IRON ORE

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

ZONE- B : CHATTISGARH, MAHARASHTRA, MADHYA PRADESH

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE			PROCESS ADOPTED
						WT%	ASSAY%	%REC	
1.	59	Pilot Plant crushing and screening investigation on Bailadila Iron ore deposit No.14.	Fe Al_2O_3 SiO_2 P	66.83 1.50 0.40 0.003	**Val. Mineral** Hematite **Gangue** Quartz Laterite	+ 1½" - 6 to 7 % - 1½''+ ½'' - 60 to 70 % - ½''- 24 to 25 %			Crushing, Dry and wet screening.
2.	65	Pilot Plant crushing and screening investigation on Bailadila Iron ore deposit No.14.	Fe Al_2O_3 SiO_2 P	67.41 1.02 0.70 0.003	**Val. Mineral** Hematite **Gangue** Quartz Laterite	+ 1½ ''- 5 % - 1½'' + ½''- 70 % - ½'' - 25 %			Crushing, Dry and wet screening.
3.	103	Sintering of iron ore fines from Bailadila.	Fe Al_2O_3 SiO_2 Volatiles	66.52 1.31 1.04 1.43	**Val. Mineral** Hematite	Satisfactory sinter obtained			Sintering
4.	360	Pilot Plant studies on crushing, screening and washing of iron ore samples from Dalli Deposit, Madhya Pradesh (Massive ore) for Bhilai Ispat Ltd.	Fe Al_2O_3 SiO_2	64.84 3.19 2.88		58.80 33.00	Product A (Lumps) Fe Al_2O_3 SiO_2 Product B (Fines) Fe Al_2O_3 SiO_2	67.82 2.37 1.70 63.56 3.34 3.06	61.40 32.50	Scrubbing, Screening and classification.

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5.	361	Pilot Plant studies on crushing, screening and washing of iron ore samples from Dalli Deposit, Madhya Pradesh (Shally ore) for Bhilai Ispat Ltd.	Sample-II A			A 71.20	Sample-II A (Lumps)	73.90	Scrubbing, Screening and classification
			Fe SiO_2 Al_2O_3	60.16 5.04 5.26			Fe 62.82 SiO_2 3.97 Al_2O_3 4.46		
			Sample-II B			B 22.71	Fe 60.68 SiO_2 4.16 Al_2O_3 5.79	22.80	
						A 57.80	Sample-II B (Lumps)		
							Fe 63.17 SiO_2 3.50 Al_2O_3 4.27	62.08	
			Fe SiO_2 Al_2O_3	58.79 5.61 6.71		B 22.90	Fe 59.85 SiO_2 5.12 Al_2O_3 4.72	30.42	
6.	362	Pilot Plant studies on crushing, screening and washing of iron ore samples from Dalli Deposit, Madhya Pradesh (Soft laminated ore) for Bhilai Ispat Ltd.	Fe SiO_2 Al_2O_3	55.39 12.74 5.52		46.30	Product A (Lumps)	51.50	Scrubbing, Screening and classification
							Fe 60.55 Al_2O_3 3.53 SiO_2 8.95		
						41.40	Product B (Sand)	43.00	
							Fe 56.55 Al_2O_3 5.23 SiO_2 9.49		

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7.	373	Pilot Plant studies on crushing, screening and washing of iron ore samples from Dalli Deposit, Madhya Pradesh (Laminated ore) for Bhilai Ispat Ltd.	Fe SiO_2 Al_2O_3	59.58 4.63 6.66	--	59.80 31.70	A Fe 63.90 SiO_2 2.49 Al_2O_3 5.36 B (Classifier sands) Fe 59.34 SiO_2 4.56 Al_2O_3 4.53	63.96 31.49	Scrubbing, Screening and classification
8	404	Pilot Plant studies on crushing, screening and washing of iron ore samples from Dalli Deposit, Madhya Pradesh (Composite sample).	Fe SiO_2 Al_2O_3	61.44 4.77 5.72	--	57.80	Fe 64.48 SiO_2 2.95 Al_2O_3 4.05	60.40	Wet screening
9.	405	Screening test on iron ore fines from Kondekasa and Mayurpani mines for Bhilai Ispat Ltd.	A Fe SiO_2 Al_2O_3 B Fe SiO_2 Al_2O_3	 59.39 4.73 7.37 54.46 6.41 9.50	--	 7.10 11.0	A (+10 mm) Fe 64.77 SiO_2 1.53 Al_2O_3 4.25 B (+10 mm) Fe 62.84 SiO_2 2.83 Al_2O_3 4.32	 7.70 12.50	Wet screening.
10.	415	Beneficiation of a low grade iron ore sample from Durgad iron ore mines, Redi area, Maharashtra.	Fe SiO_2 Al_2O_3	53.93 5.75 7.13	**Val. Mineral** Goethite Limonite **Gangue** Clay, Laterite Quartz	53.63	Fe 64.90 SiO_2 2.00 Al_2O_3 2.49	64.99	Tabling.

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11.	495	Screening tests on iron ore fines from Jharandalli and Mahamaya Mines, Madhya Pradesh.	No. JD/1-2				+10mm		Wet screening
			Fe	63.13		8.80	Fe 67.11	9.40	
			SiO_2	3.61			SiO_2 072		
			Al_2O_3	4.09			Al_2O_3 2.43		
			P	0.06			P 0.06		
							Al_2O_3/SiO_2 3.38		Wet screening
							-10mm +150 mesh		
						75.40	Fe 64.30	77.30	
							SiO_2 2.64		
							Al_2O_3 3.30		
							P 0.06		
							Al_2O_3/SiO_2 1.25		Wet screening
							+10 mm		
			No.NM/ 1-4			9.90	Fe 61.65	11.20	
			Fe	54.35			SiO_2 2.91		
			SiO_2	5.99			Al_2O_3 5.30		
			$Al2O_3$	8.52			P 0.18		
			P	0.14			Al_2O_3/SiO_2 1.82		
							-10mm + 5 mm		
						15.90	Fe 60.75	17.80	Wet screening
							SiO_2 2.43		
							Al_2O_3 5.36		
							P 0.13		
							Al_2O_3/SiO_2 1.32		

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12.	496	Screening tests on iron ore fines from Kondeksa and Mayurpani Mines Madhya Pradesh.	No.KD/1-2				+10mm			
			Fe	61.73		10.80	Fe	65.01	11.03	Wet screening
			SiO_2	3.02			SiO_2	1.04		
			Al_2O_3	5.58			Al_2O_3	4.36		
			P	0.07			P	0.07		
							Al_2O_3/SiO_2	4.19		
							-10mm +150 mesh			
						75.50	Fe	62.92	76.70	Wet screening
							SiO_2	2.35		
							Al_2O_3	4.94		
							P	0.07		
							Al_2O_3/SiO_2	2.10		
			No.MP/1-2				+10 mm			
			Fe	60.97		6.10	Fe	66.09	6.60	Wet screening
			SiO_2	5.53			SiO_2	2.11		
			Al_2O_3	4.57			Al_2O_3	2.33		
			P	0.07			P	0.05		
							Al_2O_3/SiO_2	1.1		
							-10mm +150 mesh			
						76.90	Fe	62.78	79.10	Wet screening
							SiO_2	4.47		
							Al_2O_3	3.66		
							P	0.07		
							Al_2O_3/SiO_2	0.82		

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13.	548	Crushing, Screening and scrubbing tests on iron ore sample from Mahamaya Deposit, M.P.	Fe Al_2O_3 SiO_2 P	61.52 3.20 3.91 0.15	**Val. Mineral** Hematite, Goethite **Gangue** Quartz Mica, Clay	61.20 28.00	+10mm Fe Al_2O_3 SiO_2 Al_2O_3/ SiO_2 -1-mm +65 mesh Fe Al_2O_3 SiO_2 Al_2O_3/ SiO_2	 64.85 1.38 1.45 0.95 62.36 3.13 3.96 0.79	64.60 28.40	Scrubbing and sizing
14.	587	Beneficiation of low grade iron ore sample from Galel deposit, Sindhudurg District, Maharashtra.	Fe Al_2O_3 SiO_2	55.03 4.52 8,83	**Val. Mineral** Martitised Magnetite & Goethite. **Gangue** Quartz, Gibbsite & Clay	68.64	Fe Al_2O_3 SiO_2	61.04 2.80 3.26	76.14	Scrubbing, Classification and spiraling.