



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 7653 Email : skaruna@bheltry.co.in , ajay@bheltry.co.in 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	2631700049	07.10.2017	31.10.2017

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	High Temperature Wear Testing System as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	1 No.

Important points to be taken care during submission of offer

1. Compliance Form No: TRY/ IND/ 07 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
2. Delivery period required is 4 months from the date of P.O.
3. Commissioning and performance prove out shall be done at BHEL Trichy by the supplier
4. Time period required for commissioning and performance prove out shall be 2 weeks from the date of intimation by BHEL
5. EMD for this tender Rs. 40,000/-
6. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions (refer MM/CE/GENL/001- EMD), compliance form and technical specification 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.

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

AJAY V. ASALKAR

Sr. MANAGER

MM / Capital Equipment

BHEL, Tiruchirappalli - 620 014.

Sr. Manager / Capital Equipment / MM

HIGH TEMPERATURE WEAR TESTING SYSTEM. Qty. 1 no.**PART - A****SECTION – 1: Qualifying Criteria**

The BIDDER has to compulsorily meet the Qualification Criteria indicated in Section – 1 to get qualified. Otherwise the technical offer will not be considered.

S.No.	TENDER PARTICULARS	VENDOR's RESPONSE
1.1	Only those vendor/ OEM should quote who have at least Five years of continuous experience in the field of design, manufacture and supply of "HIGH TEMPERATURE WEAR TESTING SYSTEM". Vendor to indicate the actual no. of years of experience in this field.	
1.2	Only those vendors (OEMs) should quote, who have supplied and commissioned in the last Five years (as on the original date of this tender opening) at least FIVE numbers of "HIGH TEMPERATURE WEAR TESTING SYSTEM" of similar model/capacity to their customers and such equipment should be presently working satisfactorily. The name and contact addresses of the customers, to whom the above said equipment were supplied, to be furnished with details with the OFFER.	
1.3	Vendor has to submit at least ONE PERFORMANCE CERTIFICATE for satisfactory performance of "HIGH TEMPERATURE WEAR TESTING SYSTEM", for a minimum period of one year from the date of commissioning (as on the initial date of this tender opening) from their customers to whom such equipment has been supplied and commissioned in the last FIVE years. For obtaining the Performance certificate, a suggestive format is given in Annexure.	

S.No.	TENDER PARTICULARS	VENDOR's RESPONSE
1.4	BHEL reserves the right to verify the information provided by the Vendor for the referred equipment at their referred customer's works. It shall be the responsibility of the vendor to facilitate the visit of BHEL's team at their refereed customer works. The Travel, Board, and Lodging expenses for BHEL Personnel shall be borne by BHEL. In case the information provided by vendor is found to be false / incorrect, the offer shall be rejected. BHEL reserves the right to accept or reject the OEM'S based on the assessment of their technical and financial capability.	
1.5	Vendors must be ISO 9001: 2008 certified. Copy of Certificate copy must be submitted along with offer.	

SECTION – 2

The BIDDER/VENDOR are requested to provide the following information:-

S.No.	TENDER PARTICULARS	VENDOR's RESPONSE
2.1	The BIDDER / VENDOR to furnish Reference List of Customers, with complete address, details of contact person, where "HIGH TEMPERATURE WEAR TESTING SYSTEM" have been supplied in the past.	
2.2	Specify details of "HIGH TEMPERATURE WEAR TESTING SYSTEM" supplied to any of the units of BHEL, if any (Year of commissioning with details etc).	
2.3	Details on SERVICE –AFTER-SALES Set-up in India including the Address of Agent/Service Centers In India to be provided	
2.4	Any Additional data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

SECTION – 3

The BIDDER to note:

S.No.	TENDER PARTICULARS	VENDOR's COMPLIANCE
3.1	The BIDDER shall submit the offer in TWO PARTS - Technical [with PART A & PART B] & Commercial and Price Bid.	
3.2	The Offer shall contain a comparative statement of Technical Specifications given by BHEL and the Offer Details submitted by the Bidder, against each clause. 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. In case of any deviations in any of the technical specifications, such deviations should be clearly specified in the comparative statement.	
3.3	The BIDDER shall assure a continuous support for SPARES and SERVICE for TEN years, from the date of commissioning of the equipment at BHEL Works.	
3.4	The Technical Offer shall be supported by Product Catalogue and Data Sheets with complete technical details / literature on the QUOTED MODELS of HIGH TEMPERATURE WEAR TESTING SYSTEM	
3.5	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 for the scope of supply.	

ANNEXURE**Suggestive Format of Performance Certificate**

The Performance of HIGH TEMPERATURE WEAR TESTING SYSTEM should be certified by the customer on Customer's Letter Head and submitted along with the offer.

PERFORMANCE CERTIFICATE

1.0	Name & Type of the Equipment:	
2.0	Supplier/s Name and Address	
3.0	Make & Model Number of the HIGH TEMPERATURE WEAR TESTING SYSTEM and other Sub-Systems / Major Accessories forming part of the MAIN EQUIPMENT	
4.0	Month & Year of Commissioning	
5.0	Application for which the Equipment is generally used	
6.0	EQUIPMENT DETAILS :	
7.0	Performance of the Equipment (Please tick the appropriate option)	Satisfactory Non Satisfactory
8.0	Service after Sales Support Promptness (Please tick the appropriate option)	Satisfactory Non Satisfactory
9.0	Other Remarks (if any)	
Date :		Signature & Seal of the Authority Issuing the Performance Certificate

HIGH TEMPERATURE WEAR TESTING SYSTEM, Qty. 1 no.

PART B - Technical Specification

S. No.	PARTICULARS & BHEL SPECIFICATIONS	VENDOR's OFFER
1.0	Purpose & Application: The machine should be capable of carrying out Pin on disc wear testing as per ASTM G- 99 Standard or equivalent.	
2.0	Disc parameters	
2.1	Disc diameter: 100 mm	
2.2	Disc thickness: 8 mm	
2.3	Rotational Speed of disc: 100 to 2000 rpm (maximum)	
2.4	The disc should be made of hardened steel of Rc 58-64	
3.0	Sample holder capable of holding samples of following dimensions:	
3.1	Pin Diameter: 3, 6 and 10 mm	
3.2	Ball Diameter: 10 mm (Ball holder for holding sample of diameter 10 mm should be provided)	
3.3	The pin should be made of hardened steel of Rc 58-64	
4.0	Load and loading system	
4.1	Normal Load: 5 - 200 N	
4.2	Loading system: using dead weights selectable on scale	
5.0	Measurement of wear	
5.1	Wear measurement: 0 - 2000 μ m with sensitivity of 2 μ m or better	
5.2	Frictional Force: 0 - 200 N	
5.3	Wear Track Diameter: up to 80 mm (variable)	
6.0	Heating Module	
6.1	Independent Disc Heating Module, Ambient to 800 Deg C. Vendor to confirm and specify the method of heating.	
6.2	Independent Pin Heating Module, Ambient to 600 Deg C. Vendor to confirm and specify the method of heating.	

S. No.	PARTICULARS & BHEL SPECIFICATIONS	VENDOR's OFFER
7.0	Environment Control chamber: Environment chamber with port will be provided for purging inert gas inside chamber during test.	
8.0	Motor power in kW. Vendor to specify	
9.0	Other features	
9.1	Suitable configuration of personal computer/laptop should be provided with full licensed operating system, MS office and on-line data acquisition software and hardware for display of Friction Force, testing temperature in disc & pin/ball, Coefficient of friction, normal load and combined pin and disk wear.	
9.2	Advanced comparative view reporting for comparison of multiple test results: ACACA algorithm based signal processing.	
9.3	Provision for on-line remote diagnosis of faults.	
10.0	Safety features	
10.1	Safety interlocks to ensure safe operations at all times during the running of machine.	
10.2	All electrical components must have CE or equivalent safety certifications. The vendors are required to provide certification of each electrical component used.	
11.0	Consumables and spares: Vendor to provide the list of consumables, accessories (optional and mandatory) and spares along with the following:	
11.1	Timer belt- 2 Nos	
11.2	LVDT- 2 Nos	
11.3	Load cell- 2 Nos	
11.4	Proximity sensor- 2 Nos	
11.5	Wear disc- 2 Nos	
11.6	Sample pins $\phi 10\text{mm}$ - 10 Nos	
11.7	Sample holders $\phi 10\text{mm}$ - 5 Nos	
12.0	Equipment Inspection & Acceptance At Vendors Works [PDI]	
12.1	Pre-dispatch inspection may be conducted at vendor works before dispatch to ensuring the specification issued in purchase order and function of high temperature wear testing system. Based on the PDI report, clearance for dispatch will be issued.	

S. No.	PARTICULARS & BHEL SPECIFICATIONS	VENDOR's OFFER
13.0	Documentation	
13.1	The following documents in English language should be supplied along with the equipment and all the add-on systems :- Hard Copies: 3 sets :- In CD form: 1 Set 1. Operating manuals of High Temperature Wear Testing System 2. Operation and Maintenance manual of all accessories 3. Electrical wiring Drawing – power & control circuits. 4. Maintenance & Interface manuals for equipment control system 5. Complete printed circuit board schematic indication check points for electronic controls. 6. Complete list of alarm log, error code, error messages and remedies and on line fault diagnostic to be provided by the vendor, 7. Specification ratings of all individual items 8. Trouble shooting chart for main and all sub-system 9. Preventive maintenance check list for total system. 10. Complete list of spares and consumables for equipment, along with item part no/ specification/type /model and make and address of the sub-vendor. 11. They should also submit the name(s) of the service engineer(s) employed by them who is/are competent to service the equipment being quoted with their locations in India.	
14.0	General Points	
14.1	Equipment Model Number and other related details	
14.2	Total connected Load (in kVA)	
14.3	Total weight of the equipment & Accessories	
14.4	General Arrangement drawings	
14.5	Calibration certificates for all equipment , measurement instruments and standards to be provided by the vendor	
14.6	All electronic controls for integrated controller / drives that need stabilized supply shall be provided with suitable voltage stabilizer	

S. No.	PARTICULARS & BHEL SPECIFICATIONS	VENDOR's OFFER
14.7	Civil & foundation details, flooring to reduce the vibration if any shall be provided within 15 days after receipt of purchase order	
15.0	Installation, Commissioning And Training	
15.1	The vendor's representative shall be responsible for the installation of the equipment at BHEL.	
15.2	All handling tools and mechanical / electrical help required for the installation and commissioning shall be provided by the BHEL.	
15.3	The required material and consumable for carrying out prove out trials at site will be provided by BHEL	
15.4	The vendor's representative shall impart Training to BHEL personnel for operational and maintenance aspects. It includes Safety, Operational of the equipment PC based System & Operation, Trouble – Shooting, software application, all special features and applications of the equipment, electrical/mechanical/ electronics system etc.	
16.0	Performance Guarantee: The performance of the equipment shall be Guaranteed for a period of 12 months from the date of commissioning or 18 months from the date of dispatch whichever is earlier	