

**Laboratory** Chemical and Metallurgical Services, T.S. 63 A, Sidco Industrial Estate, Ekkduthangal, Chennai, Tamil Nadu

**Accreditation Standard** ISO/IEC 17025: 2005

**Discipline** Mechanical Testing **Issue Date** 13.12.2014

**Certificate Number** T-0474 **Valid Until** 12.12.2016

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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
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#### I. MECHANICAL PROPERTIES OF MATERIAL

1.	Steel, Aluminium and copper	Tensile Strength Yield Strength % Elongation % Reduction Area (Manual & Digital)	IS 1608- 2005 ASME Sec IX -2013 ASTM A 370: 2012	Upto 400 kN
2.	Steel & Weldments	Bend Testing	IS 1599: 1985 (RA 2006) ASME Sec IX	Mandrel Dia (12 to 50) mm
3.	Steel	Impact Test Charpy U notch (2mm)	IS 1499:1977 (RA 2003)	Upto 300 Joules
		Impact Test Charpy V notch (2 mm)	IS 1757: 1988 (RA 2003)	Upto 300 Joules
		Impact Test – Izod	IS 1598:1977 (RA2003)	Upto 168 Joules
		Hardness – Brinell (3000 kg Load)	IS 1500:2013	150 to 500 HBW 10/3000
		Hardness – Rockwell C scale	IS 1586:2012	(20 to 65) HRC
		Hardness – Rockwell B scale	IS 1586:2012	(20 to 100) HRB
		Hardness –Vickers	IS 1501:2013	(600 to 750) HV 30 (300 to 450) HV 5

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## II. METALOGRAPHY TEST

1.	<b>Steel &amp; Alloy Steel</b>	Inclusion rating Non metallic inclusion	IS 4163: 2004 ASTM E 45: 2011	Upto 4
		Estimation of Average grain size (Comparison method)	IS 4748: 1988 (RA 2009) ASTM E112: 2010 ASTM E 1382: 1997	No.1 to No.8
		Determination of case depth by metallographic etching	IS 6416: 1988 (RA 2003)	(0.01 to 2) mm
		Depth of Decarburization	IS 6396: 2000 ASTM E1077:2001 (Microscopic Method)	(0.001 to 2) mm
2.	<b>Wrought Steel, Alloy Steel &amp; Weldment</b>	Macro Etch Test	IS 11371: 1985 (RA 2003)	Qualitative
3.	<b>Austenitic Stainless Steel</b>	Intergranular Corrosion Test	ASTM A 262: 02 Practice A & E Practice B & C	Qualitative

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**Anitha Jayanthan**  
Convenor

**N. Venkateswaran**  
Program Manager