

Laboratory **Godrej PED Testing Laboratory, Godrej Process Equipment, Plant 15, Godrej & Boyce Mfg. Co. Ltd., Vikhroli (East), Mumbai, Maharashtra**

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

Certificate Number **TC-7830**

Page 1 of 2

Validity **11.09.2018 to 10.09.2020**

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.	<b>MECHANICAL PROPERTIES OF METALS</b>			
1.	<b>Ferrous &amp; Non-Ferrous Material &amp; Alloys, Weldments (Ferrous &amp; Non-Ferrous Material)</b>	Tensile Strength	ASME SA-370-2017	100 MPa to 1700 MPa
		Yield Strength	ASTM A370-17	100 MPa to 1500 MPa
		0.2 % Proof stress	ASME E8/ E8 M-16a,	100 MPa to 1000 MPa
		% Elongation	ASME Sec. IX-2017	2 % to 80 %
		% Reduction in Area		2 % to 80 %
		Bend Test	ASME SA-370-2017	Qualitative
	Side Bend Test	ASTM A370-17	Mandrel diameter (mm):	
	Root & Face Bend Test	ASME Sec.IX-2017	10, 20, 30, 32, 36, 40, 48, 75 & 90	
		Brinell Hardness Test (10/ 3000)	ASME SA-370-2017 ASTM A370-05 ASTM E10-2017	100 HBW to 650 HBW 10/ 3000
		Vickers Hardness Test	ASTM E: 92-2017 ASME SA 370-2017 ASTM A370-17	100 to 225 HV5, 100 to 600 HV10 100 to 225 HV30
		Charpy V-Notch Impact Test	ASME SA-370-2017 ASTM A370-17 ASTM E23-16b	2 Joule to 240 Joule At 20°C till minus 196°C
2.	<b>Tube to Tube Sheet Weld, Mock Up</b>	Pull out & Minimum Leak Path Test	ASME Sec. VIII Div. I-2017 ASME Sec IX-2017	Qualitative
3.	<b>Through Thickness Tension Test</b>	Tensile Strength % Reduction in Area	ASME SA-770/ 770M	100 MPa to 1700 MPa 2 % to 80 %
4.	<b>Tubes</b>	Flanging Test	ASME SA-450/450M-2017 ASME SA-1016/1016M-2017	Qualitative (Up to 1" ID)
		Drift Expansion/ Flaring Test	ASME SA-450/450M-2017 ASME SA-1016/1016	Qualitative (By tool having 60°

**Deepak Kumar Sharma**  
Convenor

**Anuja Anand**  
Program Manager

**Laboratory** Godrej PED Testing Laboratory, Godrej Process Equipment, Plant 15,  
Godrej & Boyce Mfg. Co. Ltd., Vikhroli (East), Mumbai, Maharashtra

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

**Certificate Number** TC-7830

Page 2 of 2

**Validity** 11.09.2018 to 10.09.2020

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
			M-2017 ASME SA-530/530A-2017	included angle)
5.	<b>Tubes/Pipes</b>	Flattening Test	ASME SA450/450M-2017 ASME SA1016/1016M-2017 ASME SA-999/999M-2017	Qualitative (Up to NPS 12, SCH 160, NPS12 - 24, SCH 80)