

Laboratory

**EHV Transformer Testing Laboratory (T2-Transformer Division), CG
Power & Industrial Solutions Limited, Plot No. T1 to T5, MPAKVN
Industrial Area, Dist.-Bhind, Malanpur, Madhya Pradesh**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number

TC-6582

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Validity

29.11.2017 to 28.11.2019

Last Amended on 29.03.2019

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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ELECTRICAL TESTING

I.	TRANSFORMERS AND REACTORS			
1.	Power transformer, Distribution transformer, Dry Type Power Transformer	Voltage Ratio & Check of Phase Displacement	IEC 60076-01:2011 IS 2026 (Part 1):2011 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	1 to 650
		Verification of Vector Group & Polarity Check	IEC 60076-01:2011 IS 2026 (Part 1):2011 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	0.1 V to 450 V
		Insulation Resistance	IEC 60076-01:2011 IS 2026 (Part 1):2011 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	0.1 MΩ to 1000 GΩ
		Winding Resistance	IEC 60076-01:2011 IS 2026 (Part 1):2011 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	0.1 μΩ to 2 kΩ

**Nand Kumar
Convenor**

**Nitan Garg
Program Manager**

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		No Load Loss and Current	IEC 60076-01:2011 IS 2026 (Part 1):2011 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	0.1 kW to 50 kW 10 mA to 100 A
		Short-Circuit Impedance and Load Loss	IEC 60076-01:2011 IS 2026 (Part 1):2011 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	0.1 kV to 33 kV 0.1 kW to 200 kW
		On-load tap-Changer -No Load Condition -Load Condition -De-energised Condition	IEC 60076-01:2011, IS 2026 (Part 1):2011 CBIP Manual:2013 Pub. No.-317 IEC 60076-11:2018 IS 11171:1985	Qualitative
		Separate Source AC Withstand Voltage	IEC 60076-03:2013 IS 2026-03:2009 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	3 kV to 300 kV
		Induced AC Withstand Voltage test with Partial Discharge	IEC 60076-03:2013 IS 2026-03:2009 IEC 60076-11:2018 IS 11171:1985	0.8 kV to 275 kV

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		Magnetic Circuit (Isolation)	IEC 60076-01:2011 IS 2026 (Part 1):2011 CBIP Manual:2013 Pub. No.-317 IEC 60076-11:2018 IS 11171:1985	1 kV to 5 kV
		Magnetic Balance	CBIP Manual:2013 Pub. No. -317	0.1 kV to 450 V
		Magnetizing Current at Low Voltage	CBIP Manual:2013 Pub. No. -317	0.1 A to 10 A
		Capacitance & Dissipation Factor (Tan-Delta)	IEC 60076-01:2011 IS 2026 (Part 1):2011 CBIP Manual:2013 Pub. No.-317 IEC 60076-11:2018 IS 11171:1985	1 pF to 3 μF Upto 10 %
		Zero Phase-Sequence Impedance on 3φ Transformers	IEC 60076-01:2011 IS 2026 (Part 1):2011 CBIP Manual:2013 Pub. No.-317 IEC 60076-11:2018 IS 11171:1985	0.1 V to 1500 V 1 A to 1500A
		Harmonics of No-Load Current	IEC 60076-01:2011 IS 2026 (Part 1):2011 CBIP Manual:2013 Pub. No.-317 IEC 60076-11:2018 IS 11171:1985	10 mA to 100 A (1 st to 25 th order harmonic)

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		Sound Level	IEC 60076-10:2016 IS 2026-10:2009 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 NEMA TR-1:2013 IEC 60076-11:2018 IS 11171:1985	40 dB to 120 dB
		Sweep Frequency Response Analysis (SFRA)	IEC 60076-18:2010 CBIP Manual:2013 Pub. No.-317	(-) 50 dB to 6 dB
		Temperature Rise	IEC 60076-01:2011, IS 2026 (Part 1):2011, IS 1180-01:2014, CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	1kW to 200 kW 1°C to 100 °C
		Transient Voltage Transfer Characteristics	IEC 60076-03:2013 IS 2026-03:2009 CBIP Manual:2013 Pub. No.-317 IEC 60076-11:2018 IS 11171:1985	10 kVpk to 400 kVpk
		Impulse Test for the Line Terminals (LI)	IEC 60076-03:2013 IS 2026-03:2009 IS 1180-01:2014 CBIP Manual:2013 Pub. No. -317 IEC 60076-11:2018 IS 11171:1985	10 kVpk to 1000 kVpk

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