

Laboratory Minerals Lab Services Pvt. Ltd., Plot No. 25-8-141, 1<sup>st</sup> Floor, Thomson Street, Visakhapatnam, Andhra Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6350

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Validity 27.09.2017 to 26.09.2019

Last Amended on --

Sl.	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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### CHEMICAL TESTING

<b>I.</b>	<b>SOLID FUELS</b>			
<b>1.</b>	<b>Coal and Coke</b>	Total Moisture	IS 1350 (Part 1): 1984 (RA 2013)	5.0% to 40.0%
		Moisture in Air-dried (ADB)		2.0% to 30.0%
		Volatile Matter (VM)		1.0% to 50.0%
		Ash		5.0% to 60.0%
		Fixed Carbon		15.0% to 80.0%
		Gross Calorific value (GCV)	IS 1350 (Part 2): 1975 (RA 2015)	1000 kcal/kg to 7000 kcal/kg
		Sulphur	IS 1350 (Part 3): 1969 (RA 2015)	0.004% to 6.0%
<b>II.</b>	<b>ORES AND MINERALS</b>			
<b>1.</b>	<b>Iron Ore</b>	Iron (Fe)	IS 1493 (Part 1): 1981 (RA 2016)	30.0% to 70.0%
		Moisture		1.0% to 22.0%
		SiO <sub>2</sub>		1.0% to 15.0%
		Al <sub>2</sub> O <sub>3</sub>		1.0% to 15.0%
		Sulphur		0.005% to 0.030%
<b>2.</b>	<b>Bauxite</b>	Loss on Ignition (LOI)	IS 2000 (Part 1): 1985 (RA 2017)	2.0% to 40.0%
		SiO <sub>2</sub>	IS 2000 (Part 2): 1985 (RA 2017)	0.5% to 10.0%
		Al <sub>2</sub> O <sub>3</sub>	IS 2000 (Part 3): 1985 (RA 2017)	25% to 55.0%
		Fe <sub>2</sub> O <sub>3</sub>	IS 2000 (Part 4): 1985 (RA 2017)	3.0% to 25.0%
<b>3.</b>	<b>Limestone and Dolomite</b>	Loss on Ignition (LOI)	IS 1760 (Part 1): 1991 (RA 2017)	20% to 50.0%
		SiO <sub>2</sub>	IS 1760 (Part 2): 1991 (RA 2017)	0.1% to 10.0%

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		Fe <sub>2</sub> O <sub>3</sub>	SOP (MLS/VIZ/WI/04) -01 date.19.07.2016	0.05% to 3.0%
		Al <sub>2</sub> O <sub>3</sub>	IS 1760 (Part 3): 1992 (RA 2017)	0.1% to 2.5%
		CaO		20% to 56.0%
		MgO		0.3% to 30.0%

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Mallika Gope  
Convener

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N. Venkateswaran  
Program Director