

Laboratory

Mahati Electrical Testing Laboratory (Unit of Mahati Industries Pvt. Ltd.), Gat No. 233 & 175/2, NH-9, Pune-Solapur Road, At & Post Yawat, Tal. Daund, Dist. Pune, Maharashtra

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7560

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Validity 12.07.2018 to 11.07.2020

Last Amended on --

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.	Transformers (100 kVA to 50 MVA, 11kV to 245 kV, 3ϕ & up to 105MVA, 400kV, 1ϕ)	Winding Resistance	IS 2026 (Part 1):2011 Cl.10.2 IEC 60076 (Part 1):2011 Cl.11.2	2m Ω to 180 Ω
		Voltage ratio, Check vector group	IS 2026 (Part 1):2011 Cl.10.3 IEC 60076 (Part 1):2011 Cl.11.3	0.8 to 1900 (Qualitative)
		No Load Loss & Current	IS 2026 (Part 1):2011 Cl.10.5 IEC 60076 (Part 1) 2011 Cl.11.5	100W to 300 kW 125mA to 300A 10V to 33000V
		Load Loss & Impedance	IS 2026 (Part 1):2011 Cl.10.4 IEC 60076 (Part 1):2011 Cl.11.4	100W to 1000 kW 0.5% to 15%
		Insulation Resistance & Polarization Index	IS 2026 (Part 1):2011 Cl.10.1.3-j IEC60076(Part 1):2011 Cl.11.1.2	10k Ω to 20G Ω 250V to 5kV/10kV
		Separate Source voltage withstand	IS 2026 (Part 3) 2009 Cl.11 IEC 60076 (Part 3):2013 Cl.10	10kV to 96kV
		Induced over voltage withstand	IS 2026 (Part 3):2009 Cl.12.2,12.3 IEC 60076 (Part 3) Cl.11	1kV to 66kV
		Temperature Rise ,	IS 2026(Part 2):2010	125mA to 1200A

Nand Kumar
Convenor

Battal Singh
Program Manager

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		Load loss & Impedance voltage test	Cl.5.0 IEC 60076 (Part 2):2011 Cl.7	10V to 33000V 1kW to 1000 kW 10 °C to 100°C
		Zero Sequence Impedance	IS 2026 (Part 1):2011 Cl.10.7 IEC 60076 (Part 1):2011 Cl.11.8	125mA to 300A 10V to 33000V
		Lightning Impulse	IS 2026 (Part 3):2009 Cl.13 IEC 60076 (Part 3):2013 Cl.13	40kV _{pk} to 2000kV _{pk} 200kJ Rise Time:1.2µs Fall Time:50 µs
		Switching Impulse	IS 2026 (Part 3):2009 Cl.15 IEC 60076 (Part 3):2003 Cl.14	40kV _p to 1400kV _p , 200kJ Rise Time:250µs Fall Time:2500µs
		Acoustic Noise Level	IS 2026 (Part 10):2009 IEC 60076 (Part 10):2005	45 dB to 130dB
		Measurement of Harmonics of No-Load Current	IS 2026 (Part 1):2011 Cl.10.6 IEC 60076(Part 1):2011 Cl.11.6	125mA to 300A 10V to 33000V Harmonics : Upto 25th
		Capacitance & tan-delta	IS 2026 (Part 1):2011 Cl.10.1.3-j IEC 60076 (Part 1):2011 Cl.11.1.4	Capacitance: 125pF to 25nF Tan δ: Upto 0.05
		Power Taken By the Fans & Oil Pumps	IS 2026 (Part 1):2011 Cl.10.1.3-h IEC 60076 (Part 1):2011 Cl.11.1.3	125mA to 300A 10V to 33000V 1kW to 300 kW
		On-load tap Changer	IS 2026 (Part 1):2011 Cl.10.1.1 IEC 60076 (Part 1):2011 Cl.11.1.2	Qualitative
		Bushing CT Test	IS 2705 (Part 4):1992	Qualitative

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			IEC 60044-1	
		Sweep frequency response analysis	CBIP Pub-295 Cl.3.4.e. IEC 60076 (Part 18)	10Hz to 25MHz, 0.01 to 10 0.01 Ω to 10 M Ω
		Low voltage	CBIP Pub-295 Cl.3.4.f	40mV to 800V 4mA to 360A
		Magnetic Balance at 230 V single Phase	CBIP Pub-295 Cl.3.5.f. 20/25 MVA	40mV to 800V 4mA to 360A
		Dielectric strength test of transformer oil	IS 6782:1992	20kV to 90kV
		Oil leakage	CBIP Manual Pub.No.295/ 2006 Clause.17.3.2(b) CBIP Manual Pub.No.295/ 2006 Clause.17.3.1(b) CBIP Manual Pub.No.295/ 2006	0.01kg/cm ² to 1.50 kg/cm ²