National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : METALLURGY AND MATERIALS LABORATORY, LARSEN AND TOUBRO LIMITED, (DEFENCE BUSINESS VERTICAL), PRECISION MANUFACTURING & SYSTEMS COMPLEX, L&T BYE PASS ROAD, MALUMICHAMPATTI, COIMBATORE, TAMIL NADU, 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
Permanent Facility				
1	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO VICKERS HARDNESS HV (0.1Kg)	ASTM E384
2	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO VICKERS HARDNESS HV (0.1Kg)	IS 1501
3	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO VICKER's HARDNESS HV (0.5kg)	ASTM E384
4	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO VICKER'S HARDNESS HV (0.5kg)	IS 1501
5	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO VICKER'S HARDNESS HV (1.0 kg)	ASTM E384
6	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO VICKER'S HARDNESS HV (1.0 kg)	IS 1501
7	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRA)	ASTM A370
8	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRA)	ASTM E18
9	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRA)	GOST 9013
10	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRA)	IS 1586
11	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRBW)	ASTM A370
12	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRBW)	ASTM E18
13	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRBW)	GOST 9013

SCOPE OF ACCREDITATION

Laboratory Name : METALLURGY AND MATERIALS LABORATORY, LARSEN AND TOUBRO LIMITED, (DEFENCE BUSINESS VERTICAL), PRECISION MANUFACTURING & SYSTEMS COMPLEX, L&T BYE PASS ROAD, MALUMICHAMPATTI, COIMBATORE, TAMIL NADU, 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
14	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRBW)	IS 1586
15	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRC)	ASTM A370
16	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRC)	ASTM E18
17	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRC)	GOST 9013
18	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	ROCKWELL HARDNESS (HRC)	IS 1586
19	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% ELONGATION)	ASME SEC IX
20	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% ELONGATION)	ASTM A370
21	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% ELONGATION)	ASTM B557M
22	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% ELONGATION)	ASTM E8/E8M
23	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% ELONGATION)	GOST 1497
24	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% ELONGATION)	IS 1608
25	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% REDUCTION AREA)	ASME SEC IX
26	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% REDUCTION AREA)	ASTM A370
27	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% REDUCTION AREA)	ASTM B557M

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28	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% REDUCTION AREA)	ASTM E8/E8M
29	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% REDUCTION AREA)	GOST 1497
30	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% REDUCTION AREA)	IS 1608
31	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (% REDUCTION AREA)	ISO 6892-1
32	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (%ELONGATION)	ISO 6892-1
33	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (0.2 % PROOF STRENGTH & YIELD STRENGTH)	GOST 1497
34	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ASME SEC IX
35	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ASTM A370
36	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ASTM B557M
37	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ASTM E8/E8M
38	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	IS 1608
39	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ISO 6892-1
40	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (UTS)	ASME SEC IX
41	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (UTS)	ASTM A370

SCOPE OF ACCREDITATION

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42	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (UTS)	ASTM B557M
43	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (UTS)	ASTM E8/E8M
44	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (UTS)	GOST 1497
45	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (UTS)	IS 1608
46	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	TENSILE TEST (UTS)	ISO 6892-1
47	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO VICKERS HARDNESS HV (0.1Kg)	ASTM E384
48	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO VICKERS HARDNESS HV (0.1Kg)	IS 1501
49	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO VICKERS HARDNESS HV (0.5Kg)	ASTM E384
50	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO VICKERS HARDNESS HV (0.5Kg)	IS 1501
51	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO VICKERS HARDNESS HV (1.0Kg)	ASTM E384
52	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO VICKERS HARDNESS HV (1.0Kg)	IS 1501
53	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRA)	ASTM A370
54	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRA)	ASTM E18
55	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRA)	GOST 9013

SCOPE OF ACCREDITATION

Laboratory Name : METALLURGY AND MATERIALS LABORATORY, LARSEN AND TOUBRO LIMITED, (DEFENCE BUSINESS VERTICAL), PRECISION MANUFACTURING & SYSTEMS COMPLEX, L&T BYE PASS ROAD, MALUMICHAMPATTI, COIMBATORE, TAMIL NADU, 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
56	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRA)	IS 1586
57	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRBW)	ASTM A370
58	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRBW)	ASTM E18
59	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRBW)	GOST 9013
60	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRBW)	IS 1586
61	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRC)	ASTM A370
62	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRC)	ASTM E18
63	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRC)	GOST 9013
64	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	ROCKWELL HARDNESS (HRC)	IS 1586
65	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% ELONGATION)	ASME SEC IX
66	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% ELONGATION)	ASTM A370
67	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% ELONGATION)	ASTM E8/E8M
68	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% ELONGATION)	GOST 1497
69	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% ELONGATION)	IS 1608

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70	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% ELONGATION)	ISO 6892-1
71	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% REDUCTION AREA)	ASME SEC IX
72	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% REDUCTION AREA)	ASTM A370
73	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% REDUCTION AREA)	ASTM E8/E8M
74	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% REDUCTION AREA)	GOST 1497
75	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% REDUCTION AREA)	IS 1608
76	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (% REDUCTION AREA)	ISO 6892-1
77	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ASME SEC IX
78	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ASTM A370
79	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ASTM E8/E8M
80	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	GOST 1497
81	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (0.2% PROOF STRENGTH & YIELD STRENGTH)	ISO 6892-1
82	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (0.2% PROOF STRENGTH YIELD STRENGTH)	IS 1608
83	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (UTS)	ASME SEC IX

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84	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (UTS)	ASTM A370
85	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (UTS)	ASTM E8/E8M
86	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (UTS)	GOST 1497
87	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (UTS)	IS 1608
88	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	TENSILE TEST (UTS)	ISO 6892-1
89	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MACRO EXAMINATION	ASME SEC IX
90	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MACRO EXAMINATION	ASTM E340
91	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MACRO EXAMINATION	AWS D1.6/1.6M
92	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MACRO EXAMINATION	AWS D17.1/17.1M
93	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO STRUCTURAL EXAMINATION	ASM HANDBOOK vol 9
94	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO STRUCTURAL EXAMINATION	ASTM E3
95	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO STRUCTURAL EXAMINATION	ASTM E407
96	MECHANICAL-METALLOGRAPHY TEST	Aluminium & Aluminium Alloys, Stainless steel, Titanium alloys	MICRO STRUCTURAL EXAMINATION	IS 7739
97	MECHANICAL-METALLOGRAPHY TEST	Case hardened and nitrile steels	CASE DEPTH BY MICRO HARDNESS METHOD	ASTM E384
98	MECHANICAL-METALLOGRAPHY TEST	Case hardened and nitrile steels	CASE DEPTH BY MICRO HARDNESS METHOD	IS 13691
99	MECHANICAL-METALLOGRAPHY TEST	Case hardened and nitrile steels	CASE DEPTH BY MICRO HARDNESS METHOD	IS 6416
100	MECHANICAL-METALLOGRAPHY TEST	Case hardened and nitrile steels	CASE DEPTH BY MICROSCOPIC METHOD	ASTM E384

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101	MECHANICAL-METALLOGRAPHY TEST	Case hardened and nitrile steels	CASE DEPTH BY MICROSCOPIC METHOD	IS 13691
102	MECHANICAL-METALLOGRAPHY TEST	Case hardened and nitrile steels	CASE DEPTH BY MICROSCOPIC METHOD	IS 6416
103	MECHANICAL-METALLOGRAPHY TEST	Steel and stainless steel	DECABURIZATION DEPTH	IS 6396
104	MECHANICAL-METALLOGRAPHY TEST	Steel and stainless steel	DECARBURIZATION DEPTH	ASTM E1077
105	MECHANICAL-METALLOGRAPHY TEST	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MACRO EXAMINATION	ASME SEC IX
106	MECHANICAL-METALLOGRAPHY TEST	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MACRO EXAMINATION	ASTM E340
107	MECHANICAL-METALLOGRAPHY TEST	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MACRO EXAMINATION	AWS D171/17.1M
108	MECHANICAL-METALLOGRAPHY TEST	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO STRUCTURAL EXAMINATION	ASM HANDBOOK vol 9
109	MECHANICAL-METALLOGRAPHY TEST	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO STRUCTURAL EXAMINATION	ASTM E3
110	MECHANICAL-METALLOGRAPHY TEST	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO STRUCTURAL EXAMINATION	ASTM E407
111	MECHANICAL-METALLOGRAPHY TEST	Steel, Carbon steel, Steel alloys, Mild steel, Maraging steel	MICRO STRUCTURAL EXAMINATION	IS 7739