National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : CHEMICAL & METALLURGICAL TESTING LABORATORY,NORTHERN RAILWAY,CHARBAGH WORKSHOP,LUCKNOW (NRC), C & M LAB, LOCO WORK SHOP, CHARBAGH, LUCKNOW, UTTAR PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8286 **Page No** 1 of 4

Validity 22/06/2022 to 21/06/2024 **Last Amended on** 07/07/2022

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	CHEMICAL- METALS & ALLOYS	Aluminium & its alloy	Iron	ASTM E1251
2	CHEMICAL- METALS & ALLOYS	Aluminium & its alloys	Chromium	ASTM E1251
3	CHEMICAL- METALS & ALLOYS	Aluminium & its alloys	Magnesium	ASTM E 1251
4	CHEMICAL- METALS & ALLOYS	Aluminium & its alloys	Managnese	ASTM E1251
5	CHEMICAL- METALS & ALLOYS	Aluminium & its alloys	Nickel	ASTM E1251
6	CHEMICAL- METALS & ALLOYS	Aluminium & its alloys	Silicon	ASTM E1251
7	CHEMICAL- METALS & ALLOYS	Aluminium & its alloys	Tin	ASTM E1251
8	CHEMICAL- METALS & ALLOYS	Aluminium & its alloys	Zinc	ASTM E1251
9	CHEMICAL- METALS & ALLOYS	Carbon steel	Mangnese	IS:228(Part-2)
10	CHEMICAL- METALS & ALLOYS	Carbon steel	Phosphorous	IS:228(Part-3)
11	CHEMICAL- METALS & ALLOYS	Carbon steel	Silicon	IS:228 (Part-8)
12	CHEMICAL- METALS & ALLOYS	Copper & its alloy	Nickel	BS EN15079
13	CHEMICAL- METALS & ALLOYS	Copper & its alloys	Arsenic	BS EN15079
14	CHEMICAL- METALS & ALLOYS	Copper & its alloys	Iron	BS EN15079
15	CHEMICAL- METALS & ALLOYS	Copper & its alloys	Lead	BS EN15079
16	CHEMICAL- METALS & ALLOYS	Copper & its alloys	Phosphorous	BS EN15079
17	CHEMICAL- METALS & ALLOYS	Copper & its alloys	Sulphur	BS EN15079
18	CHEMICAL- METALS & ALLOYS	Copper & its alloys	Tin	BS EN15079

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19	CHEMICAL- METALS & ALLOYS	Copper & its alloys	Zinc	BS EN15079
20	CHEMICAL- METALS & ALLOYS	low Alloy steel	Aluminium	ASTM E415
21	CHEMICAL- METALS & ALLOYS	low Alloy Steel	Chromium	ASTM E415
22	CHEMICAL- METALS & ALLOYS	low Alloy steel	Copper	ASTM E415
23	CHEMICAL- METALS & ALLOYS	low Alloy steel	Mangnese	ASTM E415
24	CHEMICAL- METALS & ALLOYS	low Alloy steel	Molybdenum	ASTM E415
25	CHEMICAL- METALS & ALLOYS	low Alloy steel	Phosphorous	ASTM E415
26	CHEMICAL- METALS & ALLOYS	low Alloy steel	Silicon	ASTM E415
27	CHEMICAL- METALS & ALLOYS	Stainless steel	Chromium	IS:228(Part-6)
28	CHEMICAL- METALS & ALLOYS	Stainless steel	Mangnese	IS:228(Pt-2)
29	CHEMICAL- METALS & ALLOYS	Stainless steel	Molybdenum	IS:228(Part-7)
30	CHEMICAL- METALS & ALLOYS	Stainless steel	Phosphorous	IS:228(Pt-3)
31	CHEMICAL- METALS & ALLOYS	Stainless steel	silicon	IS:228(Part-8)
32	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Metallic material	Hardness (Brinell hardness testing @ 3000 kg)	IS:1500-Part 1
33	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Metallic material	Hardness(Rockwell B-scale)	IS 1586 (part 1)
34	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Metallic material	Hardness(Rockwell C-scale)	IS 1586 (part 1)
35	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Weld plate	Bend test	IS:1599

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36	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Weld plate	Ultimate Tensile Strength	IS:1608 (part 1)
37	MECHANICAL-METALLOGRAPHY TEST	Aluminium components	Macro etch test	IS:12573
38	MECHANICAL-METALLOGRAPHY TEST	copper and its alloy material	Macro etch test	IS:13484
39	MECHANICAL-METALLOGRAPHY TEST	ferrous material	grain size measurement by comparison method	IS:4748
40	MECHANICAL-METALLOGRAPHY TEST	ferrous material	Macro etch test	IS:13015
41	MECHANICAL-METALLOGRAPHY TEST	Ferrous material- cast iron & Steel	Microstructure	IS:7739 & ASM Hand Book volume 9
42	MECHANICAL-METALLOGRAPHY TEST	Steel	Determination of case depth by macrocopic method	IS:6416
43	MECHANICAL-METALLOGRAPHY TEST	Steel	Non metallic inclusion rating by Method"A"	IS:4163
44	MECHANICAL-METALLOGRAPHY TEST	Weldments	Macro etch test	IS:13015
45	NON-DESTRUCTIVE-METALS & ALLOYS	ICF-COACH AXLE	Ultrasonic Testing	COP-MC-34
46	NON-DESTRUCTIVE-METALS & ALLOYS	LHB(Linke hofmann busch)-COACH AXLE	Ultrasonic Testing	COP-MC-85
47	NON-DESTRUCTIVE-METALS & ALLOYS	MOTOR COACH AXLE -95	Ultrasonic Testing	COP-MC-95
48	NON-DESTRUCTIVE-METALS & ALLOYS	MOTOR COACH AXLE-111	Ultrasonic Testing	COP-MC-111
49	NON-DESTRUCTIVE-METALS & ALLOYS	TM-SHAFT(Armature shaft-TM165 & TM49)	Ultrasonic Testing	COP-K-264
50	NON-DESTRUCTIVE-METALS & ALLOYS	TOWER WAGON AXLE (NON-POWERED)	Ultrasonic Testing	COP-MC-50
51	NON-DESTRUCTIVE-METALS & ALLOYS	TOWER WAGON AXLE (POWERED)	Ultrasonic Testing	COP-MC-17
52	NON-DESTRUCTIVE-METALS & ALLOYS	WAG5- Electric Engine AXLE	Ultrasonic Testing	COP-MC-05
53	NON-DESTRUCTIVE-METALS & ALLOYS	WAG7- Electric Engine AXLE	Ultrasonic Testing	COP-MC-07

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54	NON-DESTRUCTIVE-METALS & ALLOYS	WAGON AXLE (BOXN)	Ultrasonic Testing	COP-MC-15
55	NON-DESTRUCTIVE-METALS & ALLOYS	WAP1 (TAO)-Electric Engine AXLE	Ultrasonic Testing	COP-MC-162
56	NON-DESTRUCTIVE-METALS & ALLOYS	WAP1- Electric Engine AXLE	Ultrasonic Testing	COP-MC-08
57	NON-DESTRUCTIVE-METALS & ALLOYS	WAP4- Electric Engine AXLE	Ultrasonic Testing	COP-MC-12
58	NON-DESTRUCTIVE-METALS & ALLOYS	WAP5- Electric Engine AXLE	Ultrasonic Testing	COP-MC-09
59	NON-DESTRUCTIVE-METALS & ALLOYS	WDP4-Diesel Engine AXLE & WDG4-Diesel Engine AXLE	Ultrasonic Testing	COP-MC-71