

<b>Laboratory</b>	<b>Advance Metal Testing Laboratory, 715/746, 1<sup>st</sup> Floor, GIDC Estate, Makarpura, Vadodara, Gujarat</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>27.09.2013</b>
<b>Certificate Number</b>	<b>T-1272</b>	<b>Valid Until</b>	<b>26.09.2015</b>
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<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
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#### **I. METAL & METAL PRODUCTS**

<b>1.</b>	<b>METALLIC MATERIALS</b>	Tensile Test Tensile Strength Yield / Proof Stress % Elongation % Reduction Of Area	IS 1608:2005 ASTM A 370 : 2012 BS : EN : 10002-1:2001 JIS-Z-2201:1990	0.1 kN to 400 kN  1% to 80% 1% to 80%
	<b>WELDED PRODUCTS MATERIAL</b>		ASME-Sex IX : 2010 IS 2825:1998 (RA 2002) IS 3600(Part-3):2009 IS 3600(Part-4):1984 BS EN-ISO-15614-1:2004 BS EN-ISO-5178:2011 BS EN-ISO-4136:2012 JIS-Z-2201:1990	
	<b>ALUMINUM</b>		ASTM B 557:2010	
<b>2.</b>	<b>TUBE MATERIAL</b>	Bend Test	IS 2329:2005	0.1 kN to 400 kN & Mandrel Dia 4 mm to 75 mm
	<b>STEEL PRODUCTS</b>		IS 1599:2012  ASTM:A-370-2012	
	<b>WELDED METAL</b>		BS EN-ISO-5173:2010 ASTM E 190-1992 (RA 2008) ASTM E 290-09 ASME SEC-IX:2010	

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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
3.	<b>REINFORCED BARS</b>	Tensile (0.2% Proof Stress), % of Elongation	IS 1608:2005	0.1 kN to 400 kN (4 mm to 25 mm Dia)
		Bend & Re-Bend	IS 1786-2008	Mandrel Dia 8 mm to 200 mm
4.	<b>STEEL TUBE</b>	Flattening Test	IS 2328-2005 ASTM A 370-201	0.1 kN to 400 kN
		Drift Test	IS 2335-2005 ASTM:A-370:2012	
5.	<b>STEEL BOLT / NUTS / STUDS</b>	Proof Load. Wedge Load Full Size Breaking	SA 194:2007 IS 1367(Part-6)1994 (RA-2002) IS 1367(Part-3)1994 (RA-2002)	0.1 kN to 400 kN
6.	<b>FILLET WELD JOINT</b>	Macro Test Fracture Test	ASME Sec IX-2010 IS-7307:1974 (RA 2003) IS 3600 (Part-1):1985 (RA 2003) IS 3600 (Part-8) :1985 (RA 1997) IS 3600 9Part-9) : 1985 (RA 1997) EN-1320-1996 ASME Sec IX-2010	1 mm to 30 mm Thickness / Upto 40X Magnification

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7.	<b>METALLIC MATERIALS</b>	Rockwell Hardness Test	ASTM E-18b-2012 IS-1586-2000(RA 2006) IS 1586 (Part-1) 2012	HRB : 50 to 100 HRC : 20 to 68 HRC : 50 to 60
	<b>HARD METAL</b>	Rockwell	IS-5652(P-1)-1993(RA-1998)	HRA : 20 to 92
	<b>METALLIC MATERIAL</b>	Brinell Hardness	IS 1500:2005 ASTM E10:2012	HBW : 50 to 300
8.	<b>METALLIC MATERIAL</b>	Charpy 'V' Notch Impact Test Upto -80°C (Minus)	IS-1757:1988 (RA 2003) IS 3600 (Part-2):1985	2 J to 300 J (+30°C to -80°C)
9.	<b>WELDED TEST PIECE</b>	Nick Break Test	API-1104-2005 ASME SEC-IX:2010	-

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