

<b>Laboratory</b>	<b>Testing Laboratory, Welspun Corp Ltd., Dahej Facility, Vadadla, Dahej Road, Tal. Vagra, Bharuch, Gujarat</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>17.10.2016</b>
<b>Certificate Number</b>	<b>T-2364</b>	<b>Valid Until</b>	<b>16.10.2018</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>
<b>I.</b>	<b>MECHANICAL PROPERTIES OF METALS</b>			
<b>1.</b>	<b>Ferrous Metals</b>	<b>Tensile Test</b> Tensile Strength Yield/ Proof stress (0.1% to 0.5%) Elongation %	ASTM A 370: 2016a ASTM E8/E8M: 2015a ISO 6892-1: 2009 IS 1608: 2005 (Amd. 1)	25 kN to 1200 kN.  2 % Upto 70 %
		<b>Hardness Test</b> Vickers Hardness Test	ASTM E384: 2016	100 HV 5 to 350 HV 5, 100 HV 10 to 350 HV 10
		<b>Bend Test</b> Guided Bend Test (Welds & Materials)	ASTM A370: 2016a, ASTM E 190: 2014 (ASTM E290: 2014, ISO 7438: 2016)	Thickness: 6 mm to 65 mm (mandrel diameter 20 mm to 300 mm)
		<b>Impact Test</b> Charpy Impact Test “V” notch Up to -80°C	ASTM A 370: 2016a, ASTM E 23: 2016B, BS EN ISO 148-1: 2010/ ISO 148-1: 2009	5 J to 543 J
		Drop weight Tear test % Shear area	API 5L RP5L3: 2014	10 % to 100 %
		Crack Tip Opening Displacement Test	ASTM E 1290: 2008 BS 7448 (Part 1): 1991 BS 7448 (Part 3): 2005 BS EN ISO 15653: 2010 ISO 12135-02 Cor.1 : 2008	1 kN to 200 kN
		<b>Corrosion Test</b> Hydrogen Induced Cracking Test(HIC)	NACE TM 0284: 2011	Qualitative

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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
	<b>Ferrous Metals</b>	Sulphite Stress Cracking Test by : Four Point Bend Test Uni Axial Tensile Test	ASTM G39-99 (RA 2016) NACE TM 0177: 2016	Qualitative
<b>II. PLASTICS AND POLYMERS</b>				
1.	<b>Polyethylene, Polypropylene Sheet Sample</b>	Indentation	DIN 30670: 2012 & DIN30678: 2013	0.01 mm to 1 mm
		% Elongation	DIN 30670: 2012 & DIN30678: 2013	300 % to 700 %
2.	<b>Liquid Epoxy Coating</b>	Bend	ISO 6860: 2006 Read with ISO 15741: 2001/ API RP5L2: 2015	Qualitative
		Adhesion	ISO 15741: 2001/ API RP5L2: 2015	Qualitative
3.	<b>Fusion Bonded Epoxy Coating</b>	Impact test	CAN/CSA.Z.245.20-SERIES-14	Qualitative
<b>III. METALLOGRAPHY TEST</b>				
1.	<b>Ferrous Metals</b>	<b>Macro Examination</b> Macro Etch Test (Welded zone)	ASTM E 340-15	Qualitative (7.5X, 10X, 20X)

-X-X-X-X-X-X-X-X-X-X-X-X-X-

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