National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : TRANSFORMER TESTING LAB, MEIDEN T&D (INDIA) LIMITED, APIIC, MPSEZ, MENAKURU VILLAGE, NAYUDUPETA, TIRUPATI DISTRICT, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

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Validity 17/02/2023 to 16/02/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Applied Voltage Test	IEC 60076(Part-3):2013 –Clause 10
2	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Applied Voltage Test	IS 2026 (Part-3):2018 –Clause 10
3	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Check of Voltage Vector Relationship / Polarity	IEC 60076 (Part-1):2011 –Clause 11.3
4	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Check of Voltage Vector Relationship / Polarity	IS 2026 (Part-1)–Clause 10.3
5	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of Capacitance winding to earth & between windings & for transformer bushings	IEC 60076 (Part-1)
6	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of Capacitance winding to earth & between windings & for transformer bushings	IS 2026 (Part 1)
7	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of Sound level	IEC 60076 (Part 10)
8	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of Sound level	IS 2026 (Part 10)
9	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of transient Voltage Transfer Characteristics	IEC 60076 (Part 3)
10	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of transient Voltage Transfer Characteristics	IS 2026 (Part 3)
11	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of transient Voltage Transfer Characteristics	IS 2026 (Part-3)
12	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Induced Voltage Test with PD measurement (IVPD	IEC 60076(Part-3) –Clause 11
13	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Induced Voltage Test with PD measurement (IVPD)	IS 2026 (Part-3) Clause11
14	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Induced Voltage withstand test(IVW)	IEC 60076(Part-3):2013 –Clause 11 & 12
15	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Induced Voltage withstand test(IVW)	IS 2026 (Part-3) Clause 11

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16	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Lightning Impulse Test along with Chopping on tail	IEC 60076(Part-3):2013 –Clause 13 / IEC 60076(Part-4):2002 IEC 60060:2010
17	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Lightning Impulse Test along with Chopping on tail	IS 2026 (Part-3):2018 –Clause 13 IS 2071:2016
18	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Line terminal AC withstand voltage test (LTAC)	IEC 60076 (Part-3) Clause 12
19	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Line terminal AC withstand voltage test (LTAC)	IS 2026 (Part-3) Clause 12
20	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Magnetic Circuit/ Isolation Test or Check of core-frame, core-tank & frame-tank insulation	CBIP manual- section BB-Clause 3.15
21	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Magnetic Circuit/ Isolation Test or Check of core-frame, core-tank & frame-tank insulation	CBIP manual- section BB-Clause 3.15: 2013
22	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Magnetic Circuit/ Isolation Test or Check of core-frame, core-tank & frame-tank insulation	IEC 60076 (Part-1) clause 11.12
23	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Magnetizing Current	CBIP manual –Section BB-Clause 3.17 & 3.23
24	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Dissipation Factor for windings & for transformer bushings	IEC 60076 (Part 1)
25	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Dissipation Factor for windings & for transformer bushings	IS 2026 (Part 1)
26	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Frequency Response (FRA)	IEC 60076 (Part 18)
27	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Frequency Response (FRA)	IS 2026 (Part 18)
28	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Harmonics of No load Current	IS 2026 (Part 1) clause 10.6
29	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Insulation Resistance & Polarization Index	IEC 60076 (Part-1)
30	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Insulation Resistance & Polarization Index	IS 2026 (Part-1)
31	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Load Loss	IEC 60076(Part-1):2011 –Clause 11.4

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32	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Load Loss	IS 2026 (Part-1):2011 –Clause 10.4
33	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Magnetic Balance	CBIP manual –Section BB-Clause 3.17 & 3.23
34	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of No Load Current	IEC 60076(Part-1):2011 –Clause 11.5
35	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of No Load Current	IS 2026 (Part-1):2011 –Clause 10.5
36	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of No Load Loss	IEC 60076(Part-1):2011 –Clause 11.5
37	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of No Load Loss	IS 2026 (Part-1):2011 –Clause 10.5
38	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Short Circuit Impedance	IEC 60076(Part-1):2011 –Clause 11.4
39	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Short Circuit Impedance	IS 2026 (Part-1):2011 –Clause 10.4
40	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of the Power taken by the Fans and Oil Pump motors	IEC 60076 (Part-1)
41	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Voltage Ratio	IEC 60076(Part-1):2011 –Clause 11.3
42	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Voltage Ratio	IS 2026 (Part-1):2011 –Clause 10.3
43	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Winding Resistance	IEC 60076 (Part-1) Clause 11.2
44	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Winding Resistance	IS 2026 (Part-1) Clause 10.2
45	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Zero Sequence Impedance on three phase transformer	IEC 60076 (Part-1)
46	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of Zero Sequence Impedance on three phase transformer	IS 2026 (Part 1) clause 10.7
47	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	On load tap changers	IEC 60076 (PART1)
48	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Switching Impulse Test	IEC 60076(Part-3): Clause 14
49	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Switching Impulse test	IS 2026 (Part-3)

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50	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Temperature Rise Test	IEC 60076 (Part-2)
51	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Temperature Rise Test	IS 2026 (Part-2)
52	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Test on On Load Tap Changers	IEC 60076(Part-1):2011 –Clause 11.7
53	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power Transformer (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Test on On Load Tap Changers	IS 2026 (Part-1):2011 –Clause 10.8
54	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power transformers (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Determination of transient Voltage Transfer Characteristics	IEC 60076 (Part3)
55	ELECTRICAL- INDUCTORS & TRANSFORMERS	Power transformers (From 2.5MVA to 500MVA & 6.6kV to 400kV)	Measurement of the Power taken by the Fans and Oil Pump motors	IS 2026(Part-1)
56	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dissolved gas Analysis of mineral oil - C2H2	IEC 60567
57	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dissolved gas Analysis of mineral oil - C2H6	IEC 60567
58	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Oil BDV Test	IEC 60156
59	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dielectric Dissipation Factor of Oil (Oil Tandelta)	IEC 60247
60	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dielectric Dissipation Factor of Oil (Oil Tandelta)	IS 16840
61	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dissolved gas Analysis of mineral oil - C2H4	IEC 60567
62	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dissolved gas Analysis of mineral oil - CH4	IEC 60567
63	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dissolved gas Analysis of mineral oil - CO	IEC 60567
64	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dissolved gas Analysis of mineral oil - CO2	IEC 60567

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65	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Dissolved gas Analysis of mineral oil -H2	IEC 60567
66	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Measurement of Oil Interfacial Tension	IS 6104
67	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Measurement of specific reistance of oil (Resistivity)	IEC 60247
68	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Measurement of specific reistance of oil (Resistivity)	IS 16840
69	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Oil BDV Test	IS 6792
70	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Oil moisture content Test	IEC 60814
71	ELECTRICAL- INSULATING MATERIALS & INSULATORS	New Insulating Oil	Oil moisture content Test	IS 13567
72	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Magnetic Polarisation at field strength of 800 AT/m & 50 Hz	IEC 60404-2
73	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Magnetic Polarisation at field strength of 800 AT/m & 50 Hz	IS 3024
74	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Magnetic Polarisation at field strength of 800 AT/m & 50 Hz	IS 649
75	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Specific Core Loss measurement after Accelerated Ageing Test	IEC 60404-8
76	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Specific Core Loss measurement after Accelerated Ageing Test	IS 3024
77	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Specific Core Loss measurement after Accelerated Ageing Test	IS 649
78	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Specific Core Loss Test	IEC 60404-8
79	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Specific Core Loss Test	IS 3024

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80	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Specific Core Loss Test	IS 649
81	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Stacking Factor Measurement	IEC 60404-13
82	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Stacking Factor Measurement	IS 3024
83	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Stacking Factor Measurement	IS 649
84	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Surface Insulation Resistivity	IEC 60404-11
85	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Surface Insulation Resistivity	IS 3024
86	ELECTRICAL- MAGNETIC MATERIALS	CRGO STEEL	Surface Insulation Resistivity	IS 649