

Laboratory	Metallurgy & Materials Laboratory, Precision Manufacturing Facility, L&T Heavy Engineering Division, L&T Bye Pass Road, Malumichampatti, Coimbatore, Tamil Nadu		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	07.06.2016
Certificate Number	T-2253	Valid Until	06.06.2018
Last Amended on	25.07.2016	Page	1 of 2

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. MECHANICAL PROPERTIES OF METALS				
1	Ferrous And Non Ferrous Metals (Steel, Stainless Steel, Copper Alloys, Al Alloys, Titanium Alloys Including Weldments Like Weld Plates & Pipes)	UTS	ASTM A 370: 2015	Upto 900 kN
		0.2 % P.S	ASTM E8/E8M: 2015a	
		Y.S	ASME SEC IX: 2015	Upto 90 kN
		% Elongation	IS 1608: 2005	1 % to 50 %
		% Reduction Area	GOST 1497-84	10 % to 80 %
		Rockwell Hardness (HRA,HRB,HRC)	ASTM A 370: 2015 IS 1586: 2012 ASTM E18: 2015 GOST-9013-59	20 HRA to 90 HRA 40 HRBW to 100 HRBW 20 HRC to 70 HRC
		Brinell Hardness	ASTM E10: 2015a IS 1500: 2005 GOST-9012-59	50 HBW to 600 HBW 2.5 / 187.5 kg
Vickers Hardness	ASTM E 384: 2016 IS 1501: 2002 GOST-2999-75	40 HV to 1000 HV (Load: 5,10 kgf)		
Micro Vickers Hardness	ASTM E 384: 2016 IS 1501: 2002	50 HV to 1200 HV (Load= 0.1, 0.5, 1.0, 2.0 kgf)		
II. METALLOGRAPHY TEST				
1.	Metals & Alloys	Micro Structural Characterization	ASM Hand book Vol. 9 ASTM E3-11 ASTM E407: 2015e1 IS 7739 (Part 5): 1976	50 x, 100 x, 200 x, 500 x, 1000 x (Qualitative)

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2.	Steel & Stainless Steel	Decarburization Depth	ASTM E 1077-14 IS 6396: 2000	10 µm to 1 mm 50 x,100 x,200 x,500 x,1000 x (Qualitative)
3.	Case Hardened Steels And Nitrided Steels	Case Depth By Hardness Traverse Method	IS 6416: 1988 IS 13691: 1993 ASTM E 384: 2016	0.03 mm to 10 mm (10 gf to 2000 gf) 20 µm to 10 mm
4.	Case Hardened Steels, Nitrided Steels And Welded Plates And Pipes	Total Case Depth By Microscopy Method	IS 6416:1988 IS 13691: 1993 ASTM E 384: 2016	50 x, 100 x (Qualitative)

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