attendance particulars, (d) Pay Acquittance and (e) PF & ESI remittance challans.

ANNEXURE-B

SPECIAL CONDITIONS OF CONTRACT FOR OPERATION AND MAINTENANCE OF METAL RECOVERY SYSTEM:

- 01 The tenderers are advised to visit the existing Metal Recovery System Plant at BHEL, Trichy in order to assess the nature of work, man power requirement etc., before submitting their offer.
- 02 The contractor should engage skilled labourers and supervisors for two shift operations as per the man power deployment scheme to be submitted by the tenderer for operation & maintenance of Metal recovery system located at Heat Treatment shop. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.
- 03 The tenderer should submit details of manpower deployment scheme to be employed per shift like supervisor other supporting labourers, etc., along with the tender.
- 04 Operation and maintenance is to be carried in two shifts a day. For want of effluent power supply, etc., the system can be operated in one shift occasionally. Only with the prior approval of the Engineer-in-charge.
- 05 The work is to be executed on all BHEL working days.
- 06 If the labourers, supervisors etc., are not employed as per the manpower deployment scheme the recovery will be made from the payment at pro-rata basis.
- 07 If the system is not operated for more than 24 hours due to break-down on account of other than Power Supply, non availability of effluent, Spares, etc., recovery will be made on pro rata basis **as per the approved and awarded rate in SI.No.1** per month from the date of break down to the date of putting back the system to perform effectively.
- 08 In case of any eventuality for not operating any of the systems as stated above, the man power shall be suitably redeployed. No separate compensation will be paid for non operation of the systems.
- 09 If any additional shift is felt required by BHEL and operated on any day of the month, payment will be made on pro rata basis as per the approved and awarded rate in SI.No.1 per month.
- 10 Required minimum space, Compressed air, water and Power for the effective functioning of the system will be provided by BHEL free of charges.
- 11 Rinse water and the concentrate should be tested for pH, Conductivity, Temperature and Volume for every batch taken for processing and recorded for BHEL's verification.
- 12 The composite sample of the permeate discharge and the Reject (concentrate) shall have to be analysed for BOD, COD, Suspended Solids Total dissolved solids, Chromium (hexavalent/Trivalent), Cadmium/Copper / Nickel / Iron / Chlorides / Sulphates, etc at the agency's laboratory at BHEL Trichy Complex or in any of the approved lab (King's Institute, Chennai, NIT, Trichy, TNPCB labs in TamilNadu, etc.) as directed by BHEL, in line with the laid down procedures of BIS once in a month The permeate and the Reject samples are to be tested once in a month.

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13 The contractor should maintain proper log book for the performance of the system for the scrutiny by BHEL. The log book should contain the details of the quantity of collection of the rinse water, Point of collection, concentrate and permeate recovered, point of handing over etc.

14 **The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time.**

The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.

g)	Unskilled Worker	Rs. 2000 per month
h)	Semi-skilled Worker	Rs. 2300 per month
i)	Skilled Worker / Supervisor	Rs. 2500 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

At present the Tamil Nadu State Government Minimum wages declared is enclosed for your reference. Normally the revision will be with effect from 1st April of every year. Tenderers are requested to quote their offer after taking into account of the above factor also.

15 The workmen should be covered by PF & ESI Act as practiced and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.

16 The spares listed above are tentative. Any other spares not listed, if supplied and provided will be reimbursed as per BHEL norms.

17 Spares like UV lamps, RO membrane, High Pressure Pump etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost.

18 If the spares supplied by the contractor found defective during the guarantee period, it should be serviced / replaced at the contractor's risk and cost to the satisfaction of the Engineer-in-charge. 50% of Security Deposit will be released only after the guarantee period is over.

19 Every month the contractor should submit the list for the quantity of consumables and spares used for the verification by BHEL.

20 The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes, and waste cloths etc., by the contractor.

- 21 The Contractor should supply and use the monitoring equipments such as pH meter, Conductivity meter, Thermometer, Glass beakers, etc.
- 22 The Replacement of inter connecting HDPE pipes, Indicator bulbs, Tubings, Sensors with cables, etc are in the scope of the Contractor
- 23 The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.
- 24 The permeate and the reject will be collected and accounted separately and handed over to user department.

METAL RECOVERY SYSTEM

ROUTINE MAINTENANCE & OPERATION

1. The existing system is capable of treating about 250 litres of rinse water per shift.
2. All the chemicals required for routine maintenance and operation shall be supplied by the contractor.
3. Running of the whole system with fresh water for 15 minutes. and with permeate water for about 15 minutes.
4. The pH value of the rinse water is to be corrected for values not less than 4.5
5. Measure the TDS of the raw effluent. (Rinse water)
6. Temperature of rinse water shall be measured and corrected to ambient by allowing it for natural cooling (38° C to 40°C)
7. Monitoring and maintaining pressure shall be done at the inlet and out let of Membrane system.
8. At the end of the day, the entire system should be cleaned with fresh water and permeate water and the membrane should be kept in saturated condition with permeate water by proper closing of valves at the outlet and Inlet of the system
9. Recording of pH, TDS, Temperature, pressure and flow details at the end of each batch.
10. Reloading the system with fresh effluent once the batch TDS of permeate is 100 to 110 and that of Reject is in the order of 1200 to 1300.
11. Every week the cartridge filter should be cleaned by rinsing in caustic soda solution and washing it with fresh water. The cartridge filter will be replaced once in 3 months.
12. Once in 15 days cleaning of the membrane in solution containing 400 gm of citric acid in 20 lit. of water correcting the solution for its pH value not less than 4.5 by adding about 120 ml. of Ammonia solution, circulating the solution by closing the permeate valve for about 30 minutes. and kept saturated not less than 2 hours or during the closed Holidays.
13. Accounting of permeate and Reject in carboys / PVC tanks etc. and handing over to the user department.
14. Over hauling and servicing of High pressure pump once in two months.
15. The contractor should put up his Bill for his month-wise payment along with (a) Production Report, (b) Test Report of the rinse water and permeate, (c) Attendance particulars, (d) Pay Acquittance & (e) PF & ESI remittance.

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SCHEDULE 'B'

1. The following materials will be issued FREE of cost to contractor at BHEL Stores / Stock yard.

SI.No.	DESCRIPTION	PLACE OF ISSUE
	--NIL--	

2. It will be the responsibility of the Contractor to submit his demands for the above stores in writing atleast seven days in advance of the actual requirement.
3. Issue of Stores is subject of the availability at the place of issue cited above, items of stores to be issued by BHEL which are not available at the time of indenting by the contractor may be supplied by BHEL after necessary procurement. The contractor shall not be entitled to any claim of compensation for delay in the supply of stores by BHEL under any circumstances.
4. The materials will be issued only during the working hours of the BHEL Stores Department (8.00 a.m. to 4.30 p.m.). Contractor shall have to transport them to the site of work at his own cost as soon as they are issued to him.
5. The steel materials if issued will be in random lengths and sizes as stocked by the BHEL and the cost of all cutting, conversion, substitution and fabrication as well as wastage shall have to be borne by the Contractor.
6. The contractor shall from time to time render proper account of all materials issued to him by BHEL. If he fails to do so, no further issue of materials will be made to him and he will be held responsible for any delay in the execution of the work which may occur on this account.
7. Where A.C. Sheets and accessories, Doors, Windows, Sanitary fittings, Special glasses or other items are issued free of cost to the contractor, the contractor will have to make good at his own cost any loss or damage to any part or whole of the items issued to him as above. All wastage within the premises limits as fixed by BHEL will be charged for at the prescribed issued rates of BHEL. Excess wastage will be charged for at punitive rates which will be 100% higher than the issue rates.
8. All surplus materials in good condition which are not returned to the BHEL Stores as also quantities of materials consumed in excess of the max. permissible limit as fixed by BHEL shall be charged for at punitive rates.

The decision of the Senior Engineer / Dy. Manager / Manager as to the extent to which materials have been rendered surplus or consumed in excess of the actual requirements shall be final and conclusive and binding on the contractor.

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SCHEDULE 'C'

ISSUE OF TOOLS AND PLANTS TO CONTRACTORS

Sl.No.	Qty.	Particulars	Details of BHEL Crew Supplied	Hire Charges Per unit Per Day	Place of Issue	Remarks
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.....Nil.....

- a. Machineries shall not be operated over time without the written permission of the Sr. Engineer / Dy. Manager / Manager.
- b. All Coolies, Watermen etc., required in addition to BHEL crew mentioned in column 4 above shall be arranged by the contractor at his own expense.

SCHEDULE 'D'

NOTE : All Drawings are to be signed by the Contractor as well as the officer entering into contract.

SL.No.	DRAWING NUMBER	DESCRIPTION
		----NIL----

SCHEDULE 'E'

LEAD STATEMENT

Sl.No.	Name of Material	Name of Source	Lead Particulars both for Factory and Township
	---NIL---		

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