



#### CERTIFICATE OF ACCREDITATION

# TESTING AND EVALUATION LABORATORY, INSTITUTE FOR AUTOPARTS AND HAND TOOLS TECHNOLOGY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

A9, PHASE V, FOCAL POINT, LUDHIANA, PUNJAB, INDIA

in the field of

**TESTING** 

**Certificate Number:** 

TC-5628

**Issue Date:** 

12/07/2019

Valid Until:

11/07/2021\*

\*The validity is extended for one year up to 11.07.2022

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity: INSTITUTE FOR AUTOPARTS AND HAND TOOLS TECHNOLOGY

Signed for and on behalf of NABL



N. Venkateswaran Chief Executive Officer





#### SCOPE OF ACCREDITATION

**Laboratory Name:** 

TESTING AND EVALUATION LABORATORY, INSTITUTE FOR AUTOPARTS AND HAND TOOLS TECHNOLOGY, A9, PHASE V, FOCAL POINT, LUDHIANA, PUNJAB, 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
		Permanent Facility		
1	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Cu	ASTM E 1251
2	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Fe	ASTM E 1251
3	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Mg	ASTM E 1251
4	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Mn	ASTM E 1251
5	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Ni	ASTM E 1251
6	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Pb	ASTM E 1251
7	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Si	ASTM E 1251
8	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Sn	ASTM E 1251
9	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	ті) / Д / Д	ASTM E 1251
10	CHEMICAL- METALS & ALLOYS	Aluminium & Aluminium Alloy	Zn	ASTM E 1251
11	CHEMICAL- METALS & ALLOYS	Aluminum & its alloys	Cr	ASTM 1251
12	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Al	ASTM E 415
13	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	В	ASTM E 415
14	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	С	ASTM E 415
15	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Cr	ASTM E 415
16	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Cu	ASTM E 415
17	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Mn	ASTM E 415
18	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Мо	ASTM E 415





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19	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	N	ASTM E 415
20	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Nb	ASTM E 415
21	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Ni	ASTM E 415
22	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	P	ASTM E 415
23	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	S	ASTM E 415
24	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	Si	ASTM E 415
25	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	ті / В У	ASTM E 415
26	CHEMICAL- METALS & ALLOYS	Carbon steel and low alloy steel	V	ASTM E 415
27	CHEMICAL- METALS & ALLOYS	Cast Iron	С	ASTM E 1999
28	CHEMICAL- METALS & ALLOYS	Cast Iron	Cr	ASTM E 1999
29	CHEMICAL- METALS & ALLOYS	Cast Iron	Cu	ASTM E 1999
30	CHEMICAL- METALS & ALLOYS	Cast Iron	Mn	ASTM E 1999
31	CHEMICAL- METALS & ALLOYS	Cast Iron	Мо	ASTM E 1999
32	CHEMICAL- METALS & ALLOYS	Cast Iron	Ni	ASTM E 1999
33	CHEMICAL- METALS & ALLOYS	Cast Iron	Р	ASTM E 1999
34	CHEMICAL- METALS & ALLOYS	Cast Iron	S	ASTM E 1999
35	CHEMICAL- METALS & ALLOYS	Cast Iron	Si	ASTM E 1999
36	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Al	ASTM E 1473





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37	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	С	ASTM E 1473
38	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Cr	ASTM E 1473
39	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Cu	ASTM E 1473
40	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Fe	ASTM E 1473
41	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Mn	ASTM E 1473
42	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Мо	ASTM E 1473
43	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Ni	ASTM E 1473
44	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	P 9	ASTM E 1473
45	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	S	ASTM E 1473
46	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	Si	ASTM E 1473
47	CHEMICAL- METALS & ALLOYS	Cobalt & its alloys	W	ASTM E 1473
48	CHEMICAL- METALS & ALLOYS	Copper & Its alloy	Al	BS EN 15079
49	CHEMICAL- METALS & ALLOYS	Copper & its alloy	Cr	BS EN 15079
50	CHEMICAL- METALS & ALLOYS	Copper & Its alloy	Fe	BS EN 15079
51	CHEMICAL- METALS & ALLOYS	Copper & its alloy	Ni	BS EN 15079
52	CHEMICAL- METALS & ALLOYS	Copper & its alloy	P	BS EN 15079
53	CHEMICAL- METALS & ALLOYS	Copper & Its alloy	Pb	BS EN 15079
54	CHEMICAL- METALS & ALLOYS	Copper & its alloy	Sn	BS EN 15079





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55	CHEMICAL- METALS & ALLOYS	Copper Alloy	Zn	BS EN 15079
56	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Al	ASTM E 3047
57	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	В	ASTM E 3047
58	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	С	ASTM E 3047
59	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Со	ASTM E 3047
60	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Cr	ASTM E 3047
61	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Cu	ASTM E 3047
62	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Fe	ASTM E 3047
63	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Mn	ASTM E 3047
64	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Мо	ASTM E 3047
65	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	N	ASTM E 3047
66	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Nb	ASTM E 3047
67	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	Si	ASTM E 3047
68	CHEMICAL- METALS & ALLOYS	Nickel & its Alloy	ті	ASTM E 3047
69	CHEMICAL- METALS & ALLOYS	Stainless Steel	Al	ASTM E 1086
70	CHEMICAL- METALS & ALLOYS	Stainless Steel	С	ASTM E 1086
71	CHEMICAL- METALS & ALLOYS	Stainless Steel	Cr	ASTM E 1086
72	CHEMICAL- METALS & ALLOYS	Stainless steel	Cu	ASTM E 1086





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73	CHEMICAL- METALS & ALLOYS	Stainless Steel	Mn	ASTM E 1086
74	CHEMICAL- METALS & ALLOYS	Stainless Steel	Мо	ASTM E 1086
75	CHEMICAL- METALS & ALLOYS	Stainless Steel	Nb	ASTM E 1086
76	CHEMICAL- METALS & ALLOYS	Stainless Steel	Ni	ASTM E 1086
77	CHEMICAL- METALS & ALLOYS	Stainless Steel	P	ASTM E 1086
78	CHEMICAL- METALS & ALLOYS	Stainless Steel	S	ASTM E 1086
79	CHEMICAL- METALS & ALLOYS	Stainless Steel	Si	ASTM E 1086
80	CHEMICAL- METALS & ALLOYS	Stainless Steel	ті	ASTM E 1086
81	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Al	DC-179/00/01/01/2019
82	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	С	DC-179/00/01/01/2019
83	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Cr	DC-179/00/01/01/2019
84	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Cu	DC-179/00/01/01/2019
85	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Fe	DC-179/00/01/01/2019
86	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Mn	DC-179/00/01/01/2019
87	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Мо	DC-179/00/01/2019
88	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Nb	DC-179/00/01/01/2019
89	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Ni	DC-179/00/01/01/2019
90	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Si	DC-179/00/01/01/2019





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91	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Sn	DC-179/00/01/01/2019
92	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	V	DC-179/00/01/01/2019
93	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	W	DC-179/00/01/01/2019
94	CHEMICAL- METALS & ALLOYS	Titanium & titanium Alloy	Zr	DC-179/00/01/01/2019
95	CHEMICAL- METALS & ALLOYS	Tool Steel	С	JIS G 1253
96	CHEMICAL- METALS & ALLOYS	Tool Steel	Со	JIS G 1253
97	CHEMICAL- METALS & ALLOYS	Tool Steel	Cr	JIS G 1253
98	CHEMICAL- METALS & ALLOYS	Tool Steel	Mn	JIS G 1253
99	CHEMICAL- METALS & ALLOYS	Tool Steel	Мо	JIS G 1253
100	CHEMICAL- METALS & ALLOYS	Tool SteeL	Ni	JIS G 1253
101	CHEMICAL- METALS & ALLOYS	Tool Steel	P	JIS G 1253
102	CHEMICAL- METALS & ALLOYS	Tool Steel	Si	JIS G 1253
103	CHEMICAL- METALS & ALLOYS	Tool Steel	V	JIS G 1253
104	CHEMICAL- METALS & ALLOYS	Tool Steel	w	JIS G 1253
105	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Al	ASTM E 634
106	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Cd	ASTM E 634
107	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Cu	ASTM E 634
108	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Fe	ASTM E 634





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109	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Mg	ASTM E 634
110	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Mn	ASTM E 634
111	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Ni	ASTM E 634
112	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Pb	ASTM E 634
113	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Sn	ASTM E 634
114	CHEMICAL- METALS & ALLOYS	Zinc & its Zinc Alloy	Tì D	ASTM E 634
115	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Carbon steel for forgings	Blue fracture test	IS 10138
116	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Carbon steel for forgings	Freedom from defects	IS 1875
117	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Carbon steel forgings	Dimension tolerance ,mass per meter	IS 1875
118	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Cold rolled steel strips	Dimensions and tolerances	IS 5872
119	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Bend test	IS 3650
120	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Cutting Test	IS 2615
121	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Dimension	IS 3650
122	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Handle Load test	IS 2615
123	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Insulation test	IS 2615





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124	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Shock Test	IS 2615
125	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Torsion Test	IS 2615
126	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Combination Side Cutting Plier	Tube gripping test	IS 2615
127	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	% Elongation	IS 1608
128	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	% Reduction on area	IS 1608
129	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	% Reduction on area	ISO 6892-1
130	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Bend Test	IS 1599
131	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Brinell Hardness Test	IS 1500 ( Part - 1)
132	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Charpy Impact Test V Notch ( - 75 Degrees C upto ambient temperature)	IS 1757 ( Part-1 )
133	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Charpy Impact U Notch	IS 1499
134	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Izod Impact test	IS 1598
135	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Micro vicker hardness Test	IS 1501 ( Part -1)
136	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Micro Vicker Hardness Tester	IS 1501 ( Part -1)





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137	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Rockwell hardness Test (HRB)	IS 1586 ( Part - 1)
138	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Rockwell Hardness test (HRC)	IS 1586 ( Part - 1 )
139	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Ultimate Tensile Strength	IS 1608
140	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Vicker Hardness Test	IS 1501 ( Part -1)
141	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous Material , Alloy & Products (Steel , Stainless Steel ,Cast iron)	Yield Strength	IS 1608
142	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous material ,Alloys & products	Vicker hardness test	IS 1501 ( Part -1)
143	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous material Alloys & products (Steel ,Stainless Steel)	Ericsen Cupping test	IS 10175
144	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous material, alloy & products	Micro Vicker Hardness Test	IS 1501 ( Part -1)
145	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys products	Micro Vicker hardness test	IS 1501 ( Part -1)
146	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys products	Micro Vicker Hardness Test	IS 1501 ( Part -1)
147	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous material, alloys & products	Vicker hardness test	IS 1501 ( Part -1)
148	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous materials, alloys & products	Brinell Hardness test	IS 1500 (Part - 1)
149	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous materials, alloys & products	Vicker hardness test	IS 1501 ( Part -1)





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150	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ferrous materials,alloys & products	Vicker hardness test	IS 1501 ( Part -1)
151	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hand operated square drive socket wrench and driving square for hand socket wrenches with attachment	Dimension	IS 7214
152	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hand operated square drive socket wrench and driving square for hand socket wrenches with attachment	Torque Testing	IS 6131
153	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hand operated square drive socket wrench and driving square for hand socket wrenches with attachment	Workmanship & Finish	IS 6131
154	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hot Roll Steel plate	Dimension & tolerance	IS 6240
155	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hot Roll Steel Plate	Strain age embrittlement test	IS 6240
156	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hot rolled bars for production of bright bars	Adhesion test by knife	IS 2629
157	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hot rolled bars for the production of bright bars	Dimensions & tolerance	IS 7283
158	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hot rolled bars of bright bars	Freedom from defects	IS 7283
159	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Hot Rolled medium and high tensile Structural Steel	Dimension	IS 2062
160	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Multi slip joint Plier	Dimensions	IS 6118
161	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Multi slip joint Plier	Handle load test	IS 6118
162	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Multi slip joint Plier	Permanent set test	IS 6118





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163	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Open jaw wrenches	Dimensions	IS 2028
164	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Open jaw wrenches	Torque testing	IS 6131
165	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Open jaw wrenches	Workmanship & finish	IS 6131
166	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Reinforced bar	Dimension	IS 1786
167	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Reinforced Bar	Mass per meter	IS 1786
168	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Reinforced bar	Re Bend Test	IS 1786
169	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ring Spanner	Dimension	IS 2029
170	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ring Spanner	Torque testing	IS 6131
171	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Ring Spanner	Workmanship & Finish	IS 6131
172	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Single ended open jaw wrenches	Dimensions	IS 6149
173	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Single ended open jaw wrenches	Longitudinal Play	IS 6149
174	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Single ended open jaw wrenches	Torque testing	IS 6149
175	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Single ended open jaw wrenches	Transverse Play	IS 6149





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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
176	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Single ended open jaw wrenches	Workmanship & finish	IS 6149
177	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Steel for hardening & tempering	Freedom from defects	IS 5517
178	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Steel for hardening & tempering	Hardenability test	IS 3848
179	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Steel for hardening and tempering	Dimensions	IS 5517
180	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Structural Steel	Mass per meter	IS 2062
181	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Structural Steel	Y-groove Crack ability Test	IS 10842
182	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Sub assembly /ancillaries /accessories : threaded fasteners (Bolt ,Screw)	Proof Load Bolts	IS 1367 ( Part - 3 )
183	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Sub assembly /ancillaries /accessories : threaded fasteners (Bolt ,Screw)	Proof load of nut	IS 1367 ( Part - 6 )
184	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Sub assembly /ancillaries /accessories : threaded fasteners (Bolt ,Screw)	Wedge tensile load	IS 1367 ( Part - 3 )
185	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Depth of Decarburization by microscopic & hardness method	IS 6396
186	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Designation of graphite form ,Size & distribution by Comparision method Grey iron ,Cast iron & SGI iron	IS 7754
187	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Determination of case depth of steel by microscopic & Hardness method	IS 6416
188	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Estimation of Average Grain size by comparision method	ASTM E 112





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189	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Estimation of Average Grain size by comparision method	IS 4748
190	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Examination of micro structure (Grey iron,cast iron, melleable iron, SGI iron,low alloy steel ,Case hardening steel , Carbon tool steel)	ASM handbook Volume -9 Edition 2004
191	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Macroetch test	ASTM E 381
192	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Macroetch test	IS 11371
193	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Measurement of coating thickness by microscopic thickness by microscopic method	IS 3203
194	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Non metallic Inclusion rating by Method 'A'	IS 4163
195	MECHANICAL- METALLOGRAPHY TEST	Ferrous material ,alloys & products	Non metallic Inclusion rating by Method 'A'	ISO 4967
196	MECHANICAL- METALLOGRAPHY TEST	Ferrous materials, alloys & products	Non metallic Inclusion rating by Method 'A'	ASTM E 45
197	NON-DESTRUCTIVE- METALS & ALLOYS	Ferro magnetic material pipes & tubes	Magnetic Particle Testing	IS 6752
198	NON-DESTRUCTIVE- METALS & ALLOYS	Metal & alloys	Liquid penetrant Testing	EN 10228 :1999 , ASME section V Article 6 2019 , ASTM E 165/ 165M-2012 ,IS 3658 :2010
199	NON-DESTRUCTIVE- METALS & ALLOYS	Metals & Alloys	Magnetic particle Testing	EN 10228 -1 2016, ASTM E 1444:2016, ASME SEC V 2017 ART 7, ART 25 SE 709 IS 7743: 2011, IS 10138 : 2017, IS 3703 : 2004
200	NON-DESTRUCTIVE- METALS & ALLOYS	Metals & Alloys	Radiography Testing	ASME section V article 2 2017 ASME B 16.34 :2017 , ASTM E 390 Volume (1,2,3):2015 ,ASTM E 155: 2015 , ASTM E 446: 2015 , ASTM E 64 :2017 , IS 4853 :2013 , IS 1182 :2014





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201	NON-DESTRUCTIVE- METALS & ALLOYS	Metals & Alloys	Ultrasonic Testing	ASME SEC V ART 5 , ASME SEC V ART 23 SB 548, SE 609, SA 388, SA 213, SA 435, SA 577, SA 578, SE 273 ASTM E 114 IS 9565
202	NON-DESTRUCTIVE- METALS & ALLOYS	Metals & Alloys	Ultrasonic Thickness Gauging	ASME sec V Art 23 SE 797







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		Site Facility	J .	
1	NON-DESTRUCTIVE- METALS & ALLOYS	Ferro magnetic material pipes & tubes	Magnetic Particle Testing	IS 6752
2	NON-DESTRUCTIVE- METALS & ALLOYS	Metal & alloys	Liquid penetrant Testing	EN 10228 :1999 , ASME section V Article 6 2019 , ASTM E 165/ 165M-2012 ,IS 3658 :2010
3	NON-DESTRUCTIVE- METALS & ALLOYS	Metals & Alloys	Magnetic particle Testing	EN 10228 -1 2016, ASTM E 1444:2016, ASME SEC V 2017 ART 7, ART 25 SE 709 IS 7743: 2011, IS 10138 : 2017, IS 3703 : 2004
4	NON-DESTRUCTIVE- METALS & ALLOYS	Metals & Alloys	Ultrasonic Testing	ASME SEC V ART 5 , ASME SEC V ART 23 SB 548, SE 609, SA 388, SA 213, SA 435, SA 577, SA 578, SE 273 ASTM E 114 IS 9565
5	NON-DESTRUCTIVE- METALS & ALLOYS	Metals & Alloys	Ultrasonic Thickness Gauging	ASME sec V Art 23 SE 797