



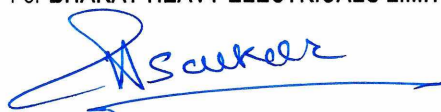
An ISO 9001
Company

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	2601700033	29.06.2017	25.07.2017
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	Thermocouple Calibration Furnace		1 No.
20	Box Type Electrical Furnace for Rod Heating		1 No
30	Box Type Electrical Furnace for Hardening – 1 No & for Tempering -1 No.		2 No
as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)			
Important points to be taken care during submission of offer 1. The Technical Documents for the above item has been split in to Three Portions each containing the respective Technical Specification for the above three furnaces. 2. Compliance Form No: TRY/IMP/02 & TRY/ IND/ 02A to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation. 3. For Line Item 10 - Delivery period required is 3 months from the date of P.O. 4. For Line Item 20 & 30 - Delivery period required is 4 months from the date of P.O. 5. Commissioning and performance prove out shall be done at BHEL Trichy by the supplier 6. For Line Item 10 - Time period required for commissioning and performance prove out shall be 3 week from the date of intimation by BHEL 7. For Line Item 20 & 30 - Time period required for commissioning and performance prove out shall be 4 week from the date of intimation by BHEL 8. EMD for this tender Rs.2,00,000/- 9. 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 / MM - Capital Equipment	

PART –A

TENDER REQUIRMENTS FOR THE SUPPLY OF
Thermocouple Calibration Furnace

Qualifying Criteria

S.N.	Pre- Qualification Criteria	Vendor's compliance
1	The BIDDER shall be OEM (or) OEM Authorised dealers.	
2	In case if the BIDDER is an OEM Authorised dealer, then he has to submit a valid certificate/authorization letter from the Authorized Representative of the OEM/ Principal Manufacturer to quote exclusively for this specific tender.	
3	The vendor should also submit following details which are necessary for qualifying their offer.	
3.1	Documentary evidence of previous Purchase Order for any of the Thermocouple Calibration Furnace (Range up above 1000°C) that they have supplied in past 10 years. The PO copy should be on the name of the Bidder.	
3.2	Name and postal address of the customer or company where the item has been supplied (Ref. to point 3.1).	
3.3	Name, designation, contact phone number and email address of the contact person of the customer (Ref. to point 3.1).	
3.4	Month & year of supply.	
4	BHEL reserves the right to verify the information provided by the Bidder. In case the information provided by vendor is found to be false/incorrect, the offer shall be rejected.	

Part-B Technical Specification for Thermocouple Calibration Furnace		
S.N.	BHEL Technical Specification:	Vendor's compliance
1	Item description: Thermocouple calibration furnace, Bench type, Horizontal furnace.	
2	Temp. Range : 500°C to 1500°C.	
3	Type of control : Thyristor control	
4	Time to Reach Max Temp. : less than 2.5 Hr.	
5	Stability : $\pm 1^{\circ}\text{C}$ @ 1500°C.	
6	Stabilization time: shall not exceed 20 minutes.	
7	Temperature Uniformity: $\pm 1^{\circ}\text{C}$ of entire thermal block.	
8	Material of equalizing Thermal block : vendor to specify	
9	Size of equalizing Thermal block : vendor to specify	
10	No of insert : 2 inserts @ 8 mm dia and 2 inserts @ 6 mm dia	
11	Type of heating element: vendor to specify	
12	Temperature sensor : Vendor to specify [Pt. /Rh-Pt.(R type) or S type thermocouple]	
13	Thermocouple accuracy= 0.25% reading	
14	Power supply : 230 VAC 50 Hz	
15	Capacity of furnace in Kw : Vendor to specify	
16	Furnace Dimensions : Vendor to specify	

17	No of controller: 2 no's (Furnace temperature controller - 1 no. + Safety controller – 1 no.).	
18	Data logger for recording the temperature readings : vendor to specify	
19	Furnace temperature controller	
19.1	Type of Furnace temp. Controller: Microprocessor based programmable PID controller.	
19.2	Make : Eurotherm is preferable	
19.3	Input : Universal input (User selectable)	
19.4	Range : Configurable	
19.5	Mounting : Panel	
19.6	Panel cut out size : 92X92 mm	
19.7	Control output: 4 to 20 mA to operate Thyristor control of the furnace.	
19.8	Display: Simultaneous colour display of PV, SV with units & output.	
19.9	Operating ambient : 0 - 50° C, 5 - 95 % RH	
19.10	Front panel configuration : Easy, on-site set up	
19.11	Temperature resolution: 0.1°C	
19.12	Accuracy: Better than or equal to 0.25% of deg. Or 1°C	
19.13	Program pattern : 4 program with 16 segments each configurable for Ramp, Soak, & dwell.	
19.14	Cold junction compensation : Automatic	
19.15	Power supply : 100 to 230 V. AC/ 50 Hz.	
19.16	Auto tuning : To be provided to perform precision control.	

19.17	Calibration facility : Standard calibration facility for error adjustment to be provided.	
19.18	Configuration & setting: Through front panel Keys	
19.19	Front Panel key: Membrane keypad/ Bezel keypad (miniature switch cover with sheet is not acceptable.)	
19.20	Self-seeking set point: In case of power failure, after resuming power it will automatically start from process temperature and the corresponding segment.	
20	Safety temperature controller	
20.1	Type: Microprocessor based on/off controller	
20.2	Mounting : Panel mounting	
20.3	Input : Universal input (User selectable)	
20.4	Range : Configurable	
20.5	Accuracy: Better than or equal to 0.25% of reading. or 1°C	
20.6	Ambient Temperature : 20°C to 50°C	
20.7	Output type : Relay	
20.8	Relay output capacity: 230V AC, 2A	
20.9	Power supply : 230V/50 HZ	
20.10	CJ Compensation : To be provided	
20.11	Configuration & setting: Through front panel Keys	
20.12	Thermocouple burnt out protection: Upscale	
20.13	Calibration facility : Standard calibration facility for error adjustment to be provided.	

21	Installation and Commissioning:	
	Installation, Commissioning and performance proveout at BHEL, Trichy Works: Complete installation and commissioning of the furnace with suitable control panel is under vendor's scope. Vendor has to prove out the performance of the furnace characteristics as per technical specification at BHEL, Trichy works. Any other items to complete the total system are under vendor's scope.	
22	The following Documents should be supplied with the furnace	
22.1	Calibration Certificate: NABL accredited calibration certificate shall be provided for temperature controllers, scanner and thermocouple.	
22.2	Thermal equalizing block Material Composition Certificate	
	Heating element material composition certificate	
22.3	Operation and maintenance manual of the dry block furnace with exploded view of furnace.	
22.4	Operation and maintenance manual of programmable controllers, Safety controller and Temperature scanners.	
22.5	Specification of all brought Items with supplier address	