Laboratory	**Welding & Testing Lab, A Division of 'Institute of Welding & Testing Technology', 303, Laxmi Industrial Estate, Penkar Pada, Mira Road (E), Mira Bhyander (M Corp.), Thane, Maharashtra**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Certificate Number	**TC-6544**	**Page 1 of 2**	
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

MECHANICAL TESTING

I.	**MECHANICAL PROPERTIES OF METALS**			
1.	**Ferrous & Non Ferrous Metals, Welding Rods, Electrodes & Filler Metals**	Ultimate Tensile Strength	IS 1608:2005 (RA 2011) ISO 3834-1: 1994 AWS D 1.1:2015 AWS D 1.2: 2003 AWS D 1.6: 2007 ASME Section IX 2017 ASME Sec II Pt.-C 2017 API 1104: 21st Edition 2015 BS EN 15609-1: 2004 BS EN ISO 5173: 2011 BS EN ISO 9606-1: 2013 BS EN ISO 9606-2: 2004 EN ISO 3834-2: 2005 EN ISO 15085-2: 2007 ISO 15607:2003 (RA 2014) DIN EN ISO 15614-12:2014 ASTM A370: 2017 BS EN 13134: 2000 BS EN ISO 13585: 2012	4 kN to 400 kN
		Yield Stress		4 kN to 400 kN
		% Elongation		5 % to 60 %
		% Reduction in area		5 % to 60 %
		Transverse Face Bend		Qualitative (Mandrel Diameter: 16 mm, 20 mm, 30 mm, 40 mm, 50 mm)
		Transverse Root Bend		
		Transverse Side Bend		
		Longitudinal Face Bend		
		Longitudinal Root Bend		
		Visual Examination	BS EN ISO 17637: 2011	Qualitative
		Weld Facture	BS EN ISO 9017: 2013	Qualitative
		Macro Examination - Hot Cracks - Cold Cracks - Lamellar tearing - Cavities - Inclusions - Lack of Fusion - Lack of Penetration	EN ISO 17639: 2003	Qualitative

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Convenor

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		- Geometrical Shape - Runs and Layers - Joint type - Weld Profile		
		Rockwell Hardness	IS 1586 (Part 1): 2012 ISO 6508-1: 2016	20 HRC to 70 HRC 50 HRB to 100 HRB
2.	**High Strength Deformed Steel Bars (TOR Steel)**	Tensile	IS 1608:2005 (RA 2011)	100 N/mm^2 to 900 N/mm^2
		Yield Stress	IS 1608:2005 (RA 2011)	100 N/mm^2 to 800 N/mm^2
		% Elongation	IS 1608:2005 (RA 2011)	5 % to 35 %
		Bend	IS 1599:2012 RA:2015	Qualitative (Mandrel Diameter: 16 mm, 20 mm, 30 mm, 40 mm, 50 mm)
		Re bend	IS 1786: 2008 RA:2013	Qualitative (Mandrel Diameter: 16 mm, 20 mm, 30 mm, 40 mm, 50 mm)
		Weight per Meter	IS 1786: 2008 RA:2013	1 kg/m to 10 kg/m
3.	**Steel plate Sheet Round Bar**	Tensile	IS 1608:2005 (RA 2011)	100 N/mm^2 to 900 N/mm^2
		Yield Stress	IS 1608:2005 (RA 2011)	100 N/mm^2 to 800 N/mm^2
		% Elongation	IS 1608:2005 (RA 2011)	5 % to 35 %
		Bend	IS 1599:2012 (RA:2015)	Qualitative (Mandrel Diameter: 16 mm, 20 mm, 30 mm, 40 mm, 50 mm, 58 mm, 66 mm)

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