

Laboratory	Central Institute of Hand Tools Laboratory, G.T. Road, Bye-Pass, Jalandhar, Punjab		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	04.09.2013
Certificate Number	T-1920	Valid Until	03.09.2015
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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
I. METALS & ALLOYS				
1. FERROUS ALLOYS (Iron Base)	Carbon		ASTM E 415-08	0.005 – 4.0%
	Sulphur		ASTM E 1086-08 ASTM E 1999-99 By OES Spectrometer	0.003 – 0.420%
	Phosphorous			0.003 – 0.800%
	Manganese			0.002 – 8.000%
	Silicon			0.05 – 3.0%
	Chromium			0.003 – 30.0%
	Nickel			0.05 – 30.0%
	Molybdenum			0.05 – 11.0%
	Tungsten			0.02 – 22.0%
	Vanadium			0.002 – 10.0%
	Copper			0.005 – 8.5%
Aluminium			0.005 – 1.300%	
2. NON FERROUS ALLOYS (Copper Base)	Al		WI. No. CIHT/QP/5.4/01/ WI-01 (CT)	0.5 – 12.0%
	Fe			0.0050 - 6.50%
	Mn			1.0 – 7.00%
	Ni			0.005 – 37.0%
	Pb			0.005 – 22.0%
	Sb			0.005 – 0.700%

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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
	NON FERROUS ALLOYS (Copper Base)	Si	WI. No. CIHT/QP/5.4/01/ WI-01 (CT)	0.005 – 7.5%
		Sn		0.005 – 18.0%
		Zn		0.005 – 45.0%
3.	NON FERROUS ALLOYS (Aluminium Base)	Cr	ASTM E 1251-11 By OES Spectrometer	0.001 – 0.700%
		Cu		0.001 – 8.5%
		Fe		0.001 – 2.20%
		Mg		0.0001 – 12.0%
		Mn		0.5 – 1.70%
		Ni		0.005 – 3.20%
		Pb		0.2 – 1.6%
		Si		0.002-25.0%
		Ti		0.001 – 0.30%
		Zn		0.005 – 12.0%

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