National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : TRANSFORMER TESTING LABORATORY, VOLTAMP TRANSFORMERS LTD., MANEJA, POST MAKARPURA, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-6171 **Page No** 1 of 3

Validity 07/04/2022 to 06/04/2024 **Last Amended on** 25/08/2022

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	Transformers from 100 kVA to 160 MVA, 220 kV class	Check of Polarity & Voltage Vector Relationship	IS 2026 (Part 1), IEC 60076 (Part 1)
2	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Induced Over Voltage Withstand Test	IS 2026 (Part 3): 2018, IEC 60076 (Part 3)
3	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Lightning Impulse Test	IS 2026 (Part 3): 2018, IEC 60076 (Part 3)
4	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Magnetic Balance Test	CBIP 317
5	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Magnetising Current Measurement at Low Voltage	CBIP 317
6	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Acoustic Noise Level	IS 2026 (Part 10): 2009, IEC 60076 (Part 10)
7	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Capacitance	IS 2026 (Part 1), IEC 60076 (Part 1)
8	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Dissipation Factor (Tan Delta)	IS 2026 (Part1), IEC 60076 (Part 1)
9	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Harmonics of No Load Current	IS 2026 (Part 1), IEC 60076 (Part 1)
10	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Insulation Resistance & Polarization Index	IS 2026 (Part 1), IEC 60076 (Part 1): 2011, CBIP 317
11	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Load Loss & Impedance voltage	IS 2026 (Part 1), IEC 60076 (Part 1)
12	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of No Load Loss & Current	IS 2026 (Part 1), IEC 60076 (Part 1)
13	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Power Taken by the Fans & Oil Pump Motors	IS 2026 (Part 1), IEC 60076 (Part 1)
14	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Voltage Ratio	IS 2026 (Part 1), IEC 60076 (Part 1)
15	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Winding Resistance	IS 2026 (Part 1), IEC 60076 (Part 1)
16	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Measurement of Zero Phase Sequence Impedance	IS 2026 (Part 1), IEC 60076 (Part 1)
17	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Partial Discharge Test	IS 2026 (Part 3): 2018, IEC 60076 (Part 3)
18	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Separate Source Voltage Withstand Test	IEC 60076 (Part 3): 2013, IS 2026 (Part 3)

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19	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	SFRA	CBIP 317
20	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Switching impulse Test	IS 2026 (Part 3): 2018, IEC 60076 (Part 3)
21	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Temperature Rise Test	IS 2026 (Part 2):2010, IEC 60076 (Part 2)
22	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 160 MVA, 220 kV class	Test on OLTC (assembled on Transformer)	IS 2026 (Part 1), IEC 60076 (Part 1)
23	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Check of Polarity & Voltage Vector Relationship	IS 2026 (Part 1), IEC 60076 (Part 1)
24	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Induced Over Voltage Withstand Test	IS 2026 (Part 3): 2018, IEC 60076 (Part 3)
25	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Magnetic Balance Test	CBIP 317
26	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Magnetising Current Measurement at Low Voltage	CBIP 317
27	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Acoustic Noise Level	IS 2026 (Part 10):2009, IEC 60076 (Part 10)
28	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Capacitance	IS 2026 (Part 1), IEC 60076 (Part 1)
29	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Dissipation Factor (Tan Delta)	IS 2026 (Part 1), IEC 60076 (Part 1)
30	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Harmonics of No Load Current	IS 2026 (Part 1), IEC 60076 (Part 1)
31	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Insulation Resistance & Polarization Index	IS 2026 (Part 1), IEC 60076 (Part 1): 2011, CBIP 317
32	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Load Loss & Impedance Voltage	IS 2026 (Part 1), IEC 60076 (Part 1)
33	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of No Load Loss & Current	IS 2026 (Part 1), IEC 60076 (Part 1)
34	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Power taken by Fans & Oil Pump Motors	IS 2026 (Part 1), IEC 60076 (Part 1)
35	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Voltage Ratio	IS 2026 (Part 1), IEC 60076 (Part 1)
36	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Winding Resistance	IS 2026 (Part 1), IEC 60076 (Part 1)
37	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Measurement of Zero Phase Sequence Impedance	IS 2026 (Part 1), IEC 60076 (Part 1)

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38	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Separate Source Voltage Withstand Test	IS 2026 (Part 3): 2018, IEC 60076 (Part 3)
39	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	SWEEP FREQUENCY RESPONSE ANALYSIS	CBIP 317
40	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Temperature Rise Test	IS 2026 (Part 2):2010, IEC 60076 (Part 2)
41	ELECTRICAL- INDUCTORS & TRANSFORMERS	Transformers from 100 kVA to 25 MVA, 132 kV class	Test on OLTC (Assembled on Transformer)	IS 2026 (Part 1), IEC 60076 (Part 1)
42	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Measurement of Electric Strength (Breakdown Voltage) of Oil	IS 335: 2018, IS 6792
43	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Measurement of Electric Strength (Breakdown Voltage) of Oil	IS 335:2018, IS 6792