



Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

An ISO 9001
Company

| | |
|-------------------------------|--|
| ENQUIRY | Phone: +91 431 257 76 53 |
| NOTICE INVITING TENDER | Fax : +91 431 252 00 31 |
| | Email : skaruna@bheltry.co.in |
| | Web : www.bhel.com |

| | | | |
|--|--------------------------------------|------------------------------------|--|
| | Enquiry Number: 2731300003 | Enquiry Date: 28.03.2013 | Due date for submission of quotation: 29.04.2013 |
|--|--------------------------------------|------------------------------------|--|


You are requested to quote the Enquiry number date and due date in all your correspondences. 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.

| SI. No | Description | Quantity |
|--------|--|----------|
| 1 | Zirconia Technic Based Portable Oxygen Analyser 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) | 02 Sets |

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. The EMD Amount for this Tender will be (INR) : 40,000.00
3. Delivery required 6 months from the date of purchase order.
4. All updates, amendments, corrigenda etc (if any) will be posted only on the above websites from time to time, as and when required, until tender is opened. There will be no publication of such updates, amendments corrigenda etc. through newspapers or any other media.

BHEL commercial terms & conditions with Price Bid and Bank Guarantee formats 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 reference 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  Sr. Manager / MM / Capital Equipment |
|---|--|

S. KARUNANIDHY
Senior Manager
MM / Capital Equipment
BHEL, TRICHY - 620 014

Zirconia Technic based Portable Oxygen Analyser – Qty : 2 Sets.**SECTION – I : QUALIFYING CRITERIA**

The BIDDER has to compulsorily meet the following requirements to get qualified for considering the technical offer :

| SI. No. | REQUIREMENTS | BIDDER'S RESPONSE |
|---------|---|-------------------|
| 1 | <p>Only those vendors (OEMs), who have supplied and commissioned at least one Zirconia Technic based Portable Oxygen Analyser (similar type being offered) in the past ten years (from the date of opening of Tender) and such equipment is presently working satisfactorily for more than one year after commissioning (from the date of opening of Tender), should quote.</p> <p>However, if such equipment had already been supplied to BHEL, then that equipment should be presently working satisfactorily for more than six months after its commissioning and acceptance (from the date of opening of Tender).</p> | |
| | <p>The vendor should submit following information where similar equipment has been supplied for qualification of their offer.</p> | |
| 1.1 | Name and postal address of the customer or company where similar equipment is installed. | |
| 1.2 | Name and designation of the contact person of the customer. | |
| 1.3 | Phone, FAX no and email address of the contact person of the customer. | |
| 1.4 | Month and Year of commissioning of the equipment. | |
| 1.5 | Along with the Technical offer, the Vendor should submit one Performance certificate from the customer for the satisfactory performance of the equipment supplied to them. For obtaining the Performance certificate, a suggestive format is provided in SECTION – IV . | |
| 1.6 | BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/ incorrect, the offer shall be rejected. | |
| 2.0 | <p>DELIVERY - The bidder shall quote the best possible delivery. However the delivery shall not exceed 6 months. The additional grace period will attract a penalty which is explained in the commercial terms of the enquiry.</p> <p>The delivery period shall be reckoned from date of purchase order to despatch from the vendor works.</p> | |

Zirconia Technic based Portable Oxygen Analyser – Qty : 2 Sets.**SECTION – II** : The BIDDER / VENDOR is requested to provide the following information:

| Sl. No. | REQUIREMENTS | VENDOR'S RESPONSE |
|---------|--|-------------------|
| 3.0 | The BIDDER/VENDOR to furnish Reference List of Customers, with full address, details of contact person, where Zirconia Technic based Portable Oxygen Analyser have been supplied in the past. | |
| 4.0 | Details of Zirconia Technic based Portable Oxygen Analyser supplied to other BHEL units, if any. (Year of commissioning, Spindle size of equipment, Spindle motor power) | |
| 5.0 | Details on SERVICE-AFTER-SALES Set-Up in India including the Address of Agents / Service Centers in South India. | |
| 6.0 | Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment. | |

SECTION – III : The BIDDER to note:

| Sl. No. | PARTICULARS | VENDOR'S RESPONSE |
|---------|--|-------------------|
| 7.0 | The BIDDER / VENDOR shall submit the offer in TWO PARTS. 1. Technical Offer [with PART A & PART B] & commercial offer 2. Price Bid. | |
| 8.0 | The Technical Offer shall contain a comparative statement of Technical Specifications demanded by BHEL and Offer Details submitted by the Bidder , against each clause. A just 'CONFIRMED' or 'COMPLIED' or 'YES' or 'NO-DEVIATION' or similar words in the technical comparative statement may lead to disqualification of the Technical Offer. | |
| 9.0 | The Technical Offer shall be supported by product Catalogues & Data Sheets and also technical details of Bought-Out-Items with copies of Product Catalogue to the extent possible. | |
| 10.0 | The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation. | |

SECTION – IV

The performance certificate should be produced on **Customer's Letter Head.**

PERFORMANCE CERTIFICATE

| | |
|---|--|
| 1. Supplier of the equipment | |
| 2. Make & Model of the equipment | |
| 3. Month & Year of Commissioning | |
| 4. Application for which M/C is used | |
| 5. Performance of the equipment (Strike off whichever is not applicable) | Satisfactory / Good / Average / Not Satisfactory |
| 6. Any Other remarks | |
| Date: | Signature & Seal of the Authority issuing the Performance Certificate |

Zirconia Technic based Portable Oxygen Analyser–Qty : 2 Sets. Page 1of1

| Clause | PARTICULARS AND BHEL SPECIFICATION | BIDDERS OFFER With Technical Details |
|--------|--|---|
| 1.0 | Purpose: The Zirconia technic based Portable Oxygen Analyseroperatable with 230 V AC power supply – is for measuring the level of traces of Oxygen Gas present in the Argon atmosphere at the TIG Welding Zone. | Vendor to note |
| 2.0 | Job profile: Full penetration butt joints – either longitudinal or circumferential – being welded using TIG process. Before start of the weld, it should be ensured that the presence of Oxygen Gas is being reduced below a minimum specified limit. The weld Zone will be purged with Argon gas to drive away the air and the purging will continue till the required purity is being achieved. As the measurement of Oxygen level is to be measured at shop floor itself, the Oxygen level measurement device must be a portable and safe. | Vendor to note |
| 3.0 | Scope of Supply: 1. Zirconia technic based Portable Oxygen Analyser - Two No. 2. Essential Spares / consumables / accessories for two years of trouble free operation – Two Sets. 3. Tool Kit - Two sets. | Vendor to confirm |
| 4.0 | The Zirconia technic based Portable Oxygen Analyser: | |
| 4.1 | The Oxygen analyser shall be of a portable and shall be carried by hand to the application area. | Vendor to confirm |
| 4.2 | The principle of operation shall be based on “Zirconia” system | Vendor to confirm |
| 4.3 | Equation for measuring cell signal processing shall be according to “NERNST” | Vendor to confirm |
| 4.4 | Supply of measuring Gas into the system shall be by a Diaphragm Pump | Vendor to Specify |
| 4.5 | “ON / OFF” switch for the diaphragm pump shall be provided at the front face of the Unit | Vendor to confirm |

Zirconia Technic based Portable Oxygen Analyser–Qty : 2 Sets. Page 2of2

| Clause | PARTICULARS AND BHEL SPECIFICATION | BIDDERS OFFER With Technical Details | |
|--------|--|---|--|
| 4.6 | Hose dimensions and maximum suction length | Vendor to Specify | |
| 4.6 | Process of evaluating the presence of oxygen shall be fast and accurate. | Vendor to confirm | |
| 4.7 | Range of Oxygen level that can be measured: 0 to 5000 ppm in inert welding gases. | Vendor to confirm & Specify value | |
| 4.8 | Allowable maximum measuring Gas Temperature (Preferable 60 – 80 degree C) | Vendor to Specify | |
| 4.9 | Allowable Humidity range (preferable upto 80% RH) | Vendor to Specify | |
| 4.10 | Gas flow Pressure range | Vendor to Specify | |
| 4.11 | Response time in milli-seconds | Vendor to Specify | |
| 4.12 | Measuring Accuracy shall be less than +/- 1% | Vendor to confirm | |
| 4.13 | Suitable Key Board shall be provided for Operation / Calibration of the Unit | Vendor to confirm | |
| 4.14 | Clear text Display shall be by using LCD / Digital | Vendor to confirm | |
| 4.15 | Details being displayed in Main and sub display | Vendor to provide | |
| 4.16 | Analog Output: 4 – 20 mA- galvanically isolated, free scalable, working Resistance max. 500Ω. | Vendor to confirm | |
| 4.17 | Interface: RS232 with cables and software (64 Bit) shall be provided for data capture using PC. | Vendor to confirm | |
| 4.18 | Overall Dimensions of the equipment | Vendor to specify | |
| 4.19 | Overall weight of the equipment | Vendor to specify | |

Zirconia Technic based Portable Oxygen Analyser–Qty : 2 Sets. Page 3of3

| Clause | PARTICULARS AND BHEL SPECIFICATION | BIDDERS OFFER With Technical Details |
|--------|--|--|
| 5.0 | <u>Spares / consumable / accessories:</u> | |
| 5.1 | Itemized break-up of all Spares / consumables / accessories used on the equipment in sufficient quantity as per recommendation of BIDDER for 2 years of trouble free operation (minimum of 2 complete sets) should be offered by BIDDER. | Vendor to provide un-priced list of spares |
| 5.2 | All types of spares for the equipment shall be available for at least ten years after supply of the equipment. If equipment or control is likely to become obsolete in this period, the vendor should inform BHEL sufficiently in advance and provide drawings of parts / details of spares & Vendors to enable BHEL to procure these in advance, if required. | Vendor to confirm |
| 6.0 | <u>Tool Kit:</u> Tool Kit should contain the tools required for maintenance and operation of the system in sufficient numbers. | Vendor to provide un-priced list of Tools |
| 7.0 | <u>Electrical:</u> | |
| 7.1 | 230 V \pm 10%, 50HZ \pm 3 HZ, AC Power Supply will be provided by BHEL. | Vendor to confirm |
| 7.2 | Suitable protection system should be provided to prevent the operator from electric shock. | Vendor to confirm |
| 7.3 | Motors shall conform to IEC or Indian Standards | Vendor to confirm |
| 7.4 | Power Rating | Vendor to specify |
| 7.5 | All adapters / receptacles should have compatibility with Indian equivalents. | Vendor to confirm |
| 8.0 | <u>Painting:</u> All non-working surfaces and control panels shall be given a primer coat & two coats of paint as specified in Vendor's Painting scheme. All unpainted surfaces shall be protected from rust during transit. | Vendor to confirm |

Zirconia Technic based Portable Oxygen Analyser–Qty : 2 Sets. Page 4of4

| Clause | PARTICULARS AND BHEL SPECIFICATION | BIDDERS OFFER With Technical Details |
|-------------|---|---|
| 9.0 | <u>Documentation:</u> | |
| 9.1 | The following documents shall be furnished along with the offer : a. Detailed catalogue of the offered “Oxygen Analyser” with details & dimensions. b. Makes of the bought-outs c. Construction features d. Detailed list of error / Alarm messages | Vendor to provide |
| 9.2 | 3 sets of the following documents shall be furnished during inspection and supply: a. Detailed catalogue of the offered “Oxygen Analyser” with details & dimensions. b. Make of Bought out items with Part no/Specification c. The operator instruction manual d. Maintenance instruction manual e. Programming manual f. Guarantee / warranty cards of all bought-outs g. Applicable Calibration / Test certificates | Vendor to confirm |
| 10.0 | Acceptance : | Vendor to confirm |
| 10.1 | Acceptance at vendor’s works: The Oxygen Analyser shall be offered for BHEL’ Inspection at vendor’s works prior to dispatch and all features shall be demonstrated. | Vendor to confirm |
| 10.2 | Acceptance at BHEL works: During commissioning the vendor should demonstrate all features of the Oxygen Analyser including calibration, interface with computer, trouble shooting etc. | Vendor to confirm |
| 11.0 | Installation and commissioning at BHEL: Installation and commissioning of the “Oxygen Analyser” at BHEL shall be in the scope of vendor | Vendor to confirm |
| 12.0 | Packing : The “Oxygen Analyser” and other accessories, Spares etc shall be packed rigidly to avoid any transit damage and dispatched | Vendor to confirm |
| 13.0 | GUARANTEE: 12 months from the date of acceptance of the “Oxygen Analyser” at BHEL or 18 months from dispatch whichever is earlier. | Vendor to confirm |