

An ISO 9001 Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant) Tiruchirappalli - 620014, TAMIL NADU, INDIA CAPITAL EQUIPMENT/ MATERIALS MANAGEMENT

ENQUIRY

Phone: +91 431 257 76 53

Fax : +91 431 252 07 19

Email: skaruna@bheltry.co.in

16.07.2011

Web : www.bhel.com

NOTICE INVITING TENDER

TWO PART BID

Enquiry Number: **Enquiry** Date:

Due date for submission of quotation:

Tender to be submitted in two parts.

2621100108 16.06.2011

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

| Item | Description | Quantity | Delivery (Item required at BHEL on) |
|------|--|----------|---|
| 10 | Design, Supply, Fabrication, Transportation, Erection and Commissioning of Underground Bulk HSD Storage Tank Confirming to IS -10987 -1992 of 1 No. x 40 KL (2.75 M Dia x 7.5 M Length Horizontal) Nominal Capacity Fabricated from MS Plates and their Accessories including Liaison work with various agencies as per the technical specification, general guidelines instructions & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in) | 01 No | 30.10.2011 |

Important points to be taken care during submission of offer

- 1. Checklist to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
- 2. Subsequent to the hosting of this Enquiry, any corrigendum to the Enquiry that may be hosted in the BHEL Web-site as well as Government Tenders-portal shall be viewed by the vendors regularly to know the details of corrigendum. In case if any vendor without seeing the corrigendum quoted as per original Enquiry and intimate that they have wrongly quoted will not be considered and rejected. However as per the appropriate Policy of BHEL action will be taken on them in this regard.

BHEL's General guidelines / instructions (refer MM/CE/GT/001) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site http://www.bhel.com or from the Government tender website http://tenders.gov.in (public sector units > Bharat Heavy Electricals Limited page) under Enquiry referred above.

Tenders should reach us before 14:00 hours on the due date Tenders will be opened at 14:30 hours on the due date Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,

For BHARAT HEAVY ELECTRICALS LIMITED

Manager / MM / Capital Equipment

S.KARUNANIDHY

Manager

MM / Capital Equipment BHEL. TRICHY-620 014

Page 1 of 1

QUALIFYING CRITERIA FOR THE SUPPLY, ERECTION & COMMISSIONING OF UNDER GROUND 1X 40KL HSD STORAGE TANK FACILITY

Section I: Company Profile: The Bidder has to provide the details pertaining to each clause in the table given below and whenever necessary additional sheets may be attached (giving clear reference number) to understand the profile of the BIDDER's COMPANY.

| S.No | PARTICULARS | VENDOR'S RESPONSE |
|------|---|-------------------|
| 1 | Number of Years of Experience of the BIDDER in the field of Design, Manufacture & Suppy of HSD Storage Vessels and Commissionng as per the Regulations of Statutary Authorities. | |
| 2 | Details on the Codes/Standards of Equipment Design, Manufacture, Erection & commissioning of Vessels at Client's Works. | |
| 3 | Details on Manufacturing Facilities available with the BIDDER for: a) Metal Forming Machines. b) Heat Treatment Facilities c) Heavy Machining & Grinding d) Vessel Assembly & Testing. | |
| 4 | Details of Quality System (with stages of internal Inspection) followed for the Vessel Building and Testing of Capacity. | |
| 5 | Details of Electrical/Electronic Control Pannel Design, Manufacturing and Testing Facilities for Vessels. | |
| | | |

| | Section II: Qualifying Criteria | |
|------|---|-------------------|
| | der has to compulsorily meet the following requirements to get qualified for submitting an offer for the 40Kly: (Additional Sheets shall be attached with the OFFER, to provide requisite details) Otherwise the offer a | |
| S.No | PARTICULARS | VENDOR'S RESPONSE |
| 6 | The tenderer should be CCOE approved fabricator of Pressure vessels under SMPV rules 1981(unfired). Copy of license should be enclosed along with the technical bid. | VENDONO NEO ONO |
| 7 | The BIDDER shall have a minium of Five Years of Contunuous Experience in the Field of Design, Manufacture, Supply, Erection, and Commissioning of HSD Strorage Vessals with CCOE approval | |
| 8 | The BIDDER might have supplied, erected & commmissioned atleast FIVE numbers of HSD Storage Vessels and atleast one no. among it to be of UNDER GROUND type with Associated Accessories (including Safety Associated Accessories (including Safety Devices) of Capacity 20KL and above. | |
| 9 | Performance Certificate in the encloed FORMAT for a period, not less than one year, from CUSTOMERS AND Rreference List of custimrs wth full contact details of CONTACT PERSON, who are the End Users of supply as per CLAUSE No.8 | |
| 10 | BHEL reserves the right to verify the information provided by vendor, and In case, it is found to be false/incorrect, the offer shall get rejected. | |
| 11 | Details on SERVICE-AFTER-SALES Set-up in India including the Addresses of Agents/Service Centers in india, to be furnished. | |
| | Section III: BID/OFFER FORMATS | |
| | The BIDDER has to comply with the following, for accepting the Technical Offer for scrutiny by the F | Purchaser: |
| S.No | PARTICULARS | VENDOR'S RESPONSE |
| 12 | The BIDDER shall SUBMIT the offer in TWO PARTS Technical (with PART A & PART B) & Commercial and | |

12

Price Bid.

| 13 | The OFFER Shall contain a comparative statement of Technicl Specifications given by BHEL and the offer Details submitted by the Bidder, against each Clause. A just 'YES' or CONFIRMED' or NO-DEVIATION' or 'ACCEPTED' or similar words in the technical coparativ statement may lead to disqualification of the Technical offer. |
|----|---|
| 14 | The Technical offer shall be supported by product Catalogue and Data Sheets In ORIGINAL and complete technical details of 'Bought-out-Items' with copies of Product Catalogue (if applicble) |
| 15 | The Commercial Offer shall contain the Scope of supply and the Un-Priced Part of the Price -bid, for confirmation of the inclusion of all the accessories, auxilary parts, safety devices, spares consumbles, etc with the main vessel/equipment, to meet the technical specification requirements. |
| 16 | Earlier performance/field experience (including service support) if any, with BHEL for the BIDDER's Equpement, will be a reckoning factor for the technical qualification of the OFFER. |
| 17 | a. The expected delivery period (including the time for Pre-Dispatch Inspection clearence by BHEL) for the HSD Storage vessels wth associated Accessories & Safety Devices, is not more than three months (which includes time for General Arrangement Drawing approval by BHEL also) from the date of issue of BHEL purchase order. b. The erection & commissioning shall be completed in a period of one Month after the receipt of equipment at site. c. Statutory clearances concerned from the local authorities and other statutary agencies in complete shall be completed before commissioning. |

| | Utility / Thirumayam | projects / 1x 40 HSD tank | | |
|-------|--|---|----------------|-------------------------------------|
| SI.No | Description | Specification | Vendor's offer | Deviation if any, vendor to specify |
| 1 | NAME OF WORK | Design, supply, fabrication, transportation,erection of commissioning of underground Bulk HSD storage tank confirming to IS - 10987 - 1992 of 1 No. x 40 KL (2.75 Mtrs Dia x 7.5 Mtrs length horizintal) nominal capacity fabricated from MS plates & their accessories including Liaison work with various agencies. | | |
| 2 | BRIEF DESCRIPTION OF WORK | M/s. BHEL / Tirchy has proposed to set up 1 x 40 KL capacity of U/G HSD tank storage facility in the premises of BHEL, at THIRUMAYAM to meet day to day HSD requirement for 2000 KVA DG SET. | | |
| 3 | HSD TANK WITH ALL NECESSARY FITTINGS/MOUNTINGS FOR 1x 40 UNDERGROUND BULK HSD STORAGE CAPACITY | Vendor to specify the details | | |
| 4 | HSD tank bottom pedestal steel supports with steel plates . | Vendor to specify the details | | |
| 5 | For the Tank wrapping of STP sheet . | Vendor to specify the details | | |
| | Digital Level Indicator for U/G tank connection to BMS (digital percentage level indicator for HSD storage tanks consisting of display unit and level sensor. The display unit should have 2-1/2 digit seven segment LED to dip -1 No. | | | |
| 7 | Flame Arrestor for U/G tank vent line as per CCOE, Norms. | Vendor to specify the details | | |
| , | 1 no. working and 1 No. standby fuel pump near the underground storae tank of capacity 80 LPM make Tushaco with 2HP flame proof motor as per IS- 2148 make Kirloskar along with base plate. | | | |
| 9 | Flame proof ON/ OFF (DOL starter) switch at fuel pump in side the yard area | Vendor to specify the details | | |
| 10 | Pressure Gauges 4" Dia , 0-10 kg range with isolation valve - 1 SET | Vendor to specify the details | | |
| 11 | Pressure Relief Valve near the Pump outlet line - 1No. | Vendor to specify the details | | |

| 12 | Piping with Fittings: | | |
|------|---|--|--|
| | Seamless Piping including all necessary bends, | Vendor to specify the details | |
| | flanges, reducers, packing sheets and tees. | | |
| 12.1 | | | |
| 12.1 | 40mm dia (approx) for U/G tank main inlet & | Vendor to specify the details | |
| 12 2 | outlet pipelines -1 LOT | vendor to speemy the details | |
| | | Vendor to specify the details | |
| 12.3 | Standard Ball Valves and Strainers with flange ends for | 1 3 | |
| | HSD use | | |
| 13 | | | |
| 13.1 | 40mm size valve -12 nos. | Vendor to specify the details | |
| | 80mm size valve -1 no. | Vendor to specify the details | |
| 13.2 | | | |
| 14 | NRV flange type of Gun metal | | |
| 14.1 | 40 mm size valve -2 nos. | Vendor to specify the details | |
| 15 | <u>Strainers</u> | | |
| 15.1 | 40mm size - 1 no. | Vendor to specify the details | |
| 15.2 | 80mm size - 1 no. | Vendor to specify the details | |
| 16 | FLOW METER | | |
| | Digital Flow meter for measuring quantity suitable | Vendor to specify the details | |
| | to HSD with Battery; backup system for inlet line | | |
| | (80mm size)- 1 set | | |
| 16.1 | | | |
| | 40 mm size Solieniod Valves of diapharm type for DG | Vendor to specify the details | |
| 16.2 | Set -1 set | | |
| | Low level / High level transmitter probes for tank | Vendor to specify the details | |
| 16.3 | 1 set | | |
| 17 | STRUCTURAL MATERIALS | | |
| 17 | Pipe supports steel structural - supply, fabrication | Vendor to specify the details | |
| | & erection for main pipeline over head tanks, day | vendor to speemy the details | |
| | tanks & pipeline supports,etc 1 LOT | | |
| | | | |
| 17.1 | | | |
| | Unloading wire braided rubber standard hose pipe | Vendor to specify the details | |
| | with end fittings of 3.6 mtr length with threaded | | |
| | cap for Nozzle with chain static current | | |
| 4.0 | discharging for HSD tank -1 SET. | | |
| 18 | | Vendor to specify the details | |
| | | venuor to specify the details | |
| 19 | LOT | | |
| 20 | Earthing clamps for flange joints -1 LOT | Vendor to specify the details | |
| 20 | D.C.P type of capacity 10Kg/CM2 fire exstinguishers- | Vendor to specify the details | |
| 21 | 1 SET | volues to speeding the details | |
| | | Vendor to specify the details | |
| | | Vendor to specify the details | |
| 23 | | . • | |
| 24 | Sign hoards 1SET | Vendor to specify the details | |
| 24 | Sign boards- 1SET | Vendor to specify the details Vendor to specify the details | |

| | Gear pump with flame proof motor as per IS- 2148 For | Vendor to specify the details | |
|------|---|---|--|
| 26 | Return line | | |
| | Flame proof DOL starter for pump near the spill tank - | Vendor to specify the details | |
| 27 | 1No. | | |
| | Automatic Control panel Type IP 65 rating | Vendor to specify the details | |
| | wheater proof for operation of fuel pumps for emergency stop switch including BMS connectivity | | |
| | along with potential contacts -1 SET | | |
| 20 | diong with potential contacts. 1 GET | | |
| 28 | copper armoured cable - 1 LOT | Vendor to specify the details | |
| 23 | Earth Pit 40 x 6mm flat earthing for HSD tank, | | |
| 30 | Fuelpumps and motors. | | |
| | PAINTING | two coats of primer and 2 coats of Tankmestic (Bitumen | |
| 31 | | Paint) as per IS 158 code | |
| 32 | LIAISON WORK -VENDORS SCOPE | | |
| | Preparation of drawings, documentation for obtaining | | |
| | Proposed approval from Chief Controller of Explosives, Nagpur or Joint Chief Controller of Explosives, Chennai of | | |
| | Explosive including traveling, boarding and lodging, out | Vendor to confirm | |
| | of pocket expenses, also approval | | |
| 32.1 | | | |
| | Preparation of documentation for Commissioner of Police or District Collector and with different | | |
| | | Vendor to confirm | |
| | etc.,) for obtaining NOC from District Authority. | | |
| 32.2 | After obtaining NOC and total Completion of HSD | | |
| | installation Required Competent Persons | | |
| | Certifications(i.e Safety certificate s under rule 130 and | | |
| | tank test certificate under Rule 126 under petroleum | Vendor to confirm | |
| | rules 2002.) | | |
| 32.3 | | | |
| | Preparation of drawings, documentation for final | | |
| | licensiing for obtaining Final Licence from Chief Controller of Explosives, Nagpur or Joint Chief Controller | | |
| | of Explosives, Chennai including traveling, boarding and | Vendor to confirm | |
| | lodging, out of pocket expenses. | | |
| 32.4 | 3 3. Francis Province | | |
| | EDECTION & CONTRACTORING | | |
| | ERECTION & COMMISSIONING | | |
| 33 | The Forestian O Commissioning and here! | | |
| | The Erection & Commissioning and handing over of | | |
| | the system is in the scope of Bidder.The supplier | | |
| | shall deploy skilled technicians for installation & | Vendor to confirm | |
| | commissioning of HSD STORAGE ,FIRE FIGHTING | | |
| | SYSTEM AND CONNECTING TO THE PROPOSED | | |
| 33.1 | PIPE NET WORK and qualified Engineers/ | | |

| | | <u> </u> | |
|------|---|-------------------|--|
| | The work shall be executed in a professional manner adopting safe working practices. All Statutory Regulations and as promulgated from time to time and as required for good Engineering practice shall be adhered to. | Vendor to confirm | |
| 33.3 | All Statutory labour laws like PF , ESI etc., in respect of labour shall be strictly adhered to. | Vendor to confirm | |
| 33.4 | The Bidder may visit the BHEL Site at Thirumayam / Trichy for HSD & their accessories for installation and commissioning for assessing the quantum of work involved, before quoting if required. | Vendor to confirm | |
| 34 | PRE-DISPATCH INSPECTION AT SUPPLIERS WORKS | | |
| | HSD & THEIR ACCESSORIES Shall be offered for Pre- dispatch inspection by BHEL Engineers at supplier's works | Vendor to confirm | |
| 35 | PROVE OUT AND ACCEPTANCE | | |
| | HSD tank & their facilities estabilishment completion will mean after obtain the necesssary inspection completion, statutory approval and physical demonstration of all systems to the satisfaction of BHEL engineers for the safe operation of the system as per the normal required parameters to satisfy the design condition. | Vendor to confirm | |
| 36 | WARRANTY | | |
| | Warranty for products against defetive materials and workmanship for a period of 12 months from the date of commissioning or 18 months from the date of despatch whichever is earlier | Vendor to confirm | |
| 37 | SPECIFIC NOTE | | |
| | Bidders must submit valid CCOE certificate copy for manufacturing of U/G HSD Tank & other facilities along with their offer, failing which offer will be liable for rejection. | Vendor to confirm | |
| 38 | BHEL SCOPE OF SUPPLY | | |
| | Complete Civil work involved for installation of U/G HSD Tank & their accessories which includes Civil Pedetals for Tanks, Pump Shed, Control Room, Unloading Gantry, Fencing, Gates. | Vendor to confirm | |

| Providing water tank ded 38.2 | icated to HSD tank Yard for | Vendor to confirm | |
|--|--|---|------|
| 38.3 Providing water line upto | fencing. | Vendor to confirm | |
| Providing single point Pov to all concerned Electrical 38.4 | wer source (Panel Board) Equipments like Pump etc. | Vendor to confirm | |
| Explosive Fees towards D towards Final License Fees | rawing Approval and s for 3 years as applicable. | Vendor to confirm | |
| 38.6 receipt of Drawings Appro | val. | Vendor to confirm | |
| fencing around the HSD yard | d with galvaniced chain link d area with MS posts, | Vendor to confirm | |
| 5 Mtr wide main gate for Ta 38.8 for emergency entry | ANKER and 1.2 Mtr wide gate | Vendor to confirm | |
| 39 Vendor's scope of su p | | | |
| underground Bulk HSD stor 10987 - 1992 of 1 No. x 40 length horizintal) nominal plates & their accessories. | erection of commissioning of rage tank confirming to IS - KL (2.75 Mtrs Dia x 7.5 Mtrs capacity fabricated from MS | Vendor to confirm | |
| (digital percentage level in consisting of display unit a unit should have 2-1/2 digit | U/G tank connection to BMS dicator for HSD storage tanks nd level sensor. The display seven segment LED to dip. | Vendor to specify the specification, reputed make with quantity | |
| Flame Arrestor for U/G ta Norms. | ink vent line as per CCOE, | Vendor to specify the specification, reputed make with quantity | |
| the underground storae make Tushaco with 2HP IS- 2148 make Kirloskar 39.4 | - | Vendor to specify the specification, reputed make with quantity | |
| pump in side the yard ar 39.5 | | Vendor to specify the specification, reputed make with quantity | |
| Pressure Gauges 4" Dia , 0-1 39.6 | 0 kg range with isolation | Vendor to specify the specification, reputed make with quantity | |
| 39.7 Pressure Relief Valve near t | he Pump outlet line | Vendor to specify the specification, reputed make with quantity | |

| | | | T |
|-------|--|---|---|
| 39.8 | Seamless Piping including all necessary bends, flanges, reducers, packing sheets and tees. | Vendor to specify the specification, reputed make with quantity | |
| 39.9 | Ball Valves with flange ends | Vendor to specify the specification, reputed make with quantity | |
| 39.1 | Strainers | Vendor to specify the specification, reputed make with quantity | |
| 39.11 | Flow meters | Vendor to specify the specification, reputed make with quantity | |
| 39.12 | NRV flange type of Gun metal | Vendor to specify the specification, reputed make with quantity | |
| 39.13 | Structural steel for pipe line supports. | Vendor to specify the specification, reputed make with quantity | |
| 39.14 | Solieniod Valves of diapharm type for DG Set | Vendor to specify the specification, reputed make with quantity | |
| 39.15 | Low level / High level transmitter probes for tanks and spill tank. | Vendor to specify the specification, reputed make with quantity | |
| 39.16 | GI earth pati 40 x 5 for tank and motor earthing- 1 LOT | Vendor to specify the specification, reputed make with quantity | |
| 39.17 | Earthing clamps for flange joints -1 LOT | Vendor to specify the specification, reputed make with quantity | |
| 39.18 | D.C.P type of capacity 10Kg/CM2 fire exstinguishers | Vendor to specify the specification, reputed make with quantity | |
| 39.19 | stands for the fire buckers | Vendor to specify the specification, reputed make with quantity | |
| 39.2 | Fire buckets | Vendor to specify the specification, reputed make with quantity | |
| 39.21 | Sign boards | Vendor to specify the specification, reputed make with quantity | |
| 39.22 | Spill tank For over flow fuel return line. | Vendor to specify the specification, reputed make with quantity | |
| 39.23 | Gear pump with flame proof motor For Return line | Vendor to specify the specification, reputed make with quantity | |
| 39.24 | Flame proof DOL starter for pump near the spill tank . | Vendor to specify the specification, reputed make with quantity | |
| 39.25 | Transportation of HSD tank and related accessories to BHEL Site/Thirumayam,Pudukottai District,Tamil Nadu | Vendor to confirm | |
| | Automatic Control panel Type IP 65 rating whether proof for operation of fuel pumps for emergency stop switch including BMS connectivity along with potential contacts | Vendor to specify the specification, reputed make with quantity | |
| 39.27 | copper armoured cable | Vendor to specify the specification, reputed make with quantity | |
| 39.28 | Double Earth pit for HSD Yard | Vendor to specify the specification, reputed make with quantity | |
| 39.29 | Charges for CCOE Approval to be paid by vendor | Vendor to confirm | |
| 39.3 | PAINTING | | |
| 39.31 | Two coats of primer and 2 coats of Tankmestic (Bitumen Paint) as per IS 158 code | Vendor to confirm | |

| | | | , | |
|-------|--|-------------------|---|--|
| 00.00 | Preparation of drawings, documentation for obtaining Proposed approval from Chief Controller of Explosives, Nagpur or Joint Chief Controller of Explosives, Chennai of Explosive including traveling, boarding and lodging, out | Vendor to confirm | | |
| 39.32 | of pocket expenses, also approval Preparation of documentation for Commissioner of Police or District Collector and with different | Manufacta and inv | | |
| 39.33 | departments(Like Fire, Revenue, Police department etc.,) for obtaining NOC from District Authority. | Vendor to confirm | | |
| | After obtaining NOC and total Completion of HSD installation Required Competent Persons Certifications(i.e Safety certificate s under rule 130 and | Vendor to confirm | | |
| 39.34 | tank test certificate under Rule 126 under petroleum | | | |
| 39.35 | Preparation of drawings, documentation for final licensiing for obtaining Final Licence from Chief Controller of Explosives, Nagpur or Joint Chief Controller of Explosives, Chennai including traveling, boarding and lodging, out of pocket expenses. | Vendor to confirm | | |
| 39.36 | The indent of this specification is to provide services for executing the projects according to most modern and proven techniques and codes. The omission of specific reference to any method, and equipment or materials necessary for the proper and efficient services towards installation shall not relieve the contractor of the responsibility of providing such services / facilities to complete the work or portion of work awarded to the Supplier. The quoted rate shall deem to be inclusive of all such contingencies. | Vendor to specify | | |
| | Documents to be supplied along with | | | |
| 40 | material supply: | | | |
| 40.1 | Three sets of the following documents are to be provided along with supply(Both hard copy and Soft copy-CD): | Vendor to confirm | | |
| 40.2 | P&I (preferably with standard coloring) with Bill of materials giving purchase specifications for each item. | Vendor to confirm | | |
| 40.3 | Function diagram for the entire operations of the system giving solenoid sequences, interlocks and pressure & flow parameters ,etc for each operation. | Vendor to confirm | | |
| 40.4 | List of rubber items if any with complete purchase specification. | Vendor to confirm | | |

| | | | 1 | T T |
|------|--|---------------------|----------|-----|
| | Cross sectional assembly drawing for all the valves giving major dimensions, seal details, | | | |
| | | Vendor to confirm | | |
| | mounting details, pressure ratings, etc. | | | |
| 40.5 | | | | |
| | Detailed technical Catalogues in original for all | | | |
| | components in the system. | Vendor to confirm | | |
| 40.6 | 1 5 | | | |
| | Electrical schematic/ control circuit diagram with | | | |
| | Bill of materials giving complete purchase | Manufactor and firm | | |
| | specification of all bought out components. | Vendor to confirm | | |
| 40.7 | specification of an bought out components. | | | |
| | Electrical wiring diagram with ferrule numbers. | Vandanta autima | | |
| 40.8 | | Vendor to confirm | | |
| 40.9 | Control panel lay-out. | Vendor to confirm | | |
| | Time schedule for design, supply, erection, | | | |
| 4.4 | testing & commissioning | | | |
| 41 | testing to commissioning | | | |
| | Thurs we said to 6: 6D 1 | Vendor to confirm | | |
| | Three months from the date of issue of Purchase or | vendor to confirm | | |
| 41.1 | | | | |
| 42 | Spares | | | |
| | The minimum required spares for the period of | | | |
| | two years to be mentioned and quoted seperately. | Vendor to specify | | |
| 42.1 | , | , , | | |
| 42.1 | | | <u> </u> | ļ |