

# TECHNICAL SPECIFICATION



Heavy Power Equipment Plant,  
Bharat Heavy Electricals Limited,

Ramachandrapuram -502032, Andhra Pradesh, INDIA.

Enquiry No. :

Due Date :

Supplier Qtn.  
No.:

E-MAIL (FROM PURCHASE DEPTT.)

## SPECIFICATION FOR SURFACE ROUGHNESS TESTER

### NOTE

1. 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. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.

2. The offer and all documents enclosed with offer should be in English language only.

ADDRESS OF THE SUPPLIER :

TELEPHONE NOS.:

FAX NOS.:

E-MAIL ADDRESS :

ADDRESS OF THE INDIAN AGENTS :

TELEPHONE NOS.:

FAX NOS.:

E-MAIL ADDRESS :

SCOPE: SUPPLY, ERECTION & COMMISSIONING OF SURFACE ROUGHNESS TESTER COMPLYING WITH SPECIFICATION AS BELOW

S.No	BHEL Requirements	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
1	<b>Purpose:</b> The equipment shall be capable of measuring surface roughness on complex airfoils and curved surfaces of turbine blades	Vendor to confirm			
2	The equipment shall be portable type suitable for operating in shop-floor conditions	Vendor to confirm			
3	The equipment shall have the following features:				
3.1	Resolution : 0.01 micron or better	Vendor to confirm			
3.2	Cut-off values: 0.25, 0.8mm, 2.5mm	Vendor to confirm			
3.3	Parameters to be evaluated : Ra,Rz,Rt	Vendor to confirm			
3.4	Accuracy : (3% of reading + LSD ) micron or better	Vendor to confirm			
3.5	Display :Digital	Vendor to confirm			
	Power : (a) Rechargeable battery or 230 V/50 Hz mains	Vendor to confirm			

S.No	BHEL Requirements	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
3.6	(b) 1 No.battery charger 230V for the rechargeable battery shall be supplied	Vendor to confirm			
3.7	Operating temperature :5 to 40 deg C	Vendor to confirm			
4	The following diamond tip pick - ups and accessories shall be supplied				
4.1	Standard pick - up for general measurement - with diamond stylus tip radius 5 microns - 1 No.	Vendor to confirm			
4.2	Right - angle pick - up - for measurement at right angles to the direction of traverse - with diamond stylus tip radius 5microns - 1 no.	Vendor to confirm			
4.3	Pick - up for use on curved surfaces - 1 no.	Vendor to confirm			
4.4	100 mm extension rod for the pick - up - 1 no.	Vendor to confirm			
4.5	Roughness specimen - 2 Nos	Vendor to confirm			
5	SPARES : Following spares are required to be supplied with the main instrument.				
	(A) Battery - 2 Nos	Vendor to accept & confirm			
	(B) Mains Power Adapter- 2 Nos	Vendor to accept & confirm			
	(C) Pick up Cable - 2 Nos	Vendor to accept & confirm			
	(D) Standard pick - up for general measurement - with diamond stylus tip radius 5 microns - 1 No.	Vendor to accept & confirm			
	(E) Pick - up for use on curved surfaces - 1 no.	Vendor to confirm			
6	Commissioning and demonstration of trouble - free operation of the equipment shall be done at BHEL	Vendor to accept & confirm			
7	Operation and maintenance manual in english shall be supplied	Vendor to accept & confirm			
8	Calibration certificate for the equipment / accessories shall be supplied	Vendor to accept & confirm			