Laboratory			Chemical Laboratory, Tata Steel Limited, Mines Division Joda, P.O Joda, Dist. Keonjhar, Odisha				
Accr	editation Standa	rd ISO/IEC 17025: 2005					
Discipline C		Chemical Testing	Chemical Testing Is		10.09.2016		
Certificate Number		T-3107	\	/alid Until	09.09.2018		
Last	Amended on	-	F	Page 1 of 2			
S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed		of Testing / of Detection		
I.	I. ORES & MINERALS						
1.	Iron Ore	Total Iron (Fe)	TSL/LAB/SOP/O1 Issue. 2, Issue Dated. 23.06.16	10.00 %	10.00 % to 69.50 %		
			IS 1493 (Part 1): 1981 (RA 2001)				
		Silica (SiO ₂)	TSL/LAB/SOP/O1 Issue. 2, Issue Dated. 23.06.16	0.2 % to	0 45 %		
		Alumina (Al ₂ O ₃)	TSL/LAB/SOP/O1 Issue. 2, Issue Dated. 23.06.16	0.2 % to	30 %		
		Phosphorous (P)	TSL/LAB/SOP/O1 Issue. 2, Issue Dated. 23.06.16	0.015 %	to 0.6 %		
		Manganese (Mn)	TSL/LAB/SOP/O1 Issue. 2, Issue Dated. 23.06.16	0.015 %	to 0.850 %		
		Titanium Oxide (TiO ₂)	TSL/LAB/SOP/O1 Issue. 2, Issue Dated. 23.06.16	0.020 %	to 0.50 %		
		Potassium Oxide (K ₂ O)	TSL/LAB/SOP/O1 Issue. 2, Issue Dated. 23.06.16	0.020 %	to 0.65 %		
		Loss on Ignition (LOI)	TSL/LAB/SOP/03 Issue. 2, Issue Dated. 23.06.16	0.2 % to	20.00 %		
2.	Manganese Ore	Total Iron (Fe)	TSL/LAB/SOP/O4 Issue. 2, Issue Dated. 23.06.16	1.5 % to	50 %		
		Silica (SiO ₂)	TSL/LAB/SOP/O4 Issue. 2, Issue Dated. 23.06.16	0.2 % to	0 40 %		
		Alumina (Al ₂ O ₃)	TSL/LAB/SOP/O4 Issue. 2, Issue Dated. 23.06.16	0.2 % to	23 %		

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Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing Issue Date 10.09.2016

Certificate Number T-3107 Valid Until 09.09.2018

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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
	Manganese Ore	Phosphorous (P)	TSL/LAB/SOP/O4 Issue. 2, Issue Dated. 23.06.16	0.015 % to 0.6 %
		Manganese (Mn)	TSL/LAB/SOP/O4 Issue. 2, Issue Dated. 23.06.16	10 % to 60 %