

BHARAT HEAVY ELECTRICALS LIMITED, JHANSI
TRANSFORMER TESTING LABORATORY
SPECIFICATION FOR 10kV 500mA AC HIGH VOLTAGE TESTER

Annexure No. 636200003 Rev 00

Note : 1) Vendor must submit complete following information. The offer meeting the following requirements would only be processed.

2) The offered column and Deviation & Remarks column (where ever applicable) of this format shall be filled by the vendor and to be submitted along with the offer. Inadequate / incomplete, ambiguous or unsustainable information against any of the clause of specification/requirement shall be treated as non-compliance.

Sl. No.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	REMARK
1.1	Purpose : The high voltage flash tester is required for conducting isolation test on transformers and reactors at various stages of manufacturing.	Vendor to Confirm	
1.2	Quantity : 04 Nos.	Vendor to Confirm	
1.3	Vendor should indicate equipment Model & make	Vendor to indicate	
1.4	The offer will be technically accepted after complying all requirements mentioned in technical specification	Vendor to confirm	
2	SPECIFICATION :		
2.1	Output Voltage		
2.1.1	Range : 0-10 KV, smooth variation. One end at earth potential.	Vendor to confirm	
2.1.2	Measurement Mode: Differential (between two ends of output)	Vendor to specify	
2.1.3	Measurement : Atleast 3½ digit Digital kV meter	Vendor to confirm	
2.1.4	Resolution : 0.1 kV or better	Vendor to confirm	
2.1.5	Accuracy : ±3% or better	Vendor to confirm	
2.2	Output Current		
2.2.1	Range : 500 mA max. at 10KV	Vendor to confirm	
2.2.2	Current Setting : Continuously variable by Potentiometer from 100mA to 500mA.	Vendor to specify	
2.2.3	Measurement : Atleast 3 digit Digital mili Ammeter	Vendor to confirm	
2.2.4	Resolution : 1 mA or better	Vendor to confirm	
2.2.5	Accuracy : ±3% or better	Vendor to confirm	
2.3	Input Supply : 240V 50Hz., 1-Phase, AC supply	Vendor to confirm	
2.4	Operating Temp. : 0°C to 50°C	Vendor to confirm	
2.5	LEADS & PROBE		
2.5.1	Input supply cable : Atleast 10 metres long supply cable suitable for input voltage & current capacity	Vendor to specify	
2.5.2	HV cable : Atleast 10 metres long HV cable with hand held probe with minimum 12kV insulation suitable for conducting isolation test on transformers & reactors	Vendor to confirm	
2.5.3	Earthing cable : Atleast 10 metres long earthing cable with crocodile clip.	Vendor to specify	
2.6	INDICATION : Indication for supply ON, HV on, Danger light with buzzer, Variac zero position.	Vendor to confirm	
2.7	COOLING : The HV Tester shall be air cooled with no external cooling requirement.	Vendor to confirm	
2.8	TIMER		
2.8.1	Range : 1-600 sec	Vendor to confirm	
2.8.2	Resolution : 1 sec	Vendor to confirm	
2.8.3	There should be a provision to set timer to any time between range specify in 2.8.1	Vendor to confirm	
2.8.4	There should be a provision of buzzer or alarm after completion of set time.	Vendor to specify	
3	SAFETY ARRANGEMENTS:		
3.1	Trip Setting : The system shall detect the leakage current very fast. Tripping circuit will be a watchdog type of protection and HV tester set shall be put to operation only when circuit is healthy.	Vendor to confirm	
3.2	Zero start protection: A zero start protection shall be built in the system, which will not allow the system to switch on until & unless the system is set at zero kV output. It should have Variac zero indication on panel.	Vendor to confirm	
3.3	Auto discharge : System should have auto discharge facility to earth any residual voltage of the set or the specimen, once the set trips or it is switched off	Vendor to confirm	
3.4	Emergency stop : System should have a emergency stop button which trips the supply along with discharging of residual voltage (if any)	Vendor to confirm	
3.5	It shall have built in over current, over voltage, over temperature etc. as per IEC.	Vendor to confirm	
3.6	Adequate schematic & control shall be built in to have inrush current below full scale operating current limit.	Vendor to confirm	
4	CABINET/CASING		
4.1	MS sheet fabricated and powder coated	Vendor to confirm	
4.2	Portable trolley type casing on heavy duty trolley having caster wheel and anti vibration pad. The complete unit shall be mounted on a 6" caster & fixed wheel for easy movement & trouble free operation on shop floor	Vendor to confirm	
5	ACCESSORIES : Vendor to furnish list and details of accessories to be supplies along with instrument.	Vendor to specify list of all accessories.	
6	SPARES		
6.1	Two no. kV meter confirming cl. 2.1.3, 2.1.4 & 2.1.5, suitable for replacement (if required), with each unit of AC HV tester	Vendor to confirm	
6.2	Two no. mA meter confirming cl. 2.2.3, 2.2.4 & 2.2.5, suitable for replacement (if required), with each unit of AC HV tester	Vendor to confirm	

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6.3	One no. 10 metres long HV cable with test probe confirming cl. 2.5.2, suitable for replacement (if required), with each unit of AC HV tester.	Vendor to confirm	
6.4	Vendor to provide the list & ensure availability of all spares item with OEM for at least 5 years of operation.	Vendor to furnish the spare list & confirm	
7	INSPECTION : Inspection by BHEL at BHEL Jhansi	Vendor to confirm.	
8	PACKING : Rigid packing for all items of complete system, all accessories and other supplied items to avoid any damage/loss in transit.	Vendor to confirm.	
9	TRANSPORTATION : Transportation & loading up to BHEL works shall be in vendor scope.	Vendor to confirm.	
10	GUARANTEE/WARRANTY : 24 Months after commissioning at our works from the date of acceptance by BHEL irrespective of date of supply.	Vendor to confirm.	
11	DOCUMENTATION		
11.1	Operation and Instruction manual : Vendor to submit a copy of manual along with the supply.	Vendor to confirm and submit along with supply.	
11.2	Maintenance manual along with circuit diagrams and schematics for trouble shooting : Vendor to submit a copy of maintenance manual & electrical schematic along with two hard copies with the supply.	Vendor to confirm and submit along with supply.	
11.3	Test Certificate & Guarantee Certificate : Vendor to submit soft copy and two hard copies along with the supply.	Vendor to confirm and submit along with supply.	
11.4	Calibration certificate: Vendor to submit Valid Calibration certificate (having atleast 8 to 9 months validity left at the time of supply) of kV meters & mA meters (all mounted & spared) from NABL accredited or equivalent laboratory along with the supply.	Vendor to confirm and submit along with supply.	
11.5	Catalogue/datasheet : Vendor to submit detailed catalogue & datasheet	Vendor to submit along with offer	
12	ERECTION & COMMISSIONING : The system shall be erected & commissioned at BHEL by the supplier. BHEL will provide power supply during commissioning.	Vendor to confirm	
13	QUALIFYING CONDITIONS:		
13.1	The supplier should either be an Original Equipment Manufacturer(OEM) or an authorised dealer/system house/channel partner of the OEM. Non OEM vendors should submit certificate of valid authorisation of OEM for quoting the system along with declaration for support during erection & commissioning, after sales service & necessary spares along with the offer.	Vendor to confirm	
13.2	- Three copies of purchase order (PO) for the quoted equipment (or better) to be furnished. - The purchase order may be in name of OEM or any Dealer/Vendor, having complete postal address of customer/company where above system is installed/supplied. - The PO date should be within 5 years. From the date of the tender opening. - The PO copy and the co-related documents to clearly mention name of item, type and Make including other details in English language.	Vendor to submit along with offer	
13.3	One copy of performance certificate (in English language) of offered model from electrical utilities for minimum one year satisfactory performance along with the PO copy.	Vendor to submit along with offer	
13.4	Vendor to submit the reference list of customers (where offered systems had been supplied within last 3 years) mentioning the customer, Machine Model, major specifications of the supplied system, Year of Supply etc. along with offer.	Vendor to submit along with offer	
13.5	BHEL reserves the right to verify information submitted by vendor. In case, information is found false / Incorrect, the offer shall be rejected	Vendor to confirm	

Note: Supplier shall submit the technical compliance/comments against each point in above format along with the mention of reference page no. of submitted document. Technical bid without complete technical compliance sheet will not be considered for technical evaluation.

02/08/20
 (शशिक डूबे)
 वरिष्ठ अभियन्ता (परिणामित प्रयोगशाला)
 परिणामित प्रयोगशाला
 बी.एच.ई.एल. जॉसी

08/08/20
 (धिरेंद्र कुमार)
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