



**BHARAT HEAVY ELECTRICALS LIMITED,
RAMACHANDRAPURAM HYDERABAD**

Enquiry No.:
Due Date:
Supplier Quotation No:

**SPECIFICATION CUM COMPLIANCE CERTIFICATE OF
“THERMOCOUPLE CALIBRATION FURNACE”**

Note:

- 1. Vendor must submit complete information against clause no. 5.0
The offer meeting this clause would only be processed.**
- 2. Wherever "Accuracy" is required, supplier has to quote accuracy or absolute
Uncertainty for one year or more.**
- 2. The "Offered" Column and where applicable, the "Deviations" &
"Remarks" Column of this format shall be filled in by the Vendor and
submitted along with the offer.**
- 3. The offer and all documents enclosed with offer should be in English language only.**

Supplier Details

Name & Address: _____

Telephone Nos.: _____

Fax No.: _____

Email Address: _____


Suppliers Indian Agent Details


Name & Address: _____


Telephone Nos.: _____

Fax No.: _____

Email Address: _____

				Clause No	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY VENDOR	OFFERED	DEVIATIONS	REMARKS
1					Purpose: High Temperature furnace required for Calibration of Thermocouples.	Vendor to Confirm			
2					Scope: The offer shall cover following items:	Vendor to Confirm			
	2.1				Thermocouple calibration furnace with temperature range:200°C to 1200°C	Vendor to Specify			
3					SPECIFICATIONS OF THERMOCOUPLE FURNACE				
	3.1	3.1.1			Range : 200°C to 1200°C	Vendor to Specify			
		3.1.2			Stability: Equal to or better than $\pm 0.5^\circ\text{C}$ for the range.	Vendor to Specify			
		3.1.3			Uniformity: Equal to or better than $\pm 0.5^\circ\text{C}$ for the range with in the block, hole to hole	Vendor to Specify			
		3.1.4			Stablisation time: Max 20 Minutes after reaching set temperature.				
		3.1.5			Heating Time: Maximum 45 minutes from room temperature to 1200 °C.	Vendor to Specify			
		3.1.6			Cooling Time: Maximum 150 minutes with the block from 1200 °C to room temperature.	Vendor to Specify			
		3.1.7			Operating temperature range: 16°C to 40°C	Vendor to Specify			
	3.2				Temperature Controlling Features				
		3.2.1			Temperature Setting: Digital display with push-button data entry	Vendor to Confirm			
		3.2.2			Set-Point Resolution: Equal to or better than 1°C	Vendor to Specify			
		3.2.3			Display Resolution : Equal to or better than 0.1°C upto 999.9°C and Equal to or better than 1°C for 1000°C to 1200 °C	Vendor to Specify			
		3.2.4			The temperature controller should be PID controller	Vendor to Confirm			
		3.2.5			The calibration furnace should have safety controller to control. Monitor the Furnace surface temperature for safety cut out of Furnace	Vendor to Confirm			
	3.3				Power Requirements: at 230 Volt $\pm 10\%$,50Hz	Vendor to specify			

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Clause No							
3.4			Heater: Power Consumption to be specified.	Vendor to Specify			
3.5			Physical Size: To be Specified by the vendor. Orientation of Heating Block for Loading of Thermo couples	Vendor to Specify			
3.6	3.6.1		Calibration Certificate of furnace issued by calibration agency shall be traceable to National standards. Calibration certificate covering minimum and maximum points (Minimum 4 point calibration with in range) shall be supplied.	Vendor to Confirm			
	3.6.2		The Supplier provide the documental evidence to prove the stability and Uniformity of Temperature in the Block.	Vendor to confirm			
3.7			Thermal block : a) immersion depth:300 mm max; b) dia 37mm(approx) with six thermo wells; two of them 9.5mm and two with 6.35mm and two them with 4.8 mm	Vendor to Specify			
4			General requirements:				
4.1			Commissioning and proving of system is to be done at BHEL.RC Puram Hyderabad free of cost.	Vendor to Confirm			
4.2			The equipment should be guaranteed in respect of design, Material construction,operation and against any manufacturing defects for a period of 24 months, from the date of commissioning and 4 copies of guarantee certificates are to be furnished.Free after sales service is to be provided during the guarantee period.	Vendor to Specify			
4.3	4.3.1		Two sets of Operation and Service Manual shall comprise of operating procedure, calibration procedure.	Vendor to Confirm			
	4.3.2		Maintanance manual with circuit diagrams, trouble shooting charts and parts list etc.				
4.4			Rigid packing for all items of complete equipment, all accessories and other supplied items to avoid any damage / loss in transit	Vendor to Confirm			

			Clause No	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY VENDOR	OFFERED	DEVIATIONS	REMARKS
	4.5			The supplier shall provide training to the staff on detailed operation of system at BHEL RC Puram, Hyderabad	Vendor to Confirm			
	4.6			Supplier shall enclose the leaflets /Datasheet having detail specification, Model No & Manufacturers Name, Items quoted.	Vendor to Confirm			
	4.7			Equipment should meet all points of our above specification and bidders must furnish point to point replies against as the points of our above specification failing which their offer may not be considered.	Vendor to Confirm			
5				QUALIFYING CONDITIONS :				
	5.1			Only those vendors who have supplied and commissioned atleast one number of furnace for the range of same quoted model for similar applications in the past three years and such is presently working satisfactorily for more than one year after commissioning should quote (prior to the issue of the tender).	Vendor to Confirm			
	5.2			The following information is to be submitted by the vendor about the companies where offered equipment has been supplied. This is required from all the vendors for qualification of their offer.	Vendor to Specify			
		5.2.1		Name of the customer/company where offered equipment is installed (Copy of Purches Order should be furnished) preferably India				
		5.2.2		Complete postal address of the customer .				
		5.2.3		Year of commissioning. (Copy of Commissioning report should be furnished)				
		5.2.4		Application for which the equipment is supplied .				
		5.2.5		Name and designation of the contact person of the customer.				
		5.2.6		Phone, FAX no. and email address of the contact person of the Customer.				
		5.2.7		Performance certificate from any one customer, regarding satisfactory performance of the equipment supplied to them and should be issued within one year of tender opening.				