



# NABL

## SCOPE OF ACCREDITATION

Laboratory **Bharat Forge Ltd. - Metallurgical Lab, Mundhwa, Pune, Maharashtra**

Accreditation Standard **ISO/IEC 17025: 2005**

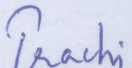
Discipline **Mechanical Testing** Issue Date **21.12.2015**

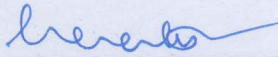
Certificate Number **T-2114** Valid Until **20.12.2017**

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

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<b>II. METALLOGRAPHY TEST</b>				
1.	<b>Metallic Material</b>	Effective Case Depth by Micro Hardness Method	DIN EN 10328: 2005	0.2 mm to 6.0 mm HV (0.5, 1)
		Grain Size by Comparison Method	ASTM E 112: 2013 ISO 643: 2015	Qualitative (ASTM Grain Size No. 0 to 10 Magnification 100x)
		Depth of Decarburized Layer by Microscopic Method by Hardness Traverse Method	ASTM E1077: 2014 SAE J 419: 1983	0.01mm to 1.0 mm Magnification 100 x
		Inclusion Rating	ASTME -45: 2013 IS4163: 2004 DIN 50602: 1985 (Comparison Method)	Qualitative (Inclusion Rating (Types A,B,C,D): 0.5 to 30 (Magnification 100 x)
		Macro Etch	ASTM E381-01: 2012	Qualitative
2.	<b>Ferrous Material, Aluminum Alloys &amp; Titanium Alloys</b>	Microstructure Examination	ASM Hand Book Vol. 9- Metallography & Microstructures(2004)	Qualitative (Magnification 50 x to 500 x)

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

  
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