

BHARAT HEAVY ELECTRICAL LIMITED

UNIT'S ADDRESS: BHEL BHOPAL: PIPLANI BHOPAL M.P.		Enquiry No.:	
CONTACT PERSON'S NAME/DESIGN/PHONE NO./E-MAIL (FROM PURCHASE DEPTT.)		Due Date:	
AMAR PRATAP SINGH		Supplier Qm. No.:	
SR. ENGINEER		Date:	
9406903746			
amarpratap@bhel.in			

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF LARGE DIAMETER MEASUREMENT SYSTEM

NOTE:-					
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1. Vendor must submit complete information against clause no. 10.0 (Qualifying Condition). The offer meeting this clause would only be processed.
2. The "Offered" Column and where applicable, the "Deviations" & "Remarks" Column of this format shall be filled in by the Vendor in COPY OF THIS SPECIFICATION ONLY 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.

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

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 AND COMMISSIONING OF TOTAL 01 SET OF LARGE DIAMETER MEASUREMENT SYSTEM WITH SPECIFICATIONS AS BELOW

SN	DESCRIPTION FOR BHEL REQUIREMENT	VENDOR TO SPECIFY/CONFIRM	OFFERED	DEVIATIONS	REMARKS
1.0	Purpose:				

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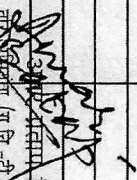
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	The Large Diameter Measurement Tool is required for measurement of inner diameter and outer diameter of wooden/aluminium formers/moulds, pressboard/epoxy cylinders, windings & core limbs of power transformers/reactors. The equipment shall have capability to measure the inside and outside diameter of core and winding having diameter of range OD 500-6000mm or wider and ID 1100-6000mm or wider for circular or offset circular cases along the complete length axis of the object, length ranging from 500mm to 5000mm. The equipment shall be capable to take OD/ID measurement at the centre of core limb/winding length too.	Vendor to note & confirm			
1.2	Make & Model of offered item	Vendor to furnish			
1.3	Quantity of offered item 01 No.	Vendor to confirm			
2.0	Scope of Supply: Total 01 set of Large Diameter Measurement system. Each set shall include:	Vendor to confirm			
2.1	Large diameter measurement tool	Vendor to confirm			
2.2	AC/DC Adaptor	Vendor to confirm			
2.3	Rechargeable Battery Set	Vendor to confirm			
2.4	USB Cable	Vendor to confirm			
2.5	Battery charger	Vendor to confirm			
2.6	Relevant Software	Vendor to confirm			
2.7	All additional accessories required for the system. (Vendor to specify)	Vendor to confirm			
3.0	Technical Specification:-				
3.1	Measurement Features				
3.1.1	Outer Diameter: 500-6000mm or wider (by tangent minimum 3 point contact method or more)	Vendor to confirm.			
3.1.2	Inner Diameter: 1100-6000mm or wider (by tangent minimum 3 point contact method or more)	Vendor to confirm.			
3.1.3	Display of minimum ID/OD measurement (by tangent minimum 3 point contact method or more)	Vendor to confirm.			
3.1.4	Display of maximum ID/OD measurement (by tangent minimum 3 point contact method or more)	Vendor to confirm.			
3.1.5	Display of average ID/OD measurement (by tangent minimum 3 point contact method or more)	Vendor to confirm.			
3.1.6	Display of angle measurement (absolute & relative) upto 180°	Vendor to confirm.			
3.1.7	Measurement on metallic surface (magnetic)	Vendor to confirm.			
3.1.8	Measurement on metallic surface (non magnetic)	Vendor to confirm.			
3.1.9	Measurement on non metallic surface	Vendor to confirm.			

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3.1.10	Measurement on non metallic surface dissected along the length (Height of the object) axis (gap b/w dissections upto 6mm) & (non metallic/metallic surface width min 4mm)	Vendor to confirm.				
3.1.11	Accuracy in diameter measurement to be $\pm(0.01 + \text{square of dia in metre}/30)\text{mm}$ or better	Vendor to confirm.				
3.1.12	Recording minimum 10 readings	Vendor to confirm.				
3.2	Interface					
3.2.1	USB	Vendor to confirm.				
3.3	Screen:					
3.3.1	Backlit LCD/LED display	Vendor to confirm.				
3.4	Power Supply Requirement					
3.4.1	The equipment shall operate on AC Voltage 230V $\pm 10\%$, 50Hz $\pm 3\%$	Vendor to confirm.				
3.4.2	The equipment shall operate on internal battery for minimum 8 hours and shall have charging facility for charging through AC supply of 230Volt 50Hz.	Vendor to confirm.				
3.5	Weight					
3.5.1	Weight:Upto 4.5 Kg Maximum (Portable in nature)	Vendor to confirm.				
3.6	Operational Features					
3.6.1	Language :English	Vendor to confirm.				
3.6.2	Provision for zero setting before start of measurement	Vendor to confirm.				
3.6.3	ID/OD measurement in mm & inches	Vendor to confirm.				
3.6.4	Absolute & relative angle measurement in degrees	Vendor to confirm.				
3.6.5	Provision for storage of measurements & clearing of memory	Vendor to confirm.				
3.6.6	Procedure for calibration	Vendor to confirm.				
3.6.7	The instrument to be rigid in nature and capable to withstand considerable jerks during handling	Vendor to confirm.				
3.6.8	The equipment shall have facility to show battery status and low battery warning shall be displayed on screen.	Vendor to confirm.				
3.6.9	Temperature Range:0 to 50° or Wider	Vendor to confirm.				
3.7	Storage					
3.7.1	The equipment shall have facility for storage of upto 12 readings and transfer of data.	Vendor to confirm.				
4.0	Carrying Case:					
4.1	Robust carrying case	Vendor to confirm.				
5.0	General requirement:					


 A. P. SINGH / A. P. SINGH
 (P. E. - II) / Sr. Engineer (DC-ITB)

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	The offer shall be submitted in two bids (Techno-commercial and Price Bid). The bidder's technical representative shall visit BHEL Bhopal for technical discussion and on the spot finalisation of technical issue, if needed within two weeks after technical bid opening. Exact date will be confirmed to vendor by BHEL.	Vendor to confirm.			
5.1	The system offered shall be complete in all respects. It shall contain all hardware/accessories/software required for the satisfactory operation of the system. Any additional hardware, software or accessories required during satisfactory operation of equipment shall be supplied by vendor without any price implication.	Vendor to confirm.			
5.2	Equipment should meet all the points of our above specification and bidders must furnish point to point replies against the points of our above specification failing which their offer may not be consider.	Vendor to confirm.			
5.3					
	6.0 Packing:				
	Sea worthy and rigid packing for all items of complete equipment and all accessories and other supplied items to avoid any damage/loss in transit. When equipment is dispatched in container, all small loose items shall be suitably packed in boxes. Any damage, loss, theft during transit shall be the sole responsibility of the vendor.	Vendor to confirm.			
6.1					
	7.0 Tests and Training:				
	Demonstration / physical inspection of all features, assemblies, subassemblies, control panel, bought out items and all accessories shall be done to the full satisfaction of BHEL representatives.	Vendor to confirm.			
7.1	Demonstration of all features of the machine & all accessories to the satisfaction of BHEL for their efficient and effective use and impart training to operators for effective use of the equipment.	Vendor to confirm.			
7.2	Demonstration by actual use of all supplied attachments and accessories to their full capacity.	Vendor to confirm.			
7.3					
	8.0 Documentation:				
	Four sets of following documents in English language should be supplied along with the equipment	Vendor to confirm			
8.1	Operating and maintenance manuals of the equipment and supplied accessories. Maintenance manual of equipment should contain System Description, Block diagram, Schematic drawings, Circuit diagrams & hardware details, Trouble shooting charts, All Assembly/ Sub Assembly Drawings shall be supplied with the part list.	Vendor to confirm			
8.2	Warranty certificate & supplier's test certificate.	Vendor to confirm			
8.3	Calibration Certificate	Vendor to confirm			
8.4					

/ A. P. SINGH

/Sr. Engineer (QC-TCB)

/Quality Control-TCB

Bhopal

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8.5	Published leaflets and Datasheet having detail specification of quoted Equipment. The Specification shall include and meet performance parameters mentioned in clause 3	Vendor to furnish	
9.0	Warranty: The machine should be warranted for 12 months from the date of acceptance of the equipment. Free after sales services is to be provided during the warranty period including free replacement of defective parts, if any.	Vendor to confirm	
10.0	Qualifying Condition: Vendor should be original equipment manufacturer (OEM) or authorized dealer/distributor of OEM. Following documents shall be furnished along with technical bid.	Vendor to confirm	
10.1	In case of dealer/distributor, Valid Authorization Certificate from OEM.	Vendor to furnish	
10.1.1	Only those vendors should quote, who or their principal have supplied the quoted Measurement System within last five years (on the date of opening of Tender).	Vendor to furnish	
10.2	Minimum one number of unpriced copy of Purchase order of equipment supplied (The supplied model shall comply the technical specification of this enquiry).	Vendor to furnish	
10.2.1	Performance Certificate of the same PO regarding satisfactory performance of minimum one year from customer. Performance certificate should be issued within one year of tender opening date.	Vendor to furnish	
10.2.2			
11.0	Terms: BHEL reserves the right to verify the information provided by vendor. If the information provided by vendor is found to be false/incorrect at any point of time, the offer shall be rejected.	Vendor to confirm	
11.1			
11.2	Delivery period of the equipment after getting PO should be 3 months.	Vendor to confirm.	
12.0	Predispatch Inspection: Predispatch inspection of the complete system shall be done by BHEL at supplier works.	Vendor to Confirm	
12.1	Pre-despatch inspection will be carried as follows on Demo job	Vendor to Confirm	
12.2	Physical Inspection (Scope of supply)	Vendor to Confirm	
12.2.1	Proving of parameters as per clause 3.0	Vendor to Confirm	
12.2.2	Demonstration of all features of the machine, control system & accessories	Vendor to Confirm	
12.2.3			

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12.2.4	Verification of software configuration and its features.	Vendor to Confirm				
12.3	The vendor shall provide Inspection Certificate to BHEL Personnel deputed for inspection and two copies shall be supplied along with equipment.	Vendor to Confirm				
12.4	Travel, boarding & lodging expenditure of BHEL personnels deputed for PDI will be borne by BHEL.	Vendor to Confirm				
12.5	In case of waiver of Predispach Inspection by BHEL, the activities mentioned in clause 13.0 will be done at BHEL before acceptance of System.	Vendor to Confirm				
13.0	Machine Acceptance	Vendor to Confirm				
13.1	Following Tests/Activities should be carried out at BHEL works on the machine.	Vendor to Confirm				
13.1.1	Physical Inspection (Scope of supply)	Vendor to Confirm				
13.1.2	Proving of all parameters as per clause 3.0 on actual available job.	Vendor to Confirm				
13.1.3	Demonstration of all features of the machine, control system & accessories	Vendor to Confirm				
13.1.4	Verification of software configuration and its features.	Vendor to Confirm				
13.1.5	Review of Test/Calibration certificate	Vendor to Confirm				

