

Laboratory Technology Development Centre-Consumables (TDC- Consumables),  
Ador Welding Limited, Akurdi Circle Chinchwad, Pune, Maharashtra

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6547 Page 1 of 3

Validity 15.11.2017 to 14.11.2019 Last Amended on --

Sl.	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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**CHEMICAL TESTING**

I.	METALS & ALLOYS			
1.	Carbon Steel	Carbon	IS 8811: 1998 (RA 2012) ASTM E415: 2014	0.002% to 1.0%
		Silicon		0.002% to 1.0%
		Manganese		0.1% to 2.0%
		Sulphur		0.001% to 0.10%
		Phosphorous		0.001% to 0.05%
		Chromium		0.01% to 0.20%
		Nickel		0.002% to 0.10%
		Cobalt		0.002% to 0.10%
2.	Alloy Steel	Niobium		0.003% to 0.06%
		Carbon	IS 8811: 1998 (RA 2012) ASTM E415: 2014	0.002% to 1.0%
		Silicon		0.002% to 2.0%
		Manganese		0.001% to 2.50%
		Sulphur		0.001% to 0.10%
		Phosphorous		0.001% to 0.05%
		Chromium		0.002% to 3.0%
		Nickel		0.002% to 5.50%
		Molybdenum		0.02% to 2.0%
		Copper		0.001% to 1.00%
		Vanadium		0.001% to 0.50%
		Titanium		0.001% to 0.050%
3.	Stainless Steel	Niobium		
		Aluminium		0.001% to 0.50%
		Cobalt		0.0015% to 0.10%
		Carbon	ASTM E 1086: 2014 IS 9879: 1998 (RA 2015)	0.002% to 0.25%
		Silicon		0.02% to 1.0%
		Manganese		0.01% to 2.0%
Sulphur	0.001% to 0.065%			
Phosphorous	0.001% to 0.05%			
Chromium	8.0% to 26.0%			

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		Nickel		0.10% to 21.0%
		Molybdenum		0.01% to 3.0%
		Copper		0.01% to 0.05%

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**MECHANICAL TESTING**

I.	MECHANICAL PROPERTIES OF METALS			
1.	Ferrous and Non Ferrous Materials and Welds	Tensile strength	ASTM E8/E8M-16a	1 kN to 400 kN
		Yield strength	IS/1608:2005	1 kN to 400 kN
		% Reduction in area	(RA 2017)	1% to 80%
		% Elongation		1% to 60%
		Charpy (V Notch) Impact [Room temperature to (-) 196°C]	ASTM E23-16	2 J to 324 J
		Rockwell Hardness	ASTM E18-16 IS 1586(Part 1): 2012	20 HRC to 70 HRC 45 HRBW to 100 HRBW
		Brinell Hardness	ASTM E10-16 IS 1500(Part 1): 2013	100 HRBW to 600 HBW (10mm/3000 kg)
		Vickers Hardness	IS 1501 (Part 1): 2013 ASTM E384: 2016	100 HV to 800 HV (HV5, HV30)