

	BHARAT HEAVY ELECTRICAL LIMITED	Enquiry No. :			
	Ramachandrapuram:: Hyderabad-32	Due Date :			
		Supplier Otn. No.:			
		Date :			
TECHNICAL SPECIFICATION FOR PORTABLE IMMERSION TYPE PYROMETER					
1. Vendor must submit complete information against clause no. 19. The offer meeting this clause would only be further processed.					
2. The offer and all documents enclosed with offer should be in English language only.					
3. Incomplete offers, offers with ambiguous information are liable for rejection, without any intimation.					
NAME & ADDRESS OF THE SUPPLIER :		NAME & ADDRESS OF THE INDIAN AGENT :			
TELEPHONE NOS.:		TELEPHONE NOS.:			
FAX NOS.:		FAX NOS.:			
E-MAIL ADDRESS :		E-MAIL ADDRESS :			
SCOPE: SUPPLY, COMMISSIONING OF PORTABLE IMMERSION TYPE PYROMETER					
SNO	DESCRIPTION FOR BHEL REQUIREMENT	Vendor to specify/Confirm	OFFERED Parameters	DEVIATIONS	REMARKS
1	PURPOSE:				
1	Portable immersion type pyrometer required to measure the temperature of molten metal viz. Steel, cast iron, copper, bronze and aluminium alloys in Ferrous & Non Ferrous Foundry having the temperature range of 300°C to 1750°C complete with lance assembly and battery charger.				
2	Thermocouple tips used is pt/pt Rh 13% ('R-Type') suitable for multiple dip application.				
3	TECHNICAL DETAILS;				
3.1	Type: Digital				
3.2	Temperature range : 300°C to 1750°C				
3.3	Measurement time: 3 to 5 seconds				
3.4	Model No. : Supplier to furnish				
3.5	Technique used: Supplier to furnish.				
3.6	The pyrometer shall be required and suitable for operation in foundry.				
3.7	Accuracy of measurement: ± 1°C Accuracy of measurement: ± 1°C Accuracy of measurement: ± 1°C Accuracy of measurement: ± 1°C				
3.8	Housing: Complete Dust proof Housing and Anti Heat Protection (Temp. Proof) to be provided.				
3.9	Display unit: Temperature indication of High Bright Red LED Display to be provided. The readings should be clearly visible from a distance of minimum 2 meters.				
4	Battery & Battery Charger:				
4.1	Type of battery Rechargeable type Nickel Cadmium dry battery				
4.2	Supplier to indicate Charging time of Battery.				
4.3	Supplier to provide indication of Status of battery such as Low/Medium/Full in pyrometer display.				
4.4	Supplier to provide the Charger of 230V, 50HZ for charging the battery.				
4.5	Battery pack suitable for pyrometer				
5	Accessories:-				
5.1	Microprocessor Unit and its inter connection circuits.				
5.2	Display unit and its inter connection circuits.				
5.3	Lance for the above pyrometer.				
5.4	Mini receptacle				
5.5	Battery set Container				
5.6	Inter lance cable				
5.7	Compensating cable				
6	Buzzer shall be provided to indicate measurement of reading at the end of measuring cycle complete.				
7	The disposable thermo couple tips shall be made out of platinum and platinum 13% Rhodium				
8	Length of the lance 2 meters with a bend of 135 °angle at 0.5 mtrs from the end. Length of the lance 2 meters with a bend of 135 °angle at 0.5 mtrs from the end. Length of the lance 2 meters with a bend of 135 °angle at 0.5 mtrs from the end.				
9	Resolution : 1°C Resolution : 1°C				
10	The digital indicator shall be electronically operated.				
11	Power & control :				
	Battery operated with automatic low battery indication, auto off, buzzer to indicate end of the cycle and hold reading facility. Zero adjustment/ automatic tare facility.				
12	OTHER REQUIREMENTS:				
12.1	Supplier shall specify the accuracy of re-usable platinum/ platinum 13% Rhodium thermocouple.				
12.2	Supplier shall furnish 3 sets of operating instruction and maintenance manuals, electrical drawings and PCB drawing with component values.				
12.3	The instrument and tips are calibrated and calibration test certificate of instrument shall be furnished along with equipment.				

12.4	The portable immersion type pyrometer shall be guaranteed for satisfactory performance, for a period of 1 year from the date of commissioning.				
13	SPARES				
13.1	Itemized breakup of mechanical, electrical and electronic spares used in the pyrometers in sufficient quantity as per recommendation of Vendor for 2 years of trouble free operation on three shifts continuous running basis shall be offered by vendor.				
14	DOCUMENTATION :				
14.1	Five sets of following documents (Hard copies) in English language should be supplied along with the pyrometer				
14.2	Operating and maintenance manuals of pyrometer and all supplied accessories to be supplied along with the equipment				
14.3	Complete Master List of parts and spares used in the pyrometer (with identifications, make, model, rating, price) shall be submitted by the vendor.				
15	ERECTION & COMMISSIONING : Test to be carried out by Vendor at BHEL works while commissioning the pyrometer :				
15.1	Supplier's engineer shall commission the portable immersion type pyrometer at BHEL and demonstrate its operating and maintenance features, to our technical personnel.				
16	PACKING:				
16.1	Rigid packing for all items of complete pyrometer equipment.				
17	GUARANTEE :				
17.1	As per BHEL term and conditions.				
18	CALIBRATION :				
18.1	Supplier to provide calibration for the equipment. Period one year from the date of commissioning.				
19	REFERENCE LIST / QUALIFYING CONDITIONS				
19.1	Only those vendors, who have supplied and commissioned at least one of same or higher sizes for similar applications in the past ten years and such machine is working satisfactorily for more than one year, after commissioning should quote. The following information should be submitted by the vendor about the companies where similar machines have been supplied. This is required from all the vendors for qualification of their offer.				
19.2	Name of the customer / company where similar machine is installed.				
19.3	Complete postal address of the customer including phone number and e-mail.				
19.4	Name and designation of the contact person of the customer, phone number and e-mail.				
19.5	Application for which the machine is supplied.				