



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT/ MATERIALS MANAGEMENT

### ENQUIRY

### NOTICE INVITING TENDER

Phone: +91 431 257 70 49

Fax : +91 431 252 07 19

Email : [csguna@bheltry.co.in](mailto:csguna@bheltry.co.in)

Web : [www.bhel.com](http://www.bhel.com)

#### TWO PART BID

Tender to be submitted in two parts.

Enquiry  
Number:

**2620900146**

Enquiry  
Date:

**19.08.2009**

Due date for submission  
of quotation:

**30.09.2009**

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
10	Heavy Duty Mobile Spectrometer as per the technical specification, general guidelines instructions & commercial conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a> )	01 No.

#### Important points to be taken care during submission of offer

1. Delivery required 6 months from the date of purchase order.
2. Grace period of 2 months beyond the above delivery period will be considered.
3. Checklist to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.

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 reference "2620900146".

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

**PART A****QUALIFYING CRITERIA FOR THE SUPPLY OF  
HEAVY DUTY MOBILE SPECTROMETER****Qty: 1 No.****SECTION – I**

The BIDDER / VENDOR has to compulsorily meet the following requirements to get qualified for submitting an offer for the impact tester.

<b>S. No.</b>	<b>REQUIREMENTS</b>	<b>VENDOR's COMMENTS</b>
<b>1.0</b>	The BIDDER / VENDOR shall have a minimum of THREE Years of Continuous Experience (from the date of tender opening) in the Design, Manufacture & Supply of "Heavy Duty Mobile Spectrometers". Kindly indicate the actual experience.	
<b>2.0</b>	The BIDDER / VENDOR shall have supplied at least one number of "Heavy Duty Mobile Spectrometers" in the last 10 years (from the date of tender opening) in India. Kindly confirm and indicate the number of equipments (quoted model) sold in 2006-09 in the world.	
<b>3.0</b>	Reference List of Customers and Performance Certificates from CUSTOMER(S) with full contact details of CONTACT PERSON.	
<b>4.0</b>	The BIDDER / VENDOR should have sound financial position and should furnish the Finance Statements (Summary of P & L Statement and Balance Sheet) for the immediate past three years.	

<b>5.0</b>	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.	
<b>6.0</b>	DELIVERY - The bidder shall quote the best possible delivery. However the delivery shall not exceed 6 months with an additional grace period of 2 months. The additional grace period will attract a penalty which is explained in the commercial terms of the enquiry. The delivery period shall be reckoned from date of purchase order to despatch from the vendor works.	

## SECTION – II

The BIDDER / VENDOR has to necessarily provide the following details, for making an assessment of the firm's capability and competency:

[The BIDDER is expected to give complete details against each clause in the table given below and wherever necessary an additional sheet may be attached (giving clear reference number) to cover the required details]

<b>S. No.</b>	<b>PARTICULARS</b>	<b>VENDOR's RESPONSE</b>
<b>7.0</b>	Number of Years of Experience of the BIDDER/ VENDOR in the field of manufacturing and supplying "Heavy Duty Mobile Spectrometers"	
<b>8.0</b>	Number of Heavy Duty Mobile Spectrometers supplied, erected & commissioned till date.	
<b>9.0</b>	Year of launch of the Model quoted against this Enquiry?	
<b>10.0</b>	Is there any other model launched after the quoted Model? Otherwise, indicate the likely year in which the next model is likely to be launched?	

<b>11.0</b>	Number of "Heavy Duty Mobile Spectrometers" supplied, erected & commissioned till date in the quoted Model?	
<b>12.0</b>	Details on International standards followed in Design of the Equipment (including analysis methodology and verification of equipment). Calibration standards of the equipment.	
<b>13.0</b>	Comprehensive Details on performance Testing - of the Equipment quoted, ensured before dispatch	
<b>14.0</b>	Any Additional Data to supplement the manufacturing capability of the BIDDER	

**SECTION – III**

The BIDDER / VENDOR has to comply with the following, for accepting the Technical Offer for scrutiny by the Purchaser:

<b>S.No.</b>	<b>REQUIREMENTS</b>	<b>VENDOR's COMPLIANCE</b>
<b>15.0</b>	The BIDDER / VENDOR shall submit the offer in TWO PARTS - Technical & Commercial and Price Bid. The Technical Offer shall be in line with the BHEL Technical Specifications and the Guidelines or Annexure mentioned, wherever applicable.	
<b>16.0</b>	The Technical Offer shall contain a comparative statement of Technical Specifications given by BHEL and the Offer Details submitted by the Bidder, against each clause of the specifications.	
<b>17.0</b>	A just 'CONFIRMED' or 'COMPLIES' or 'YES' or 'NO-DEVIATION' or similar words in the technical comparative statement may lead to disqualification of the Technical Offer.	

<b>18.0</b>	The Technical Offer shall be supported by Product Catalogue, drawings, manuals and Data Sheets in ORIGINAL and complete technical details of 'Bought-Out-Items' with copies of Product Catalogue and Selection Criteria. This should include operational and maintenance spares also.	
<b>19.0</b>	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	
<b>20.0</b>	The reference List of Customers shall be accompanied with the details (Phone Number/E-Mail ID) of the CONTACT PERSON for cross reference	

**PART B****Technical Specification for  
HEAVY DUTY MOBILE SPECTROMETER**

To carry out Positive Material Identification of Header Stubs, where large number of stubs are involved and multiple tests have to be performed continuously on a large number of stubs at one go. The checks are intended to analyse / sort low alloy, high alloy and stainless steel and nickel base alloys.

**1.0 BRIEF DESCRIPTION :**

**Heavy Duty Mobile Spectrometer:** This works on the principle of Optical Emission Spectrometry capable of giving a complete analysis within about 10 seconds, which includes elements in steels, cast iron, etc. The instrument can be used for material analysis as well as fast grade identification in arc mode. It incorporates rugged features, so that the optical system is stable against temperature changes and movement in shop floor environment.

**2.0 SPECIFICATION :**

SI No	Description	BHEL Requirement	BIDDER's COMMENT
2.1	Areas of Application in BHEL/Trichy & EQUIPMENT REQUIREMENTS	To carry out Positive Material Identification of Header Stubs, where large number of stubs are involved and multiple tests have to be performed continuously on a large number of stubs at one go.	
2.2	Principle of Operation	The Mobile spectrometer shall work on the principle of Optical Emission Spectrometry capable of analyzing multi-base materials (Fe and Ni base). No radioactive source shall be permitted. Hand held spectrometers are not acceptable (working on either optical spectrometry or by X-ray Fluorescence principle).	

2.3	Operating Parameters	The Equipment shall be heavy duty type meant for continuous usage. It shall be capable of at least 1000 sparks continuously without any break	
2.4	Detector	Non glooming CCD or CID type detector, or any other proven type detectors	
2.5	Weight restriction	The Mobile spectrometer shall preferably weigh less than 80 Kg & shall be moveable on rubber roller driven carts/trolleys.	
2.6	Power Source	The Equipment shall work on A/C Power source with in-built transformer as required.. There shall be no external eliminator for A/C to D/C power source conversion.	
2.7	Usage conditions	The instrument is meant for rugged shop floor use (15 - 45 Deg C, Dusty environment, varying humidity levels, handling by many personnel) and should be suitable for the intended rough use and ergonomically designed for heavy duty usage.	
2.8	Modes of operation	The Equipment shall be capable of providing both analysis mode as well as sorting mode i.e., approximate chemical analysis of the material shall be detected and the equipment shall be capable of Identifying the specific Grade from a lot (Sorting mode).	
2.9	Elements to be analysed in steels	The instrument shall be capable of analysing as a minimum the following elements in <b>steels</b> : Silicon, Manganese, Nickel, Chromium, Molybdenum, Cobalt, Vanadium, Tungsten, Niobium, Aluminium, Copper, Lead	
2.10	Modules	The Equipment shall possess a comprehensive list of analysis modules from which the selection can be made	

2.11	PC	The Mobile Spectrometer shall have a Modern Industrial PC along with dust proof membrane Keyboard and Serial Printer	
2.12	Interface	Additionally the Instrument shall have RS232 Port for External Computer and Printer.	
2.13	Memory	Memory of Computer shall be capable of Storing at least 1000 readings.	
2.14	Display	The Instrument shall preferably have a LCD / TFT Display.	
2.15	Software	The Software shall be for the following: Alloy Identification of commonly used high temperature materials (low alloy, high alloy, stainless steel and nickel base alloys) meeting ASME, EN and DIN. Alloy Verification giving chemical compositions Alloy table with editing facility to include newer materials Sorting Mode	
2.16	Printer	Serial Printer shall be provided.	
2.17	Calibration	Pre calibrated (factory) analytical programs shall be provided with the equipment for the following analytical programs- Carbon and Carbon Manganese Steels, Low Alloy Steels, High Alloy Steels and Stainless Steels, Nickel Base alloys A set of (SUS) Calibration Samples shall be provided for routine calibration of equipment for all the above said ranges.	
2.18	Commissioning	Commissioning of the Equipment shall be done at our Works, along with training of our personnel on the usage of equipment. The calibration of the equipment against the reference standards shall be demonstrated after supply.	



2.19	Safety of operation	There shall not be any operator health or environmental hazards associated with the equipment, and the specific precautions if any shall be clearly specified in the offer.	
2.20	Service Manual	Service Manual (2 copies) in English shall be provided	
2.21	Erection & Commissioning & Performance prove out at BHEL	Erection and commissioning shall be done by the supplier free of cost. After the installation, the supplier has to run the equipment and demonstrate its performance at BHEL works for the range of materials. including any special requirements.	
2.22	Training on Operation & Maintenance for BHEL Staff at BHEL/Trichy	Training on Operation and Maintenance for BHEL Staff – at least for half a day after the successful commissioning and prove-out of the equipment. This shall be given free of cost by the supplier.	
2.23	Guarantee	Performance Guarantee for 12 months from the date of commissioning. Free service during Guarantee period shall be provided.	
2.24	AMC and service support	An AMC programme, through trained service personnel in India, shall be offered <u>including replacement of spares</u> for a period of two years & shall be quoted for. (AMC shall commence only after the guarantee period)	