

Laboratory	India Materials Technology, Caterpillar India Private Ltd., Machines Division, Melnallathur, Thiruvallur, Tamil Nadu		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	08.12.2014
Certificate Number	T-1721	Valid Until	07.12.2016
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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 AND ALLOYS

1. Iron, steel and ferro-alloys

a) Carbon Steel, Low Carbon and low alloy steel.

Carbon	ASTM E 415- 14	0.05 % to 0.70 %
Silicon	Analysis of Chemistry Using Optical Emission Spectrometer (OES Method)	0.05 % to 0.50 %
Manganese		0.10 % to 1.50 %
Phosphorus		0.002 % to 0.08 %
Sulphur		0.002 % to 0.35 %
Chromium		0.04 % to 1.50 %
Nickel		0.03 % to 1.70 %
Molybdenum		0.01 % to 0.35 %
Aluminium		0.01 % to 0.05 %
Copper		0.02 % to 0.60 %
Titanium		0.01 % to 0.05 %
Boron		0.0005 % to 0.0050 %
Vanadium		0.01 % to 0.10 %

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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
b)	Chilled Cast Iron	Carbon	ASTM E1999-11 Analysis of Chemistry Using Optical Emission Spectrometer (OES Method)	3.0 % to 3.9 %
		Silicon		0.90 % to 2.50 %
		Manganese		0.10 % to 1.30 %
		Phosphorus		0.02 % to 0.35 %
		Sulphur		0.002 % to 0.20 %
		Chromium		0.04 % to 0.60 %
		Nickel		0.10 % to 1.00 %
		Molybdenum		0.02 % to 0.10 %
		Aluminium		0.02 % to 0.05 %
		Copper		0.10 % to 1.00 %
		Titanium		0.05 % to 0.20 %
		Magnesium		0.01 % to 0.06 %
c)	Carbon steel, Low carbon, Low alloy steel and Cast Iron	Carbon	ASTM E1019-11 Determination of Carbon and Sulphur by combustion technique	0.05 % to 4.00 %
		Sulphur		0.002 % to 0.30 %

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