

IRON ORE

SALIENT DATA OF ORE DRESSING INVESTIGATION CARRIED OUT BY OD DIVISION, IBM

ZONE-A : BIHAR, JHARKHAND, ORISSA

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE			PROCESS ADOPTED
						WT%	ASSAY%	%REC	
1.	14	Beneficiation of iron ore sample from Bonai, Orissa.	Fe Al ₂ O ₃ SiO ₂ P LOI	59.16 3.22 2.43 0.088 7.08	<u>Val. Mineral</u> Goethite Hematite <u>Gangue</u> Quartz Clay	81.15	Fe 63.42	86.86	Trommel washing
2.	49	Sintering of iron ore fines from some deposits in Bihar Orissa sector on batch and pilot plant scale.			<u>Val. Mineral</u> Hematite <u>Gangue</u> Quartz Shale	Satisfactory sinter obtained by using 7% coke breeze, 5% moisture and 30% iron fines.			
3.	370	Beneficiation of a sample of Iron ore fines from Jhilling-Langalota Iron Ore mines, Keonjhar distt. Orissa of M/s S.Lal and Co.	Fe SiO ₂ Al ₂ O ₃	56.80 7.12 7.28	<u>Val. Mineral</u> Hematite <u>Gangue</u> Gibbsite Clay	10.04	Product A Fe 63.55 Al ₂ O ₃ 4.22 SiO ₂ 2.70	10.96	High speed Tumbling and screening.
						71.36	Product B Fe 61.75 Al ₂ O ₃ 4.95 SiO ₂ 4.54	75.66	

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4.	410	Beneficiation of Iron Ore fines from Thalarani Mines, Bihar.	Fe SiO ₂ Al ₂ O ₃	60.12 3.06 5.25	<u>Val. Mineral</u> Hematite, Goethite Limonite <u>Gangue</u> Gibbsite Laterite, Clay	76.66	Fe SiO ₂ Al ₂ O ₃	63.38 1.64 3.60	80.80	Desliming.
5.	420	Beneficiation of a sample of iron ore from Karampak Iron Ore mines, Singhbhum distt. Bihar of M/s M.L. Jain & Sons.	Fe SiO ₂ Al ₂ O ₃	61.53 3.44 3.08	<u>Val. Mineral</u> Hematite Goethite <u>Gangue</u> Gibbsite Clay Quartz	20.32	A		21.08	Tumbling & screening (+12mm)
							Fe SiO ₂ Al ₂ O ₃	63.80 1.56 1.69		
6.	441	Wet high intensity magnetic separation tests on Barsua iron ore fines for Rourkela Steel Plant, Orissa.	Fe SiO ₂ Al ₂ O ₃	58.01 4.60 5.60		57.80	B		70.00	Tumbling and screening (-12 mm + 200 mesh)
							Fe SiO ₂ Al ₂ O ₃	62.67 2.34 2.64		
6.	441	Wet high intensity magnetic separation tests on Barsua iron ore fines for Rourkela Steel Plant, Orissa.	Fe SiO ₂ Al ₂ O ₃	58.01 4.60 5.60		57.80	Fe SiO ₂ Al ₂ O ₃	62.65 2.21 3.63	62.00	Wet high intensity magnetic separation.
7.	598	Pilot Plant studies on upgradation of magnetite concentrate from tailings of Jaduguda Plant Singhbhum District, Bihar.	Fe Feo Al ₂ O ₃ SiO ₂	59.74 25.33 2.27 11.67	<u>Val. Mineral</u> Magnetite <u>Gangue</u> Quartz, & chlorite	80.5	Fe Feo SiO ₂	70.65 29.71 2.16	96.4	Magnetic separation.