

Laboratory Advance Metal Testing Laboratory, 715/746, 1st Floor, GIDC Estate, Makarpura, Vadodara, Gujarat

Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing **Issue Date** 27.09.2013

Certificate Number T-1290 **Valid Until** 26.09.2015

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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
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I. METALS & ALLOYS

1.	LOW ALLOY STEEL	C	AMTL/WI/01 (Issue Date: 15.03.2011) ASTM E 415-08 & IS 8811-1998 (By Optical Emission Spectrometer)	0.08% to 1.20%
		Si		0.01% to 1.58%
		Mn		0.28% to 1.21%
		P		0.01% to 0.07%
		S		0.01% to 0.30%
		Cr		0.045% to 2.56%
		Mo		0.01% to 1.02%
		Ni		0.03% to 3.96%
		Al		0.01% to 0.017%
		Cu		0.08% to 0.42%
		N		0.01% to 0.016%
		V		0.01% to 0.201%
		Ti		0.001% to 0.039%
Nb	0.002% to 0.049%			

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2.	STAINLESS STEEL ALLOYS	C	AMTL/WI/02 (Issue Date: 15.03.2011)	0.01% to 2.50%
		Si	ASTM E 1086-08 & IS 9879-1998	0.27% to 0.47%
		Mn	(By Optical Emission Spectrometer)	0.55% to 10.20%
		P		0.022% to 0.28%
		S		0.01% to 0.02%
		Cr		11.2% to 26.52%
		Ni		0.35% to 19.88%
		Mo		0.265% to 3.62%
		Co		0.01% to 0.0285%
		B		0.002% to 0.01%
		Cu		0.01% to 0.27%
		N		0.01% to 0.41%
		W		0.01% to 0.45%
V		0.056% to 0.23%		

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3.	COPPER BASE ALLOY	Zn	AMTL/WI/03 (Issue Date 01.08.2013) (By Optical Emission Spectrometer)	0.41% to 33.75%
		Pb		0.66% to 0.91%
		Sn		2.25% to 5.53%
		P		0.107% to 0.226%
		Mn		0.065% to 0.101%
		Fe		0.066% to 0.102%
		Ni		0.025% to 0.109%
		Si		0.01% to 0.093%
		Al		0.02% to 0.63%
		As		0.02% to 0.065%
		Sb		0.026% to 0.06%
		S		0.01% to 0.03%
		Bi		0.05% to 0.056%
		Mg	0.001% to 0.002%	

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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
4.	NICKEL BASE METALS & ALLOYS	C	AMTL/WI/04 (Issue Date 01.08.2013) (By Optical Emission Spectrometer)	0.1% to 0.14%
		Si		0.028% to 0.11%
		Mn		0.01% to 1.26%
		Fe		1.5% to 1.86%
		Al		0.027% to 5.97%
		Cu		30% to 32%
		Co		0.03% to 0.338%
		Cr		13% to 13.5%
		Ti		0.027% to 0.87%
		Mo		4% to 4.3%
		B		0.01% to 0.013%
		Nb		2.00% to 2.200%
		W		0.094% to 32.00%
Zr	0.06% to 0.072%			

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5.	AL BASE ALLOY	Si	AMTL/WI/05 (Issue Date 01.08.2013) (By Optical Emission Spectrometer)	1.39% to 9.4%
		Fe		0.30% to 0.40%
		Cu		0.249% to 2.53%
		Mn		0.57% to 0.75%
		Mg		0.39% to 0.46%
		Cr		0.300% to 0.340%
		Ni		0.35% to 0.600%
		Zn		0.14% to 1.01%
		Ti		0.17% to 0.21%
		Pb		0.088% to 0.34%
		Sn		0.153% to 0.22%
		Bi		0.200% to 0.300%

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