

Laboratory	Labs & Testing Section, R & D Centre for Bicycle & Sewing Machine, B-38-39, Phase-V, Focal Point, Ludhiana, Punjab		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	19.11.2014
Certificate Number	T-1055	Valid Until	18.11.2016
Last Amended on	-	Page	1 of 1

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. METALLOGRAPHY TEST				
1.	Ferrous Materials	Microstructure analysis	ASM Hand Book Volume-9	100X to 1000X
		Estimation of grain size	IS 4748: 1988 ASTM- E 112-96	100X (±1 number)
		Inclusion rating	IS 4163: 2004 ASTM-E 45-05	100 X
		Depth of Decarburized layer	IS 6396: 2000 Cl.6.0	100X 0.1 mm to 25mm
		Case depth by microscopic method	IS 6416: 1988 Cl.8.0	100X 0.1 mm to 25mm
2.	Cast Irons Ferrous / Non- Ferrous	Designation of microstructure of Graphite	IS 7754: 1975	100X
		Coating thickness by microscopic method	IS 3203: 1982	100X 0.1 mm to 25 mm
II. MECHANICAL PROPERTIES OF MATERIALS				
1.	Ferrous & Non Ferrous Material Including Fasteners (Nuts & Bolts)	Tensile Strength	IS 1608: 2005 ASTM-A-370-97a	200 N/mm ² to 1500 N/mm ²
		Yield Stress		150 N/mm ² to 1200 N/mm ²
		% Elongation		2% to 60 %
		% Reduction in Area		2 % to 60 %
		Proof Load	IS 1367 (Part VI): 1994 ASTM-A-194-07a	10 kN to 850 kN

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