An ISO 9001
Company

Bharat Heavy Electricals Limited
(High Pressure Boiler Plant)
Tiruchirappalli – 620014, TAMIL NADU, INDIA
CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY- CORRIGENDUM 2	Phone: +91 431 257 7830 Fax : +91 431 252 0719 Email : skaruna@bheltry.co.in Web : www.bhel.com

NIT NO. 32820	**Enquiry Number:** **2601700015**	**Enquiry Date:** **16.05.2017**	**Revised Due date for submission of quotation:** **06.07.2017**

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: Portable Hardness Tester (04 Nos.)

Details of Corrigendum

The Revised Technical Specification is enclosed. Please submit the offer with reference to the enclosed technical specification instead of the earlier one issued with the NIT.

The due date for submission of quotation has been extended to 06.07.2017

All other terms & conditions and specifications as published in the NIT 32820 remain unchanged.

BHEL's General guidelines / instructions (refer MM/CE/GT/001) including bank guarantee formats and list of consortium banks, commercial terms check-list 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 "2601700015".

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** C. SARANYA Senior Engineer MM / Capital Equipment BHEL / Tiruchirappalli - 620 014. Senior Engineer/ Capital Equipment / MM

PART B

TECHNICAL SPECIFICATIONS FOR 'PORTABLE HARDNESS TESTER'

AA. APPLICATION :			
Sl.No.	**FEATURES /BHEL SPECIFICATION**	**OFFER BY BIDDER**	**DEVIATIONS**
AA.1	Portable Hardness Testing machine (complete with accessories) with Provision to Use Leeb, Rockwell & UCI in single Processor		
BB. MACHINE CONFIGURATION :	**[The scope of supply shall consist of the following]**		
Sl.No.	**FEATURES /BHEL SPECIFICATION**	**OFFER BY BIDDER**	**DEVIATIONS**
BB.1	Portable Hardness Testing machine with Provision to Use Leeb, Rockwell & UCI in single Processor.		
BB.2.	Confirming Standards shall be – LeebASTM A956 /A370 , DIN 50156, ISO EN 16859,GB/T 17394, JB/T 9378 Rockwell Method - DIN 50157 And UCI Method - ASTM A1038, DIN 50159A Conversion Standard E140, ISO EN 18265. For Testing of hardness of metals in HL, HRc, HRb, HV, HB, HS scales		
BB.3	Shall have 7 Inch color Touch Screen electronic – with multiple display options		
BB.4	Shall Permit Test in any direction – with Auto Detection of Leeb Impact directions		
BB.5	Shall have 8 GB – or 100000 reading Internal Data Storage		
BB.6	Shall provide the following Statistics —Average, Mean value, Standard deviation etc		
BB.7	Shall have Rechargeable built-in Lithium Polymer battery 8Hours battery Backup on Full Charge.		
BB.8	Operating conditions shall be -- Temp: (-)10 to (+)50 Degree C, IP 54 Classification, CE certified, 95%RH Non condensing		

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Development Engineer,
Welding Research Institute,
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Sl.No.	FEATURES /BHEL SPECIFICATION	OFFER BY BIDDER	DEVIATIONS
BB9	Shall confirm to ASTM A 956 & DIN 50156 – Method (Leeb) with 1. Variety of Probes Including D(universal), G (Casting & forgings), C(thin walled – Like Pipes), DL (Narrow area) . ***Required Qty: 1 No of each probe for each Hardness testing machine*** 2.High Accuracy +/- 4HL 3. Test Blocks – HLD High Hardness, HLD Medium Hardness & HLG Low Hardness. ***Required Qty: 1 No in each block for each Hardness testing machine*** 4.Customised (Calibrations) Conversions for Special Steels & Material For using spl grade /materials Like - Example – Titanium, Stellite, Ledeburite Chromium Steels, Ledeburite Tungsten carbide Like M7C3, M6C, X210Cr12 and other Special Grade Materials Under DIN, GHOST, ASTM, ASME, ANSI etc – Hardness Tester allows creation of conversion curves into standard hardness scales HRC, HB, HV etc		
BB10	Shall confirm to DIN 50157 – Method (Rockwell Probe) 1. Measuring Range & (Resolution) HRC 19-70, HRA 60-86, HRB 29-107, HR15N 69-94, HR15T – 88-96 all with Resolution 0.1 HB 67-638, HV 35-950 with Resolution 1 2. Accuracy +/- 1.5HRC Over entire Range 3. Rockwell (by depth of Indentaion – Including Thin Material) 4. Test Load – 10N/ 50N (Probe 50N) 5. Diamond Indentor angle 100 +/- 0.5 Degree 6. Optional Holding device Like Magnetic Foot, Measuring Clamp etc		

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CC. EQUIPMENT SPECIFICATION : GENERAL				
Sl.No.	**FEATURES**	**BHEL SPECIFICATION**	**OFFER BY BIDDER**	**DEVIATIONS**
CC.1.	Weight	Light weight (less than 2.5 kg) highly compact and portable		
CC.2.	Warranty	Two Years Manufacturer's Warranty for Electronic Processor (Display) Unit – 6 Months for Impact device, from the date of commissioning at WRI, BHEL.		
CC.3.	Service & Support	10 Years assured Spare Parts, Repair and service support Free Upgrade Firmware (Device Driver Software) for Hardness Tester.		
CC.4.	Accessibility	Shall provide Software& USB cable for download and printing of test results.		

DD. O & M MANUALS :				
S.No.	**PARTICULARS**	**BHEL SPECIFICATION**	**OFFER BY BIDDER**	**DEVIATIONS**
DD.1	No. of Copies	2 (Two) sets containing manuals of base unit, prodes, etc.		
DD.2	Language	English		
DD.3	Manual Details :	a. Manual shall contain all instructions for machine installation and operation trial, testing in sequence. b. Manual shall clearly describe the operation of the base unit, probes etc. c. Manual to give other details like trouble shooting chart, etc. d. Master List of Parts & Spares used in the machine with Make, Model, Rating, etc.		

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EE. OTHER GENERAL POINTS :				
S.No.	**PARTICULARS**	**BHEL SPECIFICATION**	**OFFER BY BIDDER**	**DEVIATIONS**
EE.1	Commissioning	The equipment shall be installed and commissioned at free of cost by the supplier/supplier's representative at BHEL Works.		
EE.2	Training	The Supplier's SERVICE ENGINEER shall give training in the Operation and Maintenance of the Machine for BHEL Staff, after the successful commissioning of Portable Hardness Tester.		
EE.4	Guarantee	The equipment shall be guaranteed for a minimum of 24 months from the date of commissioning at WRI/BHEL	As per CC.2.	
EE.5	OEM Certification	Shall be OEM or OEM authorized Indian agent with Tender specific Authorisation		
EE.6.	Pre-despatch Inspection (PDI)	The equipment shall be submitted for pre-dispatch inspection (PDI) at the manufacturer's works by BHEL Engineers before despatching the same to the BHEL, Trichy. During the PDI, a trial test is to be performed in any grade of steel and the same shall be done in the presence of BHEL Engineer(s). The cost of international/national air travel, boarding and lodging in connection with the PDI mentioned above for BHEL officials are in the scope of BHEL.		
EE.7.	Bought-Out Items	a) The Bought-Out Items - like Motors, ICs, Relays, Contactors, Switches, Electronic Elements, etc., used in the machine shall be of Internationally Reputed Manufacturers only. b) BIDDER has to furnish the MAKE of Bought-Out Items used in the machine, with the OFFER .		

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