



BHARAT HEAVY ELECTRICALS LIMITED
Heavy Power Equipment Plant, Ramachandrapuram,
Hyderabad - 502 032. INDIA.
Purchase Dept. :
E-mail:

Date : _____
Due Date : _____
Supplier Qtn. No.: _____
Date : _____

TENDER DOCUMENTS TO BE FILLED BY THE SUPPLIER FOR SUPPLY OF EQUOTIP PORTABLE HARDNESS TESTER - QTY - 1 No

ADDRESS OF THE SUPPLIER :

TELEPHONE NOS.:

E-MAIL ADDRESS :

Sl.No.	Description for BHEL Requirement.	Offered	Deviations	Remarks
	PURPOSE: The instrument is required for checking hardness for the accuracy of castings, forgings and heat treatment processes during the inspection of Ni-hard rolls, Hi-chrome liners, Bull Ring segments etc.,			
1.0	PREQUALIFICATION REQUIREMENT : a) Offers are accepted from either OEM or Dealer/agents. In case of offer from Dealer/agents authorization letter shall be submitted from the OEM for the supply & servicing of Equotip hardness tester. The date of the issue of authorization letter is to be prior to the date of the issue of this tender. b) Supplier has to submit atleast 2 customer references pertaining to the supply of the same model equipment along with date of supply and contact details. Offers which fail to meet any of the above requirements shall not be considered.			
	Technical Details of the Portable Hardness Tester:			
2.0	Make & Model	:	Equotip model (Proceq make)	
3.0	Principle	:	Leeb hardness measurement (Rebound type)	
4.0	Accuracy	:	± 0.5% @ HL = 800 / ± 4HL	
5.0	Display	:	Large graphic LCD with EL backlight	
6.0	Hardness Scale	:	HRC, HRB, HB, HV, HRA etc., (If in case HL, shall be auto convertible to these units)	
7.0	Measuring range	:	up to 650 HB, up to 70 HRC & up to 950 HV	
8.0	Impact Device	:	E type	
9.0	Materials	:	All common Ferrous & Non-ferrous materials and Special alloys like Ni-hard, Hi-chrome etc.	
10.0	Memory	:	To be specified	
11.0	Statistics function	:	Average / Max / Min / Value	
12.0	Indicator	:	Low battery	
13.0	To be inline with ASTM A 956 standard	:	vendor to agree & conform	
14.0	Power Supply	:	Pen batteries or equivalent (vendor to specify type)	

15.0	Working environment	:	0 to + 45°			
16.0	Dimension in mm (shall be portable carrying & handheld type)	:	vendor to specify			
17.0	Net weight in gms	:	vendor to specify			
18.0	The following are to be the part of main equipment (and the price shall be included in main equipment price)					
18.1	Digital display unit	:	vendor to agree & conform			
18.2	Impact Device E	:	vendor to agree & conform			
18.3	Carrying case for impact device & main equipment	:	vendor to agree & conform			
18.4	Charger (in case rechargeable battery is required to be used)	:	vendor to agree & conform			
18.5	Standard Test block for E type impact device-01 No	:	vendor to agree & conform			
19.0	Impact device can be used in all directions as per ASTM A 956 STANDARD	:	vendor to agree & conform			
20.0	Supplier shall furnish technical leaflet of the Poratable hardness tester.	:	vendor to agree & conform			
21.0	Supplier shall submit the calibration certificate along with the equipment	:	vendor to agree & conform			
22.0	Two sets of operating instructions and maintenance manuals along with a soft copy shall be furnished along with Poratable hardness tester	:	vendor to agree & conform			
23.0	Prove out: After receipt of the Poratable hardness tester at BHEL, Vendor shall demonstrate the accuracy of the equipment on 5 samples as per below table.			:	vendor to agree & conform	
	Material	Hardness range	No. of samples			
	Grey Iron	180-230 HB	1			
	Steel	150-205 HB	1			
	Ni-Hard	550-650 HB	1			
	Hi-Chrome	57-62 HRC	2			
Samples shall be provided by BHEL. In case the equipment does not provide accurate results on any of the samples BHEL reserves the right to Rejection / Replacement of the supplied equipment. Service engineer of supplier shall take responsibility to Commission and demonstrate its features to BHEL 's technical personnel within 2 weeks of the date of receipt at BHEL.						
24.0	The Poratable hardness tester shall be guaranteed for satisfactory performance for atleast 2 years from the date of commissioning at BHEL.			:	vendor to agree & conform	
25.0	Delivery period: 4 weeks from the date of P.O. with a grace delivery period of 2 weeks			:	vendor to agree & conform	