

Laboratory	Hi-Tech Gears Limited, A-588 & 589, Industrial Complex, Bhiwadi, Alwar, Rajasthan		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Testing	Issue Date	16.11.2016
Certificate Number	T-0736	Valid Until	15.11.2018
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. MECHANICAL PROPERTIES OF METALS				
1.	Carbon & Low Alloy Steel	Rockwell Hardness Testing	IS 1586-2012 / ASTM E 18: 2014 IS 1586-2012 / ASTM E 18: 2014 IS 1586-2012 / ASTM E 18: 2014	60 HRA to 90 HRA 60 HRB to 100 HRB 20 HRC to 70 HRC
		Rockwell Superficial Hardness Testing	IS 1586-2000 / ASTM E 18: 2014	70 HR-15N to 95 HR-15N
		Brinell Hardness Testing	IS 1500-2013	100 HBW to 400 HBW
		Vickers Hardness Testing (100 gm to 1000gm)	IS 1501-2013/ASTM E384: 2011	380 HV to 900 HV
II. METALLOGRAPHY TEST				
1.	Carbon & Low Alloy Steel	Average Grain Size	IS 4748-2009 / ASTM E 112: 2013 (by Microscopic method)	Grain Size No. 1 to 10 Qualitative
		Case Depth	IS 6416-1988 (RA-2012) (by Hardness Method)	0.1 mm to 5 mm
		Depth of Decarburized Layer	IS 6396-2000 (RA-2012) ASTM E 1077: 2014 (by Microscopic Method)	Upto 0.6 mm
		Inclusion Rating	IS 4163-2004 (RA-2012) ASTM E 45: 2013	Rating 0.5 to 3.0 Qualitative
		Macro-structure Examination	IS 11371-1985 (RA-2012) ASTM E 340: 2013 ASTM E 381 (RA 2012)	Qualitative
		Micro-structure Examination	IS 7739-1976 (RA-2012) ASTM E 407: 2007 ASTM E 3: 2011 ASM Handbook Vol. 9 (Metallography & Microstructure 2010)	100 X & 500 X Qualitative

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