

Laboratory Metlab Engineering Services Private Limited, No. 100/3, 1st Floor,
Block-T, 3rd Avenue, Annanagar West, Chennai, Tamil Nadu

Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing **Issue Date** 21.07.2015

Certificate Number T-3526 **Valid Until** 20.07.2017

Last Amended on - **Page** 1 of 3

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	METALS AND ALLOYS			
1.	Ferrous Metals and Alloys (Carbon & Low Alloy Steel)	C	IS 8811: 1998 / ASTM E 415: 2014	0.030 % to 1.50 %
		Si		0.030 % to 1.70 %
		Mn		0.23 % to 2.20 %
		P		0.007 % to 0.12 %
		S		0.005 % to 0.090 %
		Cr		0.023 to 1.40 %
		Mo		0.010 % to 1.60 %
		Ni		0.10 % to 3.10 %
		Al		0.015 % to 1.10 %
		Co		0.008 % to 0.40 %
		Sn		0.008 % to 0.18 %
		Cu		0.21 % to 0.48 %
		Nb		0.62 % to 0.76 %
		Ti		0.065 % to 0.44 %
		V		0.003 % to 0.13 %
	W	0.014 % to 0.28 %		

Laboratory Metlab Engineering Services Private Limited, No. 100/3, 1st Floor,
Block-T, 3rd Avenue, Annanagar West, Chennai, Tamil Nadu

Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing **Issue Date** 21.07.2015

Certificate Number T-3526 **Valid Until** 20.07.2017

Last Amended on - **Page** 2 of 3

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Ferrous Metals & Alloys (Stainless Steel)	C	IS 9879: 1998 / ASTM E 1086: 2014	0.019 % to 0.45 %
		Si		0.30 % to 0.90 %
		Mn		0.47 % to 4.20 %
		P		0.014 % to 0.030 %
		S		0.001 % to 0.030 %
		Cr		12.00 % to 18.00 %
		Mo		0.10 % to 3.60 %
		Ni		0.10 % to 22.00 %
		Cu		0.10 % to 3.60 %
		Ti		0.003 % to 0.10 %
		V		0.040 % to 0.15 %
3.	Non - Ferrous Metals & Alloys (Low alloy Aluminium)	Cu	IS 11035:1984 / ASTM E 1251: 2011	0.020 % to 1.10 %
		Mg		0.005 % to 1.00 %
		Si		0.040 % to 0.50 %
		Fe		0.050 % to 0.89 %
		Mn		0.007 % to 0.16 %
		Ni		0.005 % to 0.29 %
		Zn		0.026 % to 0.29 %

Laboratory Metlab Engineering Services Private Limited, No. 100/3, 1st Floor,
Block-T, 3rd Avenue, Annanagar West, Chennai, Tamil Nadu

Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing **Issue Date** 21.07.2015

Certificate Number T-3526 **Valid Until** 20.07.2017

Last Amended on - **Page** 3 of 3

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Non - Ferrous Metals & Alloys (Low alloy Aluminium)	Sn		0.010 % to 0.35 %
		Ti		0.005 % to 0.12 %
		Cr		0.002 % to 0.21 %
		Be		0.002 % to 0.030 %
		Pb		0.001 % to 0.39 %
4.	Non - Ferrous Metals & Alloys (High alloy Aluminium)	Cu	IS 11035: 1984 / ASTM E 1251: 2011	0.020 % to 1.10 %
		Mg		10.00 % to 15.00 %
		Si		23.00 % to 28.00 %
		Fe		0.050 % to 0.89 %
		Mn		0.007 % to 0.16 %
		Ni		0.005 % to 0.29 %
		Zn		0.026 % to 0.29 %
		Sn		0.010 % to 0.35 %
		Ti		0.005 % to 0.12 %
		Cr		0.002 % to 0.21 %
	Be		0.002 % to 0.030 %	
	Pb		0.001 % to 0.39 %	

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