

Laboratory **S.V. India Calibration Services, Shop No. 8, Shri Ram Market,
Rudrapur, Uttarakhand**

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

Certificate Number **TC-7993**

Page 1 of 5

Validity **10.10.2018 to 09.10.2020**

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
-----	----------------------------	-------------------------	---	--

CHEMICAL TESTING

I.	METALS & ALLOYS			
1.	Low Carbon Steel	Carbon (C)	ASTM E 415:2017	0.005% to 2.0 %
		Sulphur(S)	ASTM E 415:2017	0.05 % to 0.30 %
		Phosphorus(P)	ASTM E 415:2017	0.05 % to 0.10 %
		Manganese(Mn)	ASTM E 415:2017	0.03% to 2.0 %
		Silicon(Si)	ASTM E 415:2017	0.03% to 2.0 %
		Chromium(Cr)	ASTM E 415:2017	0.01 % to 2.0 %
		Nickel (Ni)	ASTM E 415:2017	0.01 % to 2.0 %
		Molybdenum(Mo)	ASTM E 415:2017	0.01 % to 2.0 %
		Titanium (Ti)	ASTM E 415:2017	0.02 % to 0.30 %
		Tungsten(W)	ASTM E 415:2017	0.02% to 2.0 %
		Vanadium(V)	ASTM E 415:2017	0.02 % to 2.0 %
		Copper(Cu)	ASTM E 415:2017	0.01 % to 1.2 %
		Aluminium (Al)	ASTM E 415:2017	0.01 % to 1.0 %
		Cobalt (Co)	ASTM E 415:2017	0.02 % to 8.0 %
		Boron (B)	ASTM E 415:2017	0.01 % to 0.015 %
Lead (Pb)	ASTM E 415:2017	0.010 % to 0.50 %		
2.	Stainless Steel	Carbon (C)	ASTM E 1086:2014	0.01 % to 0.50 %
		Sulphur(S)	ASTM E 1086:2014	0.01 % to 0.30 %
		Phosphorus(P)	ASTM E 1086:2014	0.01 % to 0.05 %
		Manganese(Mn)	ASTM E 1086:2014	0.20 % to 2.00 %
		Silicon(Si)	ASTM E 1086:2014	0.20 % to 1.50 %
		Chromium(Cr)	ASTM E 1086:2014	10.0% to 30.0 %
		Nickel (Ni)	ASTM E 1086:2014	0.30 % to 25.0 %
		Molybdenum(Mo)	ASTM E 1086:2014	0.05 % to 3.00 %
		Titanium (Ti)	ASTM E 1086:2014	0.02 % to 0.30 %
		Tungsten(W)	ASTM E 1086:2014	0.02 % to 0.4 %
		Copper(Cu)	ASTM E 1086:2014	0.01 % to 1.0 %
		Niobium (Ni)	ASTM E 1086:2014	0.005 % to 1.10 %
Cobalt (Co)	ASTM E 1086:2014	0.03 % to 0.50 %		

Vivek Vardhan
Convenor

Alok Jain
Program Manager

Laboratory

S.V. India Calibration Services, Shop No. 8, Shri Ram Market,
Rudrapur, Uttarakhand

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number

TC-7993

Page 2 of 5

Validity

10.10.2018 to 09.10.2020

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
3.	Aluminium and Aluminium Alloy	Silicon(Si)	ASTM E 1251:2011	0.010 % to 12.0%
		Copper(Cu)	ASTM E 1251:2011	0.01 % to 8.0 %
		Iron (Fe)	ASTM E 1251:2011	0.05 % to 2.0 %
		Zinc (Zn)	ASTM E 1251:2011	0.05 % to 4.0 %
		Magnesium (Mg)	ASTM E 1251:2011	0.10 % to 4.0 %
		Nickel (Ni)	ASTM E 1251:2011	0.03 % to 0.25 %
		Manganese(Mn)	ASTM E 1251:2011	0.01 % to 0.50 %
		Chromium(Cr)	ASTM E 1251:2011	0.05 % to 0.60 %
		Titanium (Ti)	ASTM E 1251:2011	0.02 % to 0.60 %
		Tin (Sn)	ASTM E 1251:2011	0.05% to 0.60 %
		Lead (Pb)	ASTM E 1251:2011	0.05 % to 0.60 %
4.	Copper and Copper Alloys	Tin (Sn)	BS EN 15079:2015	0.02 % to 10.5 %
		Lead (Pb)	BS EN 15079:2015	0.02 % to 13.50 %
		Zinc (Zn)	BS EN 15079:2015	0.03 % to 42.0 %
		Nickel (Ni)	BS EN 15079:2015	0.02 % to 7.0 %
		Aluminium (Al)	BS EN 15079:2015	0.03 % to 10.0 %
		Iron (Fe)	BS EN 15079:2015	0.08 % to 5.0 %
		Silicon(Si)	BS EN 15079:2015	0.06 % to 5.0 %
		Manganese(Mn)	BS EN 15079:2015	0.05 % to 4.0 %
		Cobalt (Co)	BS EN 15079:2015	0.02 % to 3.0 %
		Beryllium (Be)	BS EN 15079:2015	0.005 % to 3.0 %
		Phosphorus(P)	BS EN 15079:2015	0.03 % to 1.0 %
Sulphur(S)	BS EN 15079:2015	0.02 % to 0.30 %		
	Chromium(Cr)	BS EN 15079:2015	0.06 % to 0.8 %	
II.	ATMOSPHERIC POLLUTION			
1.	Ambient Air Quality	Suspended Particulate Matter (SPM)	IS 5182 (Part 4): 1999 (RA 2010)	10 µg/m ³ to 2000 µg/m ³
		Particulate Matter (size less than 2.5 µm)	40 CFR Appendix J (USEPA)	10 µg/m ³ to 2000 µg/m ³
		Particulate Matter (size less than 10 µm)(RSPM)	IS 5182 (Part 23): 2006 (RA 2012)	10 µg/m ³ to 2000 µg/m ³

Vivek Vardhan
Convenor

Alok Jain
Program Manager

Laboratory S.V. India Calibration Services, Shop No. 8, Shri Ram Market,
Rudrapur, Uttarakhand

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7993

Page 3 of 5

Validity 10.10.2018 to 09.10.2020

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
		Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001 (RA 2012)	6 µg/m ³ to 1050 µg/m ³
		Oxides of Nitrogen (NO ₂)	IS 5182 (Part 6): 2006 (RA 2012)	6 µg/m ³ to 750 µg/m ³
		Carbon Monoxide(CO)	By CO Analyzer (SOP:SVI/QSP/5.4/05-WI-08 Issue No.1, Issue Date-13.02.2018)	1 µg/m ³ to 2000 µg/m ³
		Ammonia (NH ₃)	IS 3025 (Part 34): 2003	20 to 500 µg/m ³
		Ozone (O ₃)	IS 5182 (Part 9): 1974 (RA 2014)	20 µg/m ³ to 19000 µg/m ³
2.	Indoor Air	Suspended Particulate Matter (SPM)	IS 5182 (Part 4): 1999 (RA 2010)	10 µg/m ³ to 2000 µg/m ³
		Nitrogen Oxide(NO ₂)	IS 5182 (Part 6): 2006 (RA 2012)	6 µg/m ³ to 740 µg/m ³
		Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001 (RA 2012)	6 µg/m ³ to 1050 µg/m ³
3.	Noise Levels	Noise Levels (Ambient)	IS 9989:1981 (RA 2001)	30 dB (A) to 130 dB (A)
		Noise Levels Source (DG Sets only)	IS 9989:1981 (RA 2001)	30 dB (A) to 130 dB (A)
4.	Lux Intensity	Lux Intensity	IS 3646 (Part 1): 1992 (RA 2003)	10 Lux to 1000 Lux
5.	Stack Emission	Particulate matter	IS 11255 (Part 1): 1985 (RA 2009)	5 to 400 mg/ Nm ³
		Sulphur dioxide	IS 11255 (Part 2): 1985 (RA 2009)	10 to 2000 mg/ Nm ³
		Carbon monoxide	IS 13270:1992 (RA 2003)	0.2 % by vol. to 10 % by vol.
		Carbon dioxide	IS 13270:1992 (RA 2003)	1 % by vol. to 20 % by vol.
		Oxygen	IS 13270:1992 (RA 2003)	1 % by vol. to 20 % by vol.
		NO _x	IS 11255 (Part7): 2005 (RA 2012)	2.0 mg/nm ³ to 500 mg/nm ³

Laboratory

S.V. India Calibration Services, Shop No. 8, Shri Ram Market,
Rudrapur, Uttarakhand

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number

TC-7993

Page 4 of 5

Validity

10.10.2018 to 09.10.2020

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
III.	ENVIRONMENT AND POLLUTION			
1.	Waste Water	Specific Conductance	IS 3025 (Part 14): 1984 (RA 2013)	1 µmhos/cm to 40000 µmhos/cm
		Total Suspended Solid	IS 3025 (Part 17): 1984 (RA 2012)	10 mg/l to 5000 mg/l
		Total Dissolved Solid	IS 3025 (Part 16): 1984 (RA 2012)	100 mg/l to 10000 mg/l
		Total Solid	IS 3025 (Part 15): 1984 (RA 2012)	10 mg/l to 20000 mg/l
		pH	IS 3025 (Part 11): 1983 (RA 2012)	2 mg/l to 14 mg/l
2.	Surface Water/ Ground Water	Specific Conductance	IS 3025 (Part 14): 1984 (RA 2013)	1 µmhos/cm to 30000 µmhos/cm
		Total Suspended Solid	IS 3025 (Part 17): 1984 (RA 2012)	5 mg/l to 10000 mg/l
		Total Dissolved Solid	IS 3025 (Part 16): 1984 (RA 2012)	5 mg/l to 18000 mg/l
		Total Solid	IS 3025 (Part 15): 1984 (RA 2012)	5 mg/l to 10000 mg/l
		Turbidity	IS 3025 (Part 10): 1984 (RA 2012)	1 NTU to 100 NTU
		pH	IS 3025 (Part 11): 1983 (RA 2012)	2 to 14

Vivek Vardhan
Convenor

Alok Jain
Program Manager

Laboratory S.V. India Calibration Services, Shop No. 8, Shri Ram Market,
Rudrapur, Uttarakhand

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7993

Page 5 of 5

Validity 10.10.2018 to 09.10.2020

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.	MECHANICAL PROPERTIES OF METALS			
1.	Metallic Material Ferrous & Non - Ferrous	Tensile Strength	IS 1608:2005 (RA 2017)	20 kN to 600 kN L.C-0.01 kN
		Yield Stress	IS 1608:2005 (RA 2017)	20 kN to 600 kN L.C-0.01 kN
		Elongation (%)	IS 1608:2005 (RA 2017)	1 % to 70 %
		Reduction Area (%)	IS 1608:2005 (RA 2017)	1 % to 90 %
2.	Rockwell Hardness	Rockwell Hardness (B Scale)	IS 1586:2012 ASTM E18-2017	20 HRB to 100 HRB
		Rockwell Hardness (C Scale)	IS 1586:2012 ASTM E18-2017	20 HRC to 70 HRC