

**Laboratory** Materials Engineering Lab, Tata Motors Limited, Chinhat Industrial Area, Deva Road, Lucknow, Uttar Pradesh  
**Accreditation Standard** ISO/IEC 17025: 2005  
**Discipline** Chemical Testing **Issue Date** 31.03.2015  
**Certificate Number** T-1846 **Valid Until** 30.03.2017  
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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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**METALS AND ALLOYS**

1	Low Alloy Steel	C	ASTM-E415-08	0.01 % to 1.40 %
		Mn		0.01 % to 2.30 %
		P		0.01 % to 0.13 %
		S		0.01 % to 0.30 %
		Si		0.01 % to 5.50 %
		Cu		0.01 % to 1.20 %
		Ni		0.01 % to 5.50 %
		Cr		0.01 % to 8.30 %
		Mo		0.01 % to 2.40 %
		Al		0.01 % to 2.00 %
		V		0.01 % to 0.82 %
Co	0.01 % to 2.00 %			
2	Stainless Steel	C	ASTM-1086-08	0.01 % to 4.30 %
		Si		0.01 % to 3.5 %
		Mn		0.01 % to 4.10 %
		P		0.01 % to 0.10 %
		S		0.01 % to 0.10 %
		Cr		14.27 % to 29.8 %
		Ni		8.16 % to 24 %
		Mo		0.01 % to 3.33 %
		Cu		0.01 % to 2.5 %
3	HSS/Tool Steel	C	MWI - F3301 Issue No.-1, Rev. No.-3 Issue Date-17.01.15	1.40 % to 4.3 %
		Si		0.01 % to 3.5 %
		Mn		0.01 % to 4.10 %
		P		0.01 % to 2.40 %
		S		0.01 % to 0.23 %

**Mohit Kaushik**  
 Convenor

**N. Venkateswaran**  
 Program Manager

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		Cr		0.01 % to 9.10 %
		V		0.01 % to 0.62 %
		Mo		0.01 % to 2.20 %
		W		1.0 % to 18.0%
4	Copper Base Alloys	Cu	MWI-F3302 Issue No.-1, Rev. No.-3	50 % to 97 %
		Zn	Issue Date-17.01.15	0.01 % to 44.5 %
		Sn		0.01 % to 14.75 %
		Pb		0.01 % to 17.8 %
		Fe		0.01 % to 6.00 %
		Ni		0.01 % to 33.5 %
		Al		0.01 % to 11.10 %
		Si		0.01 % to 7.10 %
		Mn		0.01 % to 6.00 %
5	Aluminum Base Alloys	Cu	ASTM-E1251-11	0.01 % to 49 %
		Mg		0.01 % to 11.0 %
		Si		0.01 % to 24.0 %
		Fe		0.01 % to 12.0 %
		Mn		0.01 % to 22.0 %
		Ni		0.01 % to 2.8 %
		Zn		0.01 % to 12.00 %

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