

Laboratory Metallurgy Lab, Sansera Engineering Pvt. Ltd., No. 261/C, Bommasandra Indl. Area, Bangalore, Karnataka

Accreditation Standard ISO/IEC 17025:2005

Discipline Mechanical Testing **Issue Date** 29.09.2015

Certificate Number T-2057 **Valid Until** 28.09.2017

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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 MATERIALS				
1.	Steels	Tensile Test Yield Stress Proof Stress % Reduction In Area % Elongation	IS 1608: 2005	2 kN to 100 kN (Diameter: 5 mm to 10 mm) Upto 80 % Upto 60 %
2.	Steels & Products	Rockwell Hardness	IS 1586: 2012	60 HRA to 85 HRA 25 HRC to 66 HRC
		Brinell Hardness	IS 1500: 2005	150 HBW to 400 HBW (10 mm ball / 3000 kgf)
		Macro Vickers Hardness	IS 1501: 2002	180 HV to 800 HV (Load: 10 kgf)
II. METALLOGRAPHY				
1.	Metallic Materials	Micro-Structural Analysis	IS 7739 (Part 5): 1976 ASM Hand Book Vol. 9: 1998	Qualitative (Magnification : 50X to 1000X)
2.	Steels	Inclusion Content	ASTM E45-13 Microscopic Method (Std. Chart Comparison)	Qualitative (ASTM grain size 0.5 to 3.0 at Magnification : 100X)
3.	Steels and Products	Grain Size / Austenite Grain Size	ASTM E-112-12 Microscopic Method – (Std. Chart Comparison Method)	Qualitative (ASTM grain size 0 to 10 at Magnification: 100X)
		Depth of Decarburization	IS 6396: 2000	0.01 mm to 1mm (Magnification: 100X)
4.	Case Hardened and Induction Hardened Steels	Effective Case Depth (ECD)	IS 6416: 1988 IS 1501: 2002	180 HV1 to 800 HV1 (Case Depth: 0.10 mm to 20 mm at Magnification: 400X)

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