



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name THYSSENKRUPP ELECTRICAL STEEL INDIA PRIVATE LIMITED TESTING LABORATORY, AT POST GONDE , VILLAGE WADIVARHE, NASHIK, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8228 Page No. : 1 / 7

Validity 02/11/2018 to 01/11/2020 Last Amended on 21/12/2018

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
1	CHEMICAL- METALS & ALLOYS	Non Ferrous (Copper base metal)	Copper(Cu)	IS 440(Reaffirmed 2006): 1964	97.5 % to 99.9 %
2	CHEMICAL- METALS & ALLOYS	Plain Carbon & low alloy steel	Manganese (Mn)	IS 8811: 1998	0.015 % to 2.00 %
3	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Aluminum (Al)	IS 8811: 1998	0.010 % to 1.100 %
4	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Carbon (C)	ASTM E 1019: 2018	0.001 % to 1.000 %
5	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Chromium (Cr)	IS 8811: 1998	0.010 % to 1.500 %
6	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Copper (Cu)	IS 8811: 1998	0.005 % to 0.22 %
7	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Nickel (Ni)	IS 8811: 1998	0.010 % to 0.050 %
8	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Nitrogen (N)	ASTM E 1019: 2018	0.0020 % to 0.060 %
9	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Oxygen (O)	ASTM E1019: 2018	0.0030 % to 0.060 %
10	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Phosphorous (P)	IS 8811: 1998	0.010 % to 0.130 %
11	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Silicon (Si)	IS 8811: 1998	0.010 % to 3.70 %
12	CHEMICAL- METALS & ALLOYS	Plain Carbon & Low Alloy steels	Sulphur (S)	ASTM E 1019: 2018	0.001 % to 0.020 %
13	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	A.C. Magnetisation / Permeability	IS 649: 1997	1 A/m to 30000 A/m



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name THYSSENKRUPP ELECTRICAL STEEL INDIA PRIVATE LIMITED TESTING LABORATORY, AT POST GONDE , VILLAGE WADIVARHE, NASHIK, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8228 Page No. : 2 / 7

Validity 02/11/2018 to 01/11/2020 Last Amended on 21/12/2018

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
14	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	A.C. Magnetisation / Permeability	IS 648: 2006	1 A/m to 30000 A/m
15	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	A.C. Magnetisation / Permeability	IS 3024: 2015	1 A/m to 30000 A/m
16	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	A.C. Magnetisation / Permeability by Single Sheet tester	IEC 60404-3: 2010	1 A/m to 30000 A/m
17	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Adherence Test	IS 649: 1997	Qualitative(Up to 180 degree Visual - Flake off)
18	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Adherence Test	IS 3024: 2015	Qualitative(Up to 180 degree Visual - Flake off)
19	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Adherence Test	IS 648: 2006	Qualitative(Up to 180 degree Visual - Flake off)
20	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Anisotropy	IS 649: 1997	0.001 Tesla to 2.0 Tesla
21	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Anisotropy	IS 648: 2006	0.001 Tesla to 2.0 Tesla
22	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Anisotropy	IS 3024: 2015	0.001 Tesla to 2.0 Tesla
23	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Coating Thickness	IS 649: 1997	0.20 μ m to 25 μ m



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name THYSSENKRUPP ELECTRICAL STEEL INDIA PRIVATE LIMITED TESTING LABORATORY, AT POST GONDE , VILLAGE WADIVARHE, NASHIK, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8228 Page No. : 3 / 7

Validity 02/11/2018 to 01/11/2020 Last Amended on 21/12/2018

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
24	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Coating Thickness	IS 3024: 2015	0.20 μ m to 25 μ m
25	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Coating Thickness	IS 648: 2006	0.20 μ m to 25 μ m
26	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Ductility	IS 649: 1997	1 No.of Bends to 100 No.of Bends
27	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Ductility	IS 648: 2006	1 No.of Bends to 100 No.of Bends
28	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Ductility	IS 3024: 2015	1 No.of Bends to 100 No.of Bends
29	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance to Heat	IS 648, IS 649:2006: 1997	25 °C to 1000 °C
30	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance to Heat	IS 3024: 2015	25 C to 1000 C
31	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance to Heat	IEC 60404-12: 1992	25 °C to 1000 °C
32	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance to Solvents(Xylene, Trichloroethylene, Freon)	IS 648, IS 649: 2006	Qualitative(Visual Flake off & Weight Difference 10 mg to 200 gms)



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name THYSSENKRUPP ELECTRICAL STEEL INDIA PRIVATE LIMITED TESTING LABORATORY, AT POST GONDE , VILLAGE WADIVARHE, NASHIK, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8228 Page No. : 4 / 7

Validity 02/11/2018 to 01/11/2020 Last Amended on 21/12/2018

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
33	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance to Solvents(Xylene, Trichlo roethylene, Freon)	IS 3024: 2015	Qualitative(Visual - Flake off & Weight Difference 10 mg to 200 gms)
34	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance to Solvents(Xylene, Trichlo roethylene, Freon)	IS 649: 1997	Qualitative(Visual - Flake off & Weight Difference 10 mg to 200 gms)
35	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance Transformer Oil	IS 3024: 2015	25 °C to 120 °C
36	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance Transformer Oil	IS 648: 2006	25 °C to 120 °C
37	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Resistance Transformer Oil	IS 649: 1997	25 °C to 120 °C
38	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Sheet Thickness	IS 649: 1997	0.1 mm to 5.0 mm
39	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Sheet Thickness	IS 648: 2006	0.10 mm to 5.0 mm
40	ELECTRICAL- MAGNETIC MATERIALS	Magnetic sheets/coils/cores	Specific Core Loss	IS 649: 1997	0.001 Tesla to 2.0 Tesla
41	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core Loss	IS 648: 2006	0.001 Tesla to 2.0 Tesla



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name THYSSENKRUPP ELECTRICAL STEEL INDIA PRIVATE LIMITED TESTING LABORATORY, AT POST GONDE , VILLAGE WADIVARHE, NASHIK, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8228 Page No. : 5 / 7

Validity 02/11/2018 to 01/11/2020 Last Amended on 21/12/2018

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
42	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core Loss	IS 3024: 2015	0.001 Tesla to 2.0 Tesla
43	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core loss by Ring Pack Tester	IEC 60404-6: 2003	0.001 Tesla to 2.0 Tesla
44	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core loss by Ring Pack Tester	IEC 60404-6: 2003	1 A/m to 30000 A/m
45	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core loss by Single Sheet Tester	IEC 60404-3: 2010	0.001 Tesla to 2.0 Tesla
46	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core loss test after Aging at 225 deg. Cent. or at defined temperature	IS 3024: 2015	0.001 Tesla to 2.0 Tesla
47	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core loss test after Aging at 225 deg. Cent. or at defined temperature	IS 649: 1997	0.001 Tesla to 2.0 Tesla
48	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Specific Core loss test after Aging at 225 deg. Cent. or at defined temperature	IS 648: 2006	0.001 Tesla to 2.0 Tesla
49	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Stacking Factor	IS 648: 2006	1 % to 100 %
50	ELECTRICAL- MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Stacking Factor	IS 649: 1997	1 % to 100 %



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name THYSSENKRUPP ELECTRICAL STEEL INDIA PRIVATE LIMITED TESTING LABORATORY, AT POST GONDE , VILLAGE WADIVARHE, NASHIK, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8228 Page No. : 6 / 7

Validity 02/11/2018 to 01/11/2020 Last Amended on 21/12/2018

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
51	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Stacking Factor	IS 3024: 2015	1 % to 100 %
52	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Surface Insulation Resistivity	IS 649: 1997	0.001 Amp to 0.999 Amp
53	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Surface Insulation Resistivity	IS 648: 2006	0.001 Amp to 0.999 Amp
54	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Surface Insulation Resistivity	IS 3024: 2015	0.001 Amp to 0.999 Amp
55	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Thermal Effect on Coating	IS 649: 1997	25 °C to 800 °C
56	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Thermal Effect on Coating	IEC 60404-12: 1992	25 °C to 800 °C
57	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Thermal Effect on Coating	IS 648: 2006	25 °C to 800 °C
58	ELECTRICAL-MAGNETIC MATERIALS	Magnetic Sheets/Coils/Cores	Thermal Effect on Coating	IS 3024: 2015	25 °C to 800 °C
59	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Plain Carbon and Low Alloy Steels	Elongation Percent	IS 1608 (part 1): 2018	1 % to 50 %



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name THYSSENKRUPP ELECTRICAL STEEL INDIA PRIVATE LIMITED TESTING LABORATORY, AT POST GONDE , VILLAGE WADIVARHE, NASHIK, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8228 Page No. : 7 / 7

Validity 02/11/2018 to 01/11/2020 Last Amended on 21/12/2018

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
60	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Plain Carbon and Low Alloy Steels	Rockwell	IS 1586 (PART 1): 2018	30 HRBW to 100 HRBW
61	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Plain Carbon and Low Alloy Steels	Rockwell	IS 1586 (PART 1): 2018	30 HR30TW to 75 HR30TW
62	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Plain Carbon and Low Alloy Steels	Tensile Strength	IS 1608 (part 1): 2018	100 MPa to 1700 MPa
63	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Plain Carbon and Low Alloy Steels	Vickers Hardness	IS 1501(PART 1): 2013	70 HV1 to 500 HV1
64	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Plain Carbon and Low Alloy Steels	Vickers Hardness	IS 1501(PART 1): 2013	70 HV5 to 500 HV5
65	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Plain Carbon and Low Alloy Steels	Yield Strength	IS 1608 (part 1): 2018	100 MPa to 1500 MPa