



BHARAT HEAVY ELECTRICAL LIMITED

UNIT : JHANSI

CONTACT PERSON'S NAME/DESIGN./PHONE NO./E-MAIL (FROM PURCHASE DEPTT.)

Ref No: CQX/MTL/636300002

Enquiry No. :

Due Date :

Supplier Qm. No.:

Date :

SPECIFICATION FOR FULLY AUTOMATIC OIL TAN DELTA AND RESISTIVITY TEST SET

Rev:00

Dtd: 04.08.2020

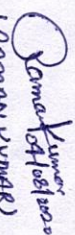
- NOTE:-**
1. Vendor must submit complete information.
 2. The "Offered" Column and where applicable, the "Deviations" & "Remarks" Column of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.
 3. The offer and all documents enclosed with offer should be in English language only.

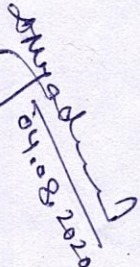
NAME & ADDRESS OF THE SUPPLIER :		NAME & ADDRESS OF INDIAN AGENT :			
TELEPHONE NOS.:		TELEPHONE NOS.:			
FAX NOS.:		FAX NOS.:			
E-MAIL ADDRESS :		E-MAIL ADDRESS :			
SL. NO.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY VENDOR	OFFERED	DEVIATIONS	REMARKS
1.0	GENERAL INTRODUCTION				
1.1	To measure the di-electric dissipation factor (Tan δ) and resistivity of transformer oil and silicon oils used in transformers	Vendor to Confirm			
2.0	REQUIREMENT				
2.1	An fully automatic oil Tan δ and resistivity test set for different types of transformer oils conforming to IEC-60247/IS-6262/IS-6103 with latest revision.	Vendor to Confirm			
2.2	Instrument Quantity	1 No.			
3.0	EQUIPMENT SPECIFICATIONS (Vendor to indicate the ranges)				
3.1.1	Oil Tan δ				
	a) Range:	0 to 1 or better			
	b) Resolution:	1 X 10 ⁻⁵ Minimum			
	c) Accuracy:	$\pm 1\%$ of reading ± 0.0001 or better			

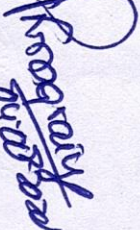
Prepared By: *Ramankumar*
(RAMAN KUMAR)

Reviewed By: *Dr. R. S. S. S.*
04.08.2020

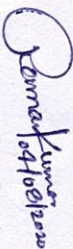
3.1.2	Resistivity						
	a) Range:	10000 MΩ-cm to 10000 TΩ-cm or better	Vendor to Confirm				
	b) Resolution:	0.1 or better	Vendor to Confirm				
3.1.3	Test Temperature						
	a) Range:	20°C to 110°C or wider	Vendor to Confirm				
	b) Resolution:	1 °C or better	Vendor to Confirm				
	c) Accuracy:	± 1 °C or better	Vendor to Confirm				
3.1.4	Test Cell Capacitance Range						
3.1.5	Test Cell Voltage	50 - 70 pF	Vendor to Specify				
	a) AC	Upto 2 KV or better	Vendor to Specify				
	b) DC	Upto 500 V or better	Vendor to Specify				
3.1.6	Oil Drain Facility	Fully Automated	Vendor to Confirm				
3.1.7	Display	LCD screen or better	Vendor to Confirm				
3.1.8	Input power supply	230V AC± 10%, 50 Hz	Vendor to Specify				
3.1.9	Oil Drain Facility	Fully Automated	Vendor to Confirm				
3.2	ACCESSORIES / AUXILIARY ITEMS						
3.2.1	Auto drain cell - 2 nos. along with the main unit		Vendor to Confirm				
3.2.3	Any other item specific to the manufacturer or model offered for satisfactory performance of test set		Vendor to Specify				
3.2.3	A rugged Carrying Case/transport case to carry the test set		Vendor to Confirm				
4.0	CONSUMABLES & SPARES						
4.1	Supplier shall enclose the list of recommended spares along with unit prices to maintain the system.		Vendor to Specify				
4.2	All types of spares for total machine and accessories should be available with the vendor for at least 05 years after supply of the machine. If machine and accessories are likely to become obsolete in this period, the vendor should inform BHEL sufficiently in advance and provide drawings of parts / details of spares & suppliers to enable BHEL to procure these in advance, if required.		Vendor to Confirm				
5.0	COMMISSIONING / ACCEPTANCE						
5.1	Commissioning and demonstration of all functions of the complete system shall be done by the vendor to the satisfaction of BHEL Engineers at BHEL, Jhansi without any price implication. Instrument shall be accepted only after successful commissioning.		Vendor to Confirm				

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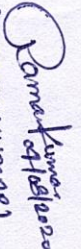
6.0	SAFETY				
6.1	The test unit shall meet all the relevant safety specification standards	Vendor to Confirm			
6.2	Any special safety requirements shall be specified by the supplier.	Vendor to Specify			
7.0	GUARANTEE				
7.1	The equipment should be guaranteed with respect of design, material construction, operation and any manufacturing defects for a period of 24 months from the date of successful commissioning at BHEL Jhansi works. Free after sales service including spares is to be provided during the guarantee period at BHEL Jhansi.	Vendor to Confirm			
8.0	PACKING				
8.1	Rigid packing for all items of complete equipment, all accessories and other supplied items to avoid any damage / loss in transit shall be done.	Vendor to Confirm			
9.0	OPERATING CONDITIONS				
9.1	Storage temperature 0°C to 50°C. Operating temperature 0°C to 50°C or wider	Vendor to Confirm			
9.2	Other operating conditions shall be specified by the supplier. Indicate value.	Vendor to Specify			
10.0	TRAINING				
10.1	BHEL Persons should be trained at BHEL Jhansi after commissioning for mutually agreed period in following areas :-	Vendor to Confirm			
10.1.1	Operation of instrument and other supplied equipments	Vendor to Confirm			
10.1.2	Use of all features of instrument	Vendor to Confirm			
10.1.3	Configuration of software, all features of software including data management	Vendor to Confirm			
10.1.4	Trouble shooting and maintenance of machine	Vendor to Confirm			
10.2	Competent, English & Hindi speaking experts shall be arranged by the vendor during training for satisfactory & effective training of BHEL personnel.	Vendor to Confirm			
10.3	Demonstration of all functions of the complete system shall be done by the vendor to the satisfaction of BHEL Engineers at BHEL Jhansi.	Vendor to Confirm			
10.4	Expenditure of training cost if any shall be quoted as total consolidated training cost (Inclusive of travel Lodging & boarding of expert)	Vendor to Specify			


 (Raman Kumar)
 Prepared By:


 15.08.2020
 Reviewed By:


 Approved By:

11.0	DOCUMENTS				
11.1	Instrument shall accompany a valid NABL calibration certificate and shall be the part of the standard documents being supplied with the test set	Vendor to Confirm			
11.2	Two sets of Operation / Service Manual which shall comprise of operating procedure, calibration procedure, trouble shooting charts, circuit diagram and parts list etc.	Vendor to Confirm			
11.3	Two copies of Test certificates and Guarantee certificates are to be furnished	Vendor to Confirm			
12.0	GENERAL CONDITIONS				
12.1	The system offered shall be complete in all respects. It shall contain all additional hardware / accessories/ software required for satisfactory operation of the system.	Vendor to Confirm			
12.2	The supplier shall ensure the provision of AMC (if required) after completion of guarantee period.	Vendor to Specify			
12.3	Supplier shall enclose the leaflets /Datasheet having detail specification, Model No. & Manufacturer's Name of items to be quoted.	Vendor to Confirm			
12.4	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			
12.5	Equipment should meet all 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 considered.	Vendor to Confirm			
13.0	QUALIFYING CONDITIONS				
13.1	Vendor should be original equipment manufacturer (OEM) or authorized dealer/distributor of OEM having after sale service center in India. In case the party is dealer/distributor, they should furnish the details of OEM and valid authorization certificate from OEM.	Vendor to Confirm			
13.2	Only those vendors should quote, who or their principal have supplied and commissioned minimum 02 nos. of offer model within last five years. Furnish unpriced PO copy.	Vendor to Submit			
13.2	Min 01 No. performance certificate of offered model (in English language only) issued to OEM / Dealer with authorisation certificate, having satisfactory performance of one year or more mentioned cl. No. 13.2	Vendor to Submit			
13.4	The vendor shall furnish the customer reference list mentioning the customer name/ contact details & year of supply where all they have supplied offered instruments.	Vendor to Submit			


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02.08.2020
 Reviewed By:


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