National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : L&T HEAVY ENGINEERING CALIBRATION AND TESTING LABORATORY, TECHNOLOGY BLOCK, HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, SURAT, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

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Validity 28/01/2023 to 27/01/2025 **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	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Chromium	IS 8811
2	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Copper	ASTM E1476
3	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Copper	ASTM E415
4	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Copper	IS 8811
5	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Molybdenum	ASTM E415
6	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Molybdenum	IS 8811
7	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Nickel	ASTM E1476
8	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Nickel	ASTM E415
9	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Nickel	IS 8811
10	CHEMICAL- METALS & ALLOYS	Carbon steel & Low alloy steel	Carbon	ASTM E415
11	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Carbon	IS 8811
12	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Chromium	ASTM E1476
13	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Chromium	ASTM E415
14	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Manganese	ASTM E1476
15	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Manganese	ASTM E415
16	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Manganese	IS 8811
17	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Molybdenum	ASTM E1476
18	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Silicon	ASTM E415

SCOPE OF ACCREDITATION

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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
19	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Silicon	IS 8811
20	CHEMICAL- METALS & ALLOYS	Carbon steel & Low Alloy steel	Vanadium	ASTM E1476
21	CHEMICAL- METALS & ALLOYS	Low alloy steel, Carbon steel, Cast iron, High nickel steel	Carbon	ASTM E1019
22	CHEMICAL- METALS & ALLOYS	Low alloy steel, Carbon steel, Cast iron, High nickel steel	Sulfur	ASTM E1019
23	CHEMICAL- METALS & ALLOYS	Stainless steel	Carbon	IS 9879
24	CHEMICAL- METALS & ALLOYS	Stainless steel	Chromium	ASTM E1086
25	CHEMICAL- METALS & ALLOYS	Stainless steel	Chromium	ASTM E1476
26	CHEMICAL- METALS & ALLOYS	Stainless steel	Chromium	ASTM E572
27	CHEMICAL- METALS & ALLOYS	Stainless steel	Chromium	IS 9879
28	CHEMICAL- METALS & ALLOYS	Stainless steel	Copper	ASTM E1086
29	CHEMICAL- METALS & ALLOYS	Stainless steel	Copper	IS 9879
30	CHEMICAL- METALS & ALLOYS	Stainless steel	Manganese	ASTM E1476
31	CHEMICAL- METALS & ALLOYS	Stainless steel	Manganese	ASTM E572
32	CHEMICAL- METALS & ALLOYS	Stainless steel	Manganese	IS 9879
33	CHEMICAL- METALS & ALLOYS	Stainless steel	Molybdenum	ASTM E1086
34	CHEMICAL- METALS & ALLOYS	Stainless steel	Molybdenum	IS 9879
35	CHEMICAL- METALS & ALLOYS	Stainless steel	Nickel	ASTM E1086
36	CHEMICAL- METALS & ALLOYS	Stainless steel	Nickel	IS 9879
37	CHEMICAL- METALS & ALLOYS	Stainless steel	Silicon	ASTM E1086

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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
38	CHEMICAL- METALS & ALLOYS	Stainless steel	Silicon	IS 9879
39	CHEMICAL- METALS & ALLOYS	Stainless steel	Carbon	ASTM E1019
40	CHEMICAL- METALS & ALLOYS	Stainless steel	Carbon	ASTM E1086
41	CHEMICAL- METALS & ALLOYS	Stainless steel	Copper	ASTM E1476
42	CHEMICAL- METALS & ALLOYS	Stainless steel	Copper	ASTM E572
43	CHEMICAL- METALS & ALLOYS	Stainless steel	Manganese	ASTM E1086
44	CHEMICAL- METALS & ALLOYS	Stainless steel	Molybdenum	ASTM E1476
45	CHEMICAL- METALS & ALLOYS	Stainless steel	Molybdenum	ASTM E572
46	CHEMICAL- METALS & ALLOYS	Stainless steel	Nickel	ASTM E1476
47	CHEMICAL- METALS & ALLOYS	Stainless steel	Nickel	ASTM E572
48	CHEMICAL- METALS & ALLOYS	Stainless steel	Niobium	ASTM E1476
49	CHEMICAL- METALS & ALLOYS	Stainless steel	Niobium	ASTM E572
50	CHEMICAL- METALS & ALLOYS	Stainless steel	Sulfur	ASTM E1019
51	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Carbon steel / Low alloy steel (Ferritic Steel)	Drop Weight Test : NDT Temperature	ASTM E208
52	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ASTM A370
53	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ASME SA370
54	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Charpy V notch (2mm) Impact test: Percentage of Shear	ASME SA370

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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
55	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Charpy V notch (2mm) Impact test: Percentage of Shear	ASTM A370
56	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ASTM A370
57	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ASME SA370
58	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Tensile test (Room temperature) : Elongation	ASME SA 370
59	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Tensile Test (Room Temperature) : Reduction in area	ASME SA370
60	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Tensile Test (Room Temperature) : Tensile Strength	ASME SA 370
61	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	ASME SA370
62	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Bend test	ASME SECTION IX
63	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Bend test	ASTM E190
64	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Bend test	ISO 5173
65	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Brinell Hardness (HBW 2.5mm/187.5kgf)	ASTM E10
66	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Brinell Hardness (HBW 2.5mm/187.5kgf)	IS 1500 (PART 1)
67	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Brinell Hardness (HBW 2.5mm/187.5kgf)	ISO 6506-1

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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
68	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ASTM E23
69	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ISO 148-1
70	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Charpy V notch (2mm) Impact test: Percentage of Shear	ASTM E23
71	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Charpy V notch (2mm) Impact test: Percentage of Shear	ISO 148-1
72	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ISO 148-1
73	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ASTM E23
74	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Micro Vickers Hardness (HV1)	ASTM E384
75	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Micro Vickers Hardness (HV1)	IS0 6507-1
76	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Rockwell Hardness in 'B' Scale (HRBW)	ASTM E18
77	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Rockwell Hardness in 'B' Scale (HRBW)	IS 1586 (PART1)
78	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Rockwell Hardness in 'B' Scale (HRBW)	ISO 6508-1
79	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Rockwell Hardness in 'C' Scale (HRC)	ASTM E18
80	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Rockwell Hardness in 'C' Scale (HRC)	IS 1586 (PART 1)

SCOPE OF ACCREDITATION

Laboratory Name : L&T HEAVY ENGINEERING CALIBRATION AND TESTING LABORATORY, TECHNOLOGY BLOCK, HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, SURAT, GUJARAT, INDIA

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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
81	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Rockwell Hardness in 'C' Scale (HRC)	ISO 6508-1
82	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Room temperature Tensile test: Tensile strength	ISO 4136
83	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Shear Load test for Tube to Tube-sheet joint : Tensile Strength	ASME Sec. VIII Div.1
84	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Elongation	ASTM E21
85	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Elongation	ISO 6892-2
86	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Reduction in area	ASTM E21
87	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Reduction in area	ISO 6892-2
88	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Tensile Strength	ASTM E21
89	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Tensile Strength	ISO 6892-2
90	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Yield Strength @ 0.2% offset	ASTM E21
91	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Elevated Temperature) : Yield Strength @ 0.2% offset	ISO 6892-2
92	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile test (Room temperature) : Elongation	ASTM E8/E8M
93	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile test (Room temperature) : Elongation	IS 1608 (PART 1)
94	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile test (Room temperature) : Elongation	ISO 6892-1

SCOPE OF ACCREDITATION

Laboratory Name : L&T HEAVY ENGINEERING CALIBRATION AND TESTING LABORATORY, TECHNOLOGY BLOCK, HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, SURAT, GUJARAT, INDIA

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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
95	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Reduction in area	ASTM E8/E8M
96	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Reduction in area	IS 1608 (PART-1)
97	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Reduction in area	ISO 6892-1
98	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Tensile Strength	ASME SEC. IX
99	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Tensile Strength	ASTM E8/E8M
100	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Tensile Strength	IS 1608 (PART 1)
101	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Tensile Strength	ISO 6892-1
102	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	ASTM E8/E8M
103	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	IS 1608 (PART 1)
104	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	ISO 6892-1
105	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Vickers Hardness - HV10	ASTM E92
106	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Vickers Hardness - HV10	IS 1501 (PART 1)
107	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Vickers Hardness - HV10	ISO 6507-1
108	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Carbon steel/Low allow steel (Ferritic steel)	Drop Weight Test 'V' notch : NDT Temperature	ASTM E208

SCOPE OF ACCREDITATION

Laboratory Name :	L&T HEAVY ENGINEERING CALIBRATION AND TESTING LABORATORY, TECHNOLOGY BLOCK, HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, SURAT, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
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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
109	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material & products	Drop Weight Test : NDT Temperature	ASTM E208
110	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ASME SA370
111	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ASTM E23
112	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Percentage of Shear	ASTM E23
113	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ASME SA370
114	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ASTM E23
115	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Micro Vickers Hardness (HV1)	ASTM E384
116	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Micro Vickers Hardness (HV1)	IS0 6507-1
117	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Rockwell Hardness in 'B' Scale (HRBW)	ASTM E18
118	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Rockwell Hardness in 'B' Scale (HRBW)	IS 1586 (PART1)
119	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Rockwell Hardness in 'B' Scale (HRBW)	ISO 6508-1
120	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Rockwell Hardness in 'C' Scale (HRC)	ASTM E18
121	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Rockwell Hardness in 'C' Scale (HRC)	IS 1586 (PART 1)

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122	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Rockwell Hardness in 'C' Scale (HRC)	ISO 6508-1
123	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : %Elongation	ASTM E21
124	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : Tensile Strength	ASTM E21
125	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : Tensile Strength	ISO 6892-2
126	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : Yield Strength @ 0.2% offset	ASTM E21
127	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile test (Room temperature) : Elongation	IS 1608 (PART 1)
128	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Reduction in area	ASME SA370
129	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Reduction in area	ASTM E8/E8M
130	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Tensile Strength	ASME SA 370
131	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Tensile Strength	ASME SEC. IX
132	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Tensile Strength	IS 1608 (PART 1
133	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Tensile Strength	ISO 6892-1
134	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	ASME SA370
135	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	ASTM E8/E8M

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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
136	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	IS 1608 (PART 1
137	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	ISO 6892-1
138	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Vickers Hardness - HV10	IS 1501 (PART 1)
139	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Bend test	ASTM E290
140	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Brinell Hardness (HBW 2.5mm/187.5kgf)	ASTM E10
141	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Brinell Hardness (HBW 2.5mm/187.5kgf)	IS 1500 (PART 1)
142	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Brinell Hardness (HBW 2.5mm/187.5kgf)	ISO 6506-1
143	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ASTM A370
144	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Lateral Expansion (mm)	ISO 148-1
145	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Percentage of Shear	ASME SA370
146	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Percentage of Shear	ASTM A370
147	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test: Percentage of Shear	ISO 148-1
148	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ASTM A370

SCOPE OF ACCREDITATION

Laboratory Name : L&T HEAVY ENGINEERING CALIBRATION AND TESTING LABORATORY, TECHNOLOGY BLOCK, HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, SURAT, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

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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
149	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Charpy V notch (2mm) Impact test:Absorb Energy (Temperature +90°C to -196°C)	ISO 148-1
150	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : %Elongation	ISO 6892-2
151	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : Reduction in area	ASTM E21
152	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : Reduction in area	ISO 6892-2
153	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Elevated Temperature) : Yield Strength @ 0.2% offset	ISO 6892-2
154	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : % Reduction in area	ASTM A370
155	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile test (Room temperature) : %Elongation	ASTM A370
156	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile test (Room temperature) : Elongation	ASME SA 370
157	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile test (Room temperature) : Elongation	ASTM E8/E8M
158	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile test (Room temperature) : Elongation	ISO 6892-1
159	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Reduction in area	IS 1608 (PART-1)
160	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Reduction in area	ISO 6892-1
161	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Tensile Strength	ASTM A370

SCOPE OF ACCREDITATION

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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
162	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Tensile Strength	ASTM A370
163	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Tensile Strength	ASTM E8/E8M
164	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Tensile Test (Room Temperature) : Yield Strength @ 0.2% offset	ASTM A370
165	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Vickers Hardness - HV10	ASTM E92
166	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Vickers Hardness - HV10	ISO 6507-1
167	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous materials, alloys & products	Bend test	IS 1599
168	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Stainless steel	Determination of resistance to intergranular corrosion of Stainless steel	ISO 3651-2
169	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Stainless steel	Determination of resistance to intergranular corrosion of Stainless steel	ISO 3651-2
170	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Stainless steel	IGC test Practice - E	ASTM A262
171	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Stainless Steel	IGC test Practice - E	ASTM A262
172	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel	Grain size measurements	ASTM E112
173	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel	Inclusion rating	ASTM E45
174	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel	Microstructure Examination	ASM Metal Handbook Vol-9
175	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Grain size measurements	ASTM E112
176	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Inclusion rating	ASTM E45

SCOPE OF ACCREDITATION

Laboratory Name :	L&T HEAVY ENGINEERING CALIBRATION AND TESTING LABORATORY, TECHNOLOGY BLOCK, HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, SURAT, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
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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
177	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Macro Examination (Weld)	ISO 17639
178	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Macro Examination (Weld)	ISO 6520-1
179	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Macro Examination (Weld)	ASME SECTION IX
180	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Microstructure Examination	ASM Metal Handbook Vol-9
181	MECHANICAL-METALLOGRAPHY TEST	Carbon steel, Low alloy steel, High alloy steel, Ni based alloy, Titanium & its alloy.	Minimum Leak path / Axial length measurement	ASME SECTION IX