

Laboratory	PME Power Solutions (India) Limited, B - 10 & 11, Site-C, Surajpur, UPSIDC Industrial Area, Greater Noida, Uttar Pradesh		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Electrical Testing	Issue Date	14.10.2015
Certificate Number	T-3622	Valid Until	13.10.2017
Last Amended on	-	Page	1 of 3

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	TRANSFORMERS AND REACTORS			
1.	Power & Distribution Transformers (Single & Three Phase) All Transformers Upto 160 MVA, 330 KV	Measurement of Voltage Ratio & Check of Phase Displacement	IS 2026 (Part 1): 2011 IEC 60076 (Part 1): 2011 CBIP Manual: 2013	0.8 to 16000 & (\pm)90°
		Verification of Vector Group & Polarity Checks	IS 2026 (Part 1): 2011 IEC 60076 (Part 1): 2011 CBIP Manual: 2013	Qualitative
		Measurement of Insulation Resistance & Polarization Index	IS 2026 (Part 1): 2011 IEC 60076 (Part 1): 2011 CBIP Manual: 2013	0.1 M Ω to 1000 G Ω
		Measurement of Winding Resistance	IS 2026 (Part 1): 2011 IEC 60076 (Part 1): 2011 CBIP Manual: 2013	0.01 $\mu\Omega$ to 100 k Ω
		Measurement of No Load Loss and Current	IS 2026 (Part 1): 2011 IEC 60076 (Part 1): 2011 CBIP Manual: 2013	100 kW, 500 A
		Measurement of Short Circuit Impedance & Load Loss	IS 2026 (Part 1): 2011 IEC 60076 (Part 1): 2011 CBIP Manual: 2013	Upto 45 kV, 350 kW
		Tests on (On - Load) TAP - Changer	IS 2026 (Part 1): 2011 IEC 60076 (Part 1): 2011 CBIP Manual: 2013	Qualitative
		Separate Source AC Withstand Voltage Test (Applied Potential Test)	IS 2026 (Part 3): 2009 IEC 60076 (Part 3): 2013 CBIP Manual: 2013	Qualitative (Upto 300 kV)

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Power & Distribution Transformers (Single & Three Phase) All Transformers Upto 160 MVA, 330 KV	Induced AC withstand Voltage test (Excluding Partial Discharge)	IS 2026 (Part 3): 2009 IEC 60076 (Part 3): 2013 CBIP Manual: 2013	Qualitative (Upto 500 kV)
		Induced AC withstand Voltage test (ACSD) with Partial Discharge)	IS 2026 (Part 3): 2009 IEC 60076 (Part 3): 2013 CBIP Manual: 2013	Qualitative (Upto 500 kV 1000 pC)
		Induced AC withstand Voltage test (ACLD) with Partial Discharge)	IS 2026 (Part 3): 2009 IEC 60076 (Part 3): 2013 CBIP Manual: 2013	Qualitative (Upto 500 kV 1000 pC)
		Magnetic Circuit (Isolation) Test	IS 2026 (Part 1): 2011 IEC 60076 (Part 3): 2013 CBIP Manual: 2013	Upto 5 kV
		Magnetic Balance Test on 3Φ Transformer	CBIP Manual: 2013	Upto 415 V
		Measurement of Magnetising Current at Low Voltage	CBIP Manual: 2013	Upto 415 V, 50 A
		Measurement of Capacitance and Dissipation Factor (Tan-Delta) of Winding	IS 2026-1: 2011 IEC 60076-1: 2011 CBIP Manual: 2013	3 pF to 0.3 μF 0.001 % to 100 %
		Measurement of Capacitance and Dissipation Factor (Tan-Delta) of Bushing	IS 2099: 1986 (RA 2003) IEC 60137: 2003 CBIP Manual: 2013	3 pF to 0.3 μF, 0.01 % to 100 %
		Measurement of Zero Phase Sequence Impedance (s) on 3Φ Transformer	IS 2026-1: 2011 IEC 60076-1: 2011 CBIP Manual: 2013	1 % to 100 %

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	Power & Distribution Transformers (Single & Three Phase) All Transformers Upto 160 MVA, 330 KV	Measurement of Harmonics of the No Load Current	IS 2026-1: 2011 IEC 60076-1: 2011 CBIP Manual: 2013	Upto 50 th harmonics
		Measurement of Power Taken by Fans & Oil Pump Motors	IS 2026-1: 2011 IEC 60076-1: 2011 CBIP Manual: 2013	Upto 100 kW
		Determination of Sound Levels	IS 2026-10: 2009 CBIP Manual: 2013 IEC 60076-10: 2001 IEC 60076-10-1: 2005 NEMA TR 1: 2013	Upto 130 dB
		Temperature - Rise	IS 2026-2: 2010 IEC 60076-2: 2011	Upto 450 kW

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