Laboratory	**S.N. Metallurgical Services, Plot No. B-70, MIDC Area, Waluj, Aurangabad, Maharashtra**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**TC-5127** ***(in lieu of T-1231,T-1232)*** **Page 1 of 2**
Validity	**01.04.2017 to 31.03.2019** **Last Amended on --**

CHEMICAL TESTING

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	**METAL & ALLOYS**			
1.	**Carbon Steel & Alloy Steel**	C	ASTM–E-415: 2015 (Optical Emission Spectrometric Analysis)	0.02 % to 1.10 %
		Mn		0.10 % to 1.50 %
		Cr		0.01 % to 1.50 %
		Ni		0.01 % to 2.0 %
		Mo		0.01 % to 0.40 %
		S		0.01 % to 0.06 %
		P		0.005 % to 0.10 %
		Si		0.01 % to 0.50 %
		V		0.01 % to 0.40 %
2.	**Stainless Steel**	C	ASTM-E-1086: 2014 (Optical Emission Spectrometric Analysis)	0.02 % to 0.100 %
		Mn		0.50 % to 2.00 %
		Cr		10.0 % to 22.00 %
		Ni		7.0 % to 18.0 %
		Mo		0.20 % to 0.50 %
		S		0.02 % to 0.05 %
		P		0.02 % to 0.05 %
		Si		0.50 % to 1.50 %
3.	**Aluminium & its Alloys**	Si	ASTM–E-1251: 2011 (Optical Emission Spectrometric Analysis)	0.05 % to 12.50 %
		Mn		0.01 % to 1.00 %
		Fe		0.10 % to 1.80 %
		Cu		0.03 % to 3.50 %
		Cr		0.01 % to 0.50 %
		Ni		0.20 % to 1.50 %
		Zn		0.02 % to 7.50 %
		Pb		0.01 % to 0.30 %
		Sn		0.01 % to 0.20 %
		Mg		0.03 % to 5.50 %

Vikas Kumar Jaiswal
Convenor

N. Venkateswaran
Program Director

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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
		MECHANICAL TESTING		
I.	**MECHANICAL PROPERTIES OF METALS**			
1.	**Ferrous Material Alloys & Products**	**Tensile Testing**		
		Ultimate Tensile Strength	IS: 1608: 2005 (RA 2011)	0.1kN to 390 kN / 0.1 kN
	Aluminum Material Alloys & Products	Yield Stress	IS: 1608: 2005 (RA 2011)	0.1kN to 390 kN / 0.1 kN
		0.2% Proof Stress	IS: 1608: 2005 (RA 2011)	0.1kN to 390 kN / 0.1 kN
		% Elongation	IS: 1608: 2005 (RA 2011)	0% to 80% / 0.01%
	Copper Material Alloys & Products	% Area Reduction	IS: 1608: 2005 (RA 2011)	0% to 80% / 0.01%
		Rockwell Hardness		
		HRA	IS: 1586-1: 2012	40 HRA to 88 HRA/1 HRA
		HRBW	IS: 1586-1: 2012	30 HRB to 100 HRB/1 HRB
		HRC	IS: 1586-1: 2012	20 HRC to 70 HRC/1HRC
		Brinell Hardness HBW at 2.5 mm ball dia/ 187.5 kg load	IS:1500-1: 2013	125 HBW to 350 HBW / 2 HBW(2.5/187.5)
		Vickers Hardness Hv1	IS: 1501-1: 2013	4.9 Hv1 to 1000 Hv1/1 Hv1
2.	**Case Hardened Ferrous Alloys Products**	Case Depth (By Hardness Traverse)	IS: 6416: 1988 (RA 2012) (Para 1-a)	0.01 mm to 5.0 mm/ 0.1 mm

Vikas Kumar Jaiswal
Convenor

N. Venkateswaran
Program Director