



BHARAT HEAVY ELECTRICAL LTD.

COPROPRATE R&D, VIKASNAGAR

HYDERABAD 500093

SPECIFICATION FOR PORTABLE SURFACE ROUGHNESS TESTER

SPECIFICATION NUMBER: QE-2016-827-RD39-SPEC-02

A. Application:

The Portable Surface Roughness tester is intended to be used in shop floor for checking of surface finish of blades, Rotor, impellers etc. for turbines and compressors. The surface finish of components on which surface roughness is to be measured is 0.1 micron or higher.

B. Technical Requirements

Sr. No.	Description	Specification	Vendor Compliance
1	Measurement Range	0.1 μm or higher	
2	Standard	Testing equipment and methods should meet ISO 4287 or any international standard.	
3	Evaluation parameters	Ra, Rz, Ry, Rt at least.	
4	Display	LCD (minimum 6 cm) with good visibility	
5	Portability	Portable, handy and light weight. Drive Unit shall be separable from the display unit and attachment to display unit shall be through a cable.	
6	Power Supply	Rechargeable batteries and AC adapter	
7	PC interface	USB port	
8	Temperature	Working temperature: 5°C - 50°C	
9	Extension rod	50 mm (minimum) extension rod shall be provided.	
10	Attachment	Suitable adpoter for height gauge mounting shall be provided.	

C. General Requirements:

Sr. No.	Description	Vendor Compliance
1	Vendors shall quote all necessary items/accessories required for functioning/operation of the equipment (i.e. software, cables, connectors, charger, adapters, calibration/roughness specimen, carrying bag, etc.) even it is not explicitly specified. The quotation must be on single piece basis.	
2	Vendors shall provide training for four persons at our works. During training the vendor shall also demonstrate interfacing of equipment and details of software and	
4	The vendor shall provide calibration certificate of instruments and explain the calibration procedures of instrument during training.	
3	The vendor shall provide one set of operation manual.	
5	Warranty period of instrument should not be less than 12 months counted from the date of commissioning.	

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D. Qualifying Conditions :

Sr. No.	Description	Vendor Compliance
1	Only those OEMs or its authorized agencies that have supplied and commissioned at least one number of surface roughness testers of the quoted model in past five years (counting from the date of tender opening), should quote. Quoted model should be of OEM's standard catalogue item and such model should have been successfully installed at customer's works for more than one year (counting from the date of tender opening).	
2	To prove the above criteria, supplier must submit following documents/information. This is required for all vendors for qualification of their offer.	
a	Self-declaration certificate (in case of OEM or subsidiary) or authorisation certificate (in case of Agent).	
b	Photocopy or softcopy of minimum one purchase order of quoted model.	
c	Photocopy of minimum one number of Installation/service reports which was counter signed by clients at the time of commissioning. Report should bear the date of installation, status of installation.	
d	Copy of Standard catalogue detailing the quoted model.	
e	Name of quoted model.	
f	Following information shall be supplied with the offer for verification by BHEL (if required) of above claim: (i) Name and address of the customer / company where such machine(s) is (are) installed. (ii) Name, designation, phone, email address of the contact person of the customer. (iii) Application for which the machine is supplied. (iv) Supplied model name. (v) Year of installation.	