National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : QUALITY ASSURANCE LABORATORIES, SHIP BUILDING CENTRE, DHRUV BUILDING, KRISHNA GATE, NAVAL BASE POST, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

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Validity 31/08/2022 to 30/08/2024 **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 & Alloy Steel	Aluminium	ASTM E415
2	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Aluminium	IS 8811
3	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Boron	ASTM E415
4	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Boron	IS 8811
5	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Carbon	ASTM E415
6	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Carbon	IS 8811
7	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Chromium	ASTM E415
8	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Chromium	IS 8811
9	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Cobalt	ASTM E415
10	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Cobalt	IS 8811
11	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Copper	ASTM E415
12	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Copper	IS 8811
13	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Manganese	ASTM E415
14	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Manganese	IS 8811
15	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Molybdenum	ASTM E415
16	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Molybdenum	IS 8811
17	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Nickel	ASTM E415
18	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Nickel	IS 8811

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 & Alloy Steel	Phosphorus	ASTM E415
20	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Phosphorus	IS 8811
21	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Silicon	ASTM E415
22	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Silicon	IS 8811
23	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Sulfur	ASTM E415
24	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Sulfur	IS 8811
25	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Tin	ASTM E415
26	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Tin	IS 8811
27	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Titanium	ASTM E415
28	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Titanium	IS 8811
29	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Vanadium	ASTM E415
30	CHEMICAL- METALS & ALLOYS	Carbon & Alloy Steel	Vanadium	IS 8811
31	CHEMICAL- METALS & ALLOYS	Carbon, Alloy and Stainless Steel	Carbon	ASTM E1019
32	CHEMICAL- METALS & ALLOYS	Carbon, Alloy and Stainless Steel	Carbon	IS 228 (Part 20)
33	CHEMICAL- METALS & ALLOYS	Carbon, Alloy and Stainless Steel	Sulfur	ASTM E1019
34	CHEMICAL- METALS & ALLOYS	Carbon, Alloy and Stainless Steel	Sulfur	IS 228 (Part 20)
35	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Aluminium	BS EN 15079
36	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Arsenic	BS EN 15079
37	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Bismuth	BS EN 15079

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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	Copper & its Alloys	Iron	BS EN 15079
39	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Lead	BS EN 15079
40	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Manganese	BS EN 15079
41	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Nickel	BS EN 15079
42	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Phosphorus	BS EN 15079
43	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Silicon	BS EN 15079
44	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Sulfur	BS EN 15079
45	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Tin	BS EN 15079
46	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Titanium	BS EN 15079
47	CHEMICAL- METALS & ALLOYS	Copper & its Alloys	Zinc	BS EN 15079
48	CHEMICAL- METALS & ALLOYS	Stainless Steel	Arsenic	ASTM E1086
49	CHEMICAL- METALS & ALLOYS	Stainless Steel	Arsenic	IS 9879
50	CHEMICAL- METALS & ALLOYS	Stainless Steel	Carbon	ASTM E1086
51	CHEMICAL- METALS & ALLOYS	Stainless Steel	Carbon	IS 9879
52	CHEMICAL- METALS & ALLOYS	Stainless Steel	Chromium	ASTM E1086
53	CHEMICAL- METALS & ALLOYS	Stainless Steel	Chromium	IS 9879
54	CHEMICAL- METALS & ALLOYS	Stainless Steel	Cobalt	IS 9879
55	CHEMICAL- METALS & ALLOYS	Stainless Steel	Cobalt	ASTM E1086
56	CHEMICAL- METALS & ALLOYS	Stainless Steel	Copper	ASTM E1086

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
57	CHEMICAL- METALS & ALLOYS	Stainless Steel	Copper	IS 9879
58	CHEMICAL- METALS & ALLOYS	Stainless Steel	Manganese	ASTM E1086
59	CHEMICAL- METALS & ALLOYS	Stainless Steel	Manganese	IS 9879
60	CHEMICAL- METALS & ALLOYS	Stainless Steel	Molybdenum	ASTM E1086
61	CHEMICAL- METALS & ALLOYS	Stainless Steel	Molybdenum	IS 9879
62	CHEMICAL- METALS & ALLOYS	Stainless Steel	Nickel	ASTM E1086
63	CHEMICAL- METALS & ALLOYS	Stainless Steel	Nickel	IS 9879
64	CHEMICAL- METALS & ALLOYS	Stainless Steel	Niobium	ASTM E1086
65	CHEMICAL- METALS & ALLOYS	Stainless Steel	Niobium	IS 9879
66	CHEMICAL- METALS & ALLOYS	Stainless Steel	Phosphorus	ASTM E1086
67	CHEMICAL- METALS & ALLOYS	Stainless Steel	Phosphorus	IS 9879
68	CHEMICAL- METALS & ALLOYS	Stainless Steel	Silicon	ASTM E1086
69	CHEMICAL- METALS & ALLOYS	Stainless Steel	Silicon	IS 9879
70	CHEMICAL- METALS & ALLOYS	Stainless Steel	Sulfur	ASTM E1086
71	CHEMICAL- METALS & ALLOYS	Stainless Steel	Sulfur	IS 9879
72	CHEMICAL- METALS & ALLOYS	Stainless Steel	Tin	ASTM E1086
73	CHEMICAL- METALS & ALLOYS	Stainless Steel	Tin	IS 9879
74	CHEMICAL- METALS & ALLOYS	Stainless Steel	Titanium	ASTM E1086
75	CHEMICAL- METALS & ALLOYS	Stainless Steel	Titanium	IS 9879

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Laboratory Name : QUALITY ASSURANCE LABORATORIES, SHIP BUILDING CENTRE, DHRUV BUILDING, KRISHNA GATE, NAVAL BASE POST, VISAKHAPATNAM, ANDHRA PRADESH, 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
76	CHEMICAL- METALS & ALLOYS	Stainless Steel	Tungsten	ASTM E1086
77	CHEMICAL- METALS & ALLOYS	Stainless Steel	Tungsten	IS 9879
78	CHEMICAL- METALS & ALLOYS	Stainless Steel	Vanadium	ASTM E1086
79	CHEMICAL- METALS & ALLOYS	Stainless Steel	Vanadium	IS 9879
80	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Aluminium	ASTM E2994
81	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Chromium	ASTM E2994
82	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Iron	ASTM E2994
83	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Manganese	ASTM E2994
84	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Molybdenum	ASTM E2994
85	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Nitrogen	ASTM E2994
86	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Oxygen	ASTM E2994
87	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Silicon	ASTM E2994
88	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Tin	ASTM E2994
89	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Vanadium	ASTM E2994
90	CHEMICAL- METALS & ALLOYS	Titanium & its Alloys	Zirconium	ASTM E2994
91	CHEMICAL- PAINTS & SURFACE COATING	Epoxy Enamel	Pot Life	IS 14209 (Annexure B)
92	CHEMICAL- PAINTS & SURFACE COATING	Epoxy Enamel	Pot Life	NCD 1457 (Part 1)
93	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Binder Content	IS 101 (Part 8 / Section 2)
94	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Colour	IS 101 (Part 4 / Section 2)

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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	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Colour	IS 5
96	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Dry Film Thickness	IS 101 (Part 3 / Section 2)
97	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Drying Time (Surface Dry and Hard Dry)	IS 101 (Part 3 / Section 1)
98	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Fineness of Grind	ASTM D1210
99	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Fineness of Grind	IS 101 (Part 3 / Section 5)
100	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Flexibility and Adhesion (a) Bend Test	IS 101 (Part 5 / Section 2)
101	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Gel Time	NCD 1416 (Appendix C)
102	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Gloss (60) Degree	ASTM D523
103	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Impact Testing with 10 to 100 cm Height and 1 & 2 kg Load	IS 101 (Part 5 / Section 3)
104	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Mass per 10 Litre	IS 101 (Part 1 / Section 7)
105	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Mass Solids (Non Volatile Matter)	IS 101 (Part 2 / Section 2)
106	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Pigment Content	IS 101 (Part 8 / Section 2)
107	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Pot Life	NCD 1435 (Appendix A)
108	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Pull of Strength	ASTM D4541
109	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Condensation (Humidity)	IS 101 (Part 6 / Section 1)
110	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Distilled Water (Change in Conductivity)	NCD 1457 (Part 1)
111	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Liquids (Diesel, Petrol, HCl, NaOH, HNO3, H2SO4)	NCD 1457 (Part 1 / Appendix C)
112	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Liquids (Fresh Water, Distilled Water, H2SO4, NaOH, Sea Water, HCl, HNO3)	IS 101 (Part 6 / Section 1)

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113	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Liquids (Fresh Water, Distilled Water, H2SO4, NaOH, Sea Water, HCl, HNO3)	IS 101 (Part 7 / Section 2)
114	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Salt Spray (NSS)	IS 101 (Part 6 / Section 1)
115	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Sea Water or Fresh Water	NCD 1457 (Part 1 / Appendix B)
116	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Resistance to Sulphuric Acid	NCD 1457 (Part 2 / Appendix B)
117	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Sag Resistance	ASTM D4400
118	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Specific Gravity	IS 101 (Part 1 / Section 7)
119	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Viscosity by Cone & Plate Viscometer	ASTM D4287
120	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Viscosity by Ford Cup	ASTM D1200
121	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Viscosity by Stromer Type Viscometer	ASTM D562
122	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Volatile Matter	IS 101 (Part 2 / Section 2)
123	CHEMICAL- PAINTS & SURFACE COATING	Marine Paints and Commercially Available Paints	Volume Soilds	IS 101 (Part 8 / Section 6)
124	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Ash Content	IS 1448 (Part 4)
125	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Boiling Point	ASTM D1120
126	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Breakdown Voltage	IS 6792
127	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Chloride Content	AWTT (1217-03 of Meter ohm)
128	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Density	ASTM D1298
129	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Flash point	ASTM D93
130	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Kinematic Viscosity @ 100 Degree Celsius	ASTM D445

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131	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Kinematic Viscosity @ 40 Degree Celsius	ASTM D445
132	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic oils, Mineral Oils and Lube oils	Kinematic Viscosity @ 50 Degree Celsius	ASTM D445
133	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Mass Fraction of Mechanical Impurities	GOST 25821
134	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Salt Water Contamination	Kittiwake Method
135	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Specific Gravity	IS 1448 (Part 32)
136	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Visocity Index	IS 1448 (Part 56)
137	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Water and Sediment Content	ASTM D1796
138	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Water and Sediment Content	IS 1448 (Part 41)
139	CHEMICAL- PETROLEUM AND PRODUCTS	Hydraulic Oils, Mineral Oils and Lube Oils	Water Content by Distillation	IS 1448 (Part 40)
140	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Alkalinity	IS 3025 (Part 23)
141	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Aluminum (as Al)	IS 3025 (Part 55)
142	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Ammonium	ASTM D1426
143	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Ammonium (as NH4+)	US EPA 300
144	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Calcium	ASTM D6919
145	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Chemical Oxygen Demand (COD)	ASTM D1252
146	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Chloride	IS 3025 (Part 32)
147	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Chloride (as Cl-)	US EPA 300.0
148	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Conductivity	IS 3025 (Part 14)
149	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Copper (as Cu)	APHA 23rd Edition 3500-Cu
150	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Copper (as Cu)	IS 3025 (Part 42)
151	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	De Oxidizing Substances(KMnO4)	GOST 6709
152	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Density	IS 3025 (Part 12)
153	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Dissolved Oxygen	IS 3025 (Part 38)
154	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Free Chlorine	IS 3025 (Part 26)

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155	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Hydrazine	ASTM D1385
156	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Iron (as Fe)	IS 3025 (Part 53)
157	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Lead (as Pb)	IS 3025 (Part 47)
158	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Lithium (as Li+)	ASTM D6919
159	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Magnesium (as Mg+)	ASTM D6919
160	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Oil Content in Water	ASTM D7066
161	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	pH	IS 3025 (Part 11)
162	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Potassium (as K+)	ASTM D6919
163	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Salinity	APHA 23rd Edition 2520
164	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Silica	ASTM D859
165	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Sodium (as Na+)	ASTM D6919
166	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Total Dissolved solids	IS 3025 (Part 14)
167	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Total Hardness (as CaCO3)	IS 3025 (Part 21)
168	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Total Residue	GOST 27026
169	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Turbidity	IS 3025 (Part 10)
170	CHEMICAL- WATER	DM Water, UF Water, Boiler Water, Drinking Water	Zinc (as Zn)	IS 3025 (Part 49)
171	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Bend test	ASTM E190 & ASTM 290
172	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Brinell Hardness	ASTM E10
173	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Brinell Hardness	ASTM E10
174	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Charpy Impact Test (V Notch) at Room Temperature to Minus 40 Degree.	ASTM E23

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Validity 31/08/2022 to 30/08/2024 **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
175	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Yield Strength (0.2% Offset)	ASTM E21
176	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	% Elongation	ASTM E21
177	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	% Elongation	ASTM E8/8M
178	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	% Reduction of Area	ASTM E21
179	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	% Reduction of Area	ASTM E8/8M
180	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Tensile Strength	ASTM E21
181	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Tensile Strength	ASTM E8/8M
182	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Vickers Hardness	ASTM E92
183	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Vickers Hardness	ASTM E92

SCOPE OF ACCREDITATION

Laboratory Name : QUALITY ASSURANCE LABORATORIES, SHIP BUILDING CENTRE, DHRUV BUILDING, KRISHNA GATE, NAVAL BASE POST, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

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184	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Yield Strength (0.2% Offset)	ASTM E8/8M
185	MECHANICAL-METALLOGRAPHY TEST	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Average Grain Size (Comparison Method)	ASTM E112
186	MECHANICAL-METALLOGRAPHY TEST	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Intergranular Corrosion Test Practice A	ASTM A262
187	MECHANICAL-METALLOGRAPHY TEST	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Intergranular Corrosion Test Practice E	ASTM A262
188	MECHANICAL-METALLOGRAPHY TEST	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Macro Examination	ASTM E340
189	MECHANICAL-METALLOGRAPHY TEST	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Micro Examination	ASTM E407
190	MECHANICAL-METALLOGRAPHY TEST	Ferrous and Non Ferrous Metals (Metal Rods, Metal Plates, Metal Pipes, Metal Angle Bars, Channel Bars, Bulb Bars and its Weldments, Weld Consumables (Both Ferrous and Non Ferrous) and Finished Products like Valves, Flanges, Nuts, Bolts.)	Micro Hardness Vickers Test	ASTM E384