IRON ORE

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

ZONE-D : GOA

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE				PROCESS ADOPTED
						WT%	ASSAY%		%REC	
1.	108	Beneficiation of low grade iron ore sample from M/s Salgaocar and Brother Pvt. Ltd., Goa.	Fe Al_2O_3 SiO_2	59.18 6.55 1.50	**Val. Mineral** Hematite Magnetite Laterite **Gangue** Gibbsite	64.83	Fe Al_2O_3	65.46 2.41	70.44	Magnetic separation and Tabling.
2.	140	Beneficiation of siliceous lumpy iron ore sample from M/s Emro Goa Pvt. Ltd. (Sample No.2)	Fe Al_2O_3 SiO_2 LOI	59.15 1.21 27.91 0.58	**Val. Mineral** Hematite **Gangue** Quartz	50.78	Fe Al_2O_3 SiO_2	62.33 0.80 9.70	62.43	Tabling
3.	142.	Beneficiation of siliceous friable iron ore sample from M/s Emco Goa Pvt. Ltd. (Sample No.1)	Fe Al_2O_3 SiO_2 LOI	48.90 1.23 28.80 0.74	**Val. Mineral** Hematite **Gangue** Quartz	53.50	Fe Al_2O_3 SiO_2 LOI	66.48 0.25 4.67 0.19	72.65	Classification and Magnetic separation.
4.	143	Beneficiation of high alumina blue dust sample from Salitho Pale Mines, Goa (Sample No.1)	Fe Al_2O_3 SiO_2 LOI	58.36 6.80 3.12 8.22	**Val. Mineral** Hematite Goethite **Gangue** Gibbsite Opal	42.35	Fe Al_2O_3	64.03 2.50	52.15	Magnetic separation & Tabling

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE				PROCESS ADOPTED
						WT%	ASSAY%		%REC	
5.	144	Beneficiation of high alumina iron ore sample from Salitho Pale Mines, Goa (Sample No.2).	Fe (T) Al_2O_3 SiO_2 LOI	64.34 3.78 1.10 4.40	**Val. Mineral** Hematite, Goethite **Gangue** Gibbsite	78.30	Fe Al_2O_3 SiO_2	65.75 1.87 1.21	80.10	Hydraulic classification
6.	178	Beneficiation of blue dust sample from Salitho Pale Mines, Goa (Sal/Lz/Lg).	Fe Al_2O_3 SiO_2 LOI	58.70 5.02 3.29 6.50	**Val. Mineral** Goethite Hematite **Gangue** Quartz Clay, Muscovite	83.39	Fe Al_2O_3	62.28 2.47	88.14	Washing, Screening , Classification & Tabling.
7.	183	Beneficiation of iron ore sample from Harvalem mines, Goa.	Fe Al_2O_3 SiO_2	56.17 6.82 5.78	**Val. Mineral** Goethite Hematite **Gangue** Gibbsite Clay	9.65	Fe Al_2O_3	62.14 2.09	10.80	Attrition scrubbing, Hand picking.
8.	189	Reduction of alumina content in blue dust sample from Salitho Pale Mines, Goa (Sample No. SAL/UZ/LG).	Fe Al_2O_3 SiO_2 P LOI	64.22 3.55 2.40 0.11 5.83	**Val. Mineral** Goethite Hematite **Gangue** Gibbsite Quartz	80.00	Fe Al_2O_3 P	66.76 1.74 0.11	82.80	Hydraulic classification.

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE				PROCESS ADOPTED
						WT%	ASSAY%		%REC	
9.	204	Beneficiation of iron ore rejects from Bicholim Iron Ore mines of M/s Dempo Mining Corpn. Pvt. Ltd., Goa.	+12mm Lumps		**Val. Mineral** Goethite Hematite **Gangue** Gibbsite Cliachite	68.20	Fe	58.01	70.77	Heavy media paration
			Fe	55.78						
			Al_2O_3	8.58						
			SiO_2	1.92						
			LOI	8.01						
			-12mm Fines		**Val. Mineral** Goethite Hematite **Gangue** Gibbsite, Cliachite, Laterite & Clay material	39.64	Fe	62.00	45.85	Tabling
			Fe	53.83						
			Al_2O_3	12.20						
			SiO_2	4.25						
10.	262	Beneficiation of a siliceous iron ore sample from Haldool Dongor Mines, Goa.	Fe	44.17	**Val. Mineral** Magnetite **Gangue** Quartz	44.40	Fe	67.07	68.40	Magnetic separation.
			Al_2O_3	2.00			SiO_2	2.96		
			SiO_2	34.18						
			P	0.07						
			LOI	1.31						
11.	312	Beneficiation of a low grade iron ore sample No. SAZ-LGBD-1/75 from Goa for M/s V.M. Salgaoncar & Brothers Pvt. Ltd.	Fe	58.03	**Val. Mineral** Goethite **Gangue** Gibbsite, Quartz	50.20	Fe	64.39	55.10	Classification.
			Al_2O_3	6.28			Al_2O_3	1.97		
			SiO_2	4.01						
			LOI	7.66						
12.	313	Beneficiation of a low grade iron ore sample No. VEL-LGBD-1/75 from Goa for M/s V.M. Salgaoncar & Brothers Pvt. Ltd.	Fe	59.72	**Val. Mineral** Goethite **Gangue** Gibbsite, Quartz	60.10	Fe	63.32	60.10	Cycloning
			Al_2O_3	4.36			Al_2O_3	2.46		
			SiO_2	2.86			SiO_2	1.89		
			LOI	7.57						

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE				PROCESS ADOPTED
						WT%	ASSAY%		%REC	
13.	314	Beneficiation of a low grade iron ore sample No. SAL-R-1/75 from Goa for M/s V.M. Salgaoncar & Brothers Pvt. Ltd.	Fe Al_2O_3 SiO_2 LOI	55.49 9.07 2.58 8.97	**Val. Mineral** Goethite Hematite **Gangue** Gibbsite,	46.50	Fe	63.41	53.00	Dry Magnetic Separation.
14.	341	Beneficiation of a siliceous iron ore sample for M/s EMCO Goa Pvt. Ltd.	Fe FeO Al_2O_3 SiO_2 P S	38.74 5.46 2.10 40.98 0.23 0.80	**Val. Mineral** Magnetite Goethite Hematite **Gangue** Quartz	51.37	Fe Al_2O_3 SiO_2	61.77 0.66 11.36	80.40	Low intensity wet magnetic separation followed by tabling of non magnetics.
15.	369	Beneficiation of a low grade iron ore sample No. HC-LGL-1 from Harvalem-Cudnem area, Goa.	Fe SiO_2 Al_2O_3	54.61 5.04 10.17	**Val. Mineral** Goethite Hematite **Gangue** Gibbsite Quartz	39.14	Fe SiO_2 Al_2O_3	63.53 1.82 5.48	45.67	Tabling
16	407	Beneficiation of a low grade iron ore sample from Bicholim mines, Goa (Sample No.2 BIDMC-Low grade rejects lumps).	Fe SiO_2 Al_2O_3	56.90 1.90 9.42	**Val. Mineral** Goethite Martitised Magnetite **Gangue** Gibbsite Laterite,Clay Quartz	65.17	Fe SiO_2 Al_2O_3	62.42 1.39 4.73	71.19	Low Intensity Wet magnetic separation followed by Tabling.

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE			PROCESS ADOPTED
						WT%	ASSAY%	%REC	
17.	408	Beneficiation of a low grade iron ore sample from Bicholim mines, Goa (Sample No.3 BIDMC-Low grade rejects fines).	Fe SiO_2 Al_2O_3	57.14 2.71 9.98	**Val. Mineral** Goethite Martitised Magnetite **Gangue** Gibbsite Laterite,Clay Quartz	60.05 64.7	A Fe Al_2O_3 B Fe SiO_2 Al_2O_3	64.86 4.02 62.77 2.26 4.56	68.94 71.79	Low Intensity Wet magnetic separation followed by Tabling.
18.	413	Beneficiation of an Iron Ore sample from Timblo minerals Pvt. Ltd., Goa.	Fe SiO_2 Al_2O_3	61.40 9.85 3.27	**Val. Mineral** Hematite, Magnetite **Gangue** Quartz	60.74	Fe SiO_2 Al_2O_3	67.36 2.72 2.33	67.09	Dry magnetic separation.
19.	421	Beneficiation of iron ore fines from Sonshi mines, Goa (Sample A) for M/s Sesa Goa Pvt. Ltd.	Fe SiO_2 Al_2O_3	58.72 3.72 4.26		74.30	Fe SiO_2 Al_2O_3	63.23 1.86 2.41	80.0	Hydro-cycloning.
20.	422	Beneficiation of iron ore fines from Sonshi mines, Goa (Sample B) for M/s Sesa Goa Pvt. Ltd.	Fe SiO_2 Al_2O_3	58.76 3.57 3.95		81.30	Fe SiO_2 Al_2O_3	62.48 2.53 1.68	85.9	Hydro-cycloning.
21.	423	Beneficiation of iron ore fines from Sonshi mines, Goa (Sample C) for M/s Sesa Goa Pvt. Ltd.	Fe SiO_2 Al_2O_3	60.81 2.75 2.99		91.90	Fe SiO_2 Al_2O_3	63.19 2.05 2.01	94.14	Hydro-cycloning.
22.	424	Beneficiation of iron ore fines from Sonshi mines, Goa (Sample D) for M/s Sesa Goa Pvt. Ltd.	Fe SiO_2 Al_2O_3	59.60 3.05 5.10		70.20	Fe SiO_2 Al_2O_3	63.20 2.06 3.09	75.0	Hydro-cycloning.

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE			%REC	PROCESS ADOPTED
						WT%	ASSAY%			
23.	425	Beneficiation of an iron ore sample from Surla-Sonshi Mines Goa (Lumpy-I).	Fe SiO_2 Al_2O_3	57.02 4.70 4.98	**Val. Mineral** Hematite, Goethite Magnetite **Gangue** Gibbsite Quartz, Clay	73.24	Conc.I Fe SiO_2 Al_2O_3 Conc.II Fe SiO_2 Al_2O_3	 61.38 2.55 2.65 62.42 2.59 2.60	77.57	Scrubbing followed by wet screening.
24.	434	Beneficiation of an iron ore sample from Surla-sonshi Mines Goa (Lumpy-II).	Fe SiO_2 Al_2O_3	60.22 3.04 3.42	**Val. Mineral** Hematite **Gangue** Gibbsite Quartz, Clay	55.49	Fe SiO_2 Al_2O_3	66.63 1.65 1.98	60.68	Wet magnetic separation followed by tabling.
25.	460	Beneficiation of a low grade blue dust sample from Bicholin mine Goa of Dempo Mining Corporartion Ltd. (Sample No. 1-BIDMC-LGP-bc).	Fe SiO_2 Al_2O_3 LOI	54.50 3.21 4.95 10.48	**Val. Mineral** Goethite **Gangue** Gibbsite Quartz, Clay	44.90 47.30	Conc.I Fe SiO_2 Al_2O_3 Conc.II Fe SiO_2 Al_2O_3	 63.08 1.55 1.81 63.37 1.65 1.78	51.70 40.80	Low intensity wet magnetic separation. High intensity wet magnetic separation.
26.	481	Beneficiation of a low grade lumpy (LG/LP) Iron ore sample from Codli mines of Mingoa (P) Ltd., Goa.	Fe SiO_2 Al_2O_3	54.77 3.20 9.35	**Val. Mineral** Hematite Goethite **Gangue** Gibbsite	44.29	Fe SiO_2 Al_2O_3	63.39 1.74 4.12	51.62	Magnetic separation followed by tabling.

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE			PROCESS ADOPTED
						WT%	ASSAY%	%REC	
27.	482	Beneficiation of alow grade blue dust iron ore sample from Shigao Mines of M/s Pandurang Timblo (P) Ltd. Goa.	Fe SiO_2 Al_2O_3 Mn	58.20 2.65 3.75 6.55	**Val. Mineral** Hematite Goethite Magnetite **Gangue** Gibbsite Quartz, Muscovite	58.68	Fe SiO_2 Al_2O_3 Mn	66.28 1.03 1.52 3.40	65.50	Low intensity wet magnetic separation followed by high intensity wet magnetic separation.
28.	483	Beneficiation of a low grade iron ore sample (+10 mm lumps) from Codli Mines of M/s Mingoa (P) Ltd.(Mingoa/Codli/FS/IB).	Fe SiO_2 Al_2O_3	57.21 3.53 5.20	**Val. Mineral** Goethite Magnetite **Gangue** Gibbsite Quartz, clay	68.53	Fe SiO_2 Al_2O_3	50.57 3.08 4.66	70.76	Wet screening
29.	484	Beneficiation of a low grade iron ore sample (-10 mm fractopn) from Codli Mines of M/s Mingoa (P) Ltd.(No. Mingoa/Codli/FS/IA).	Fe SiO_2 Al_2O_3	52.02 6.75 9.35	**Val. Mineral** Goethite Magnetite **Gangue** Gibbsite Quartz, clay	34.12	Fe SiO_2 Al_2O_3	64.87 1.93 1.96	42.43	Low intensity magnetic separation following by tabling.
30.	488	Beneficiation of a powdery iron ore sample from Saniem Mines of M/s Talaulicar & Sons(P) Ltd. Goa.	Fe SiO_2 Al_2O_3	65.32 1.65 2.64	**Val. Mineral** Hematite **Gangue** Gibbsite Quartz, clay	26.71 51.40	Lumps Fe SiO_2 Al_2O_3 Fines Fe SiO_2 Al_2O_3	 67.06 0.79 2.09 66.16 1.38 2.18	27.49 52.20	Wet screening

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE			%REC	PROCESS ADOPTED
						WT%	ASSAY%			
31.	489	Beneficiation of iron ore sample from Shigao Mines of M/s Sociedade de Fomento Ind. (P) Ltd., Goa.	Fe SiO_2 Al_2O_3	64.37 2.00 3.87	**Val. Mineral** Hematite Magnetite **Gangue** Gibbsite Quartz	87.42	Fe SiO_2 Al_2O_3	65.52 1.89 3.42	88.32	Wet screening
32.	490	Beneficiation of iron ore sample from Samiem Mines of M/s Talanlikar & Sons (Pvt) Ltd., Goa.	Fe SiO_2 Al_2O_3	63.60 0.97 4.88	**Val. Mineral** Hematite **Gangue** Gibbsite Quartz, Clay, Mica	30.22	Fe SiO_2 Al_2O_3	66.50 0.83 2.79	31.45	Wet screening
33.	493	Beneficiation of iron ore fines (Sample No.4) from Codli Mines Goa (Goa/BP/D/314/LCBD).	Fe SiO_2 Al_2O_3	63.90 1.69 2.35	**Val. Mineral** Martitised magnetite **Gangue** Quartz Gibbsite	17.70 68.30	Lumps+10mm Fe SiO_2 Al_2O_3 Fines-10mm Fe SiO_2 Al_2O_3	 65.92 1.76 1.79 65.99 1.09 2.02	18.10 69.80	Wet Screening Hydraulic classification.
34.	494	Beneficiation of a powdry iron ore (Sample No. 9) from Odmol Mine Goa.	Fe SiO_2 Al_2O_3	63.11 3.25 2.95	**Val. Mineral** Martitised Magnetite **Gangue** Quartz Gibbsite & Mica	72.70	Fe SiO_2 Al_2O_3	65.65 2.75 2.08	76.00	Scrubbing & classification.

IRON ORE

SR. NO.	R.I. NO.	TITLE OF THE INVESTIGATION	ORIGINAL ANALYSIS %		MINERALOGY	CONCENTRATE			%REC	PROCESS ADOPTED
						WT%	ASSAY%			
35.	499	Beneficiation of a blue dust sample from Kirlapale mine, Goa (Goa/BP/D/435/BD).	Fe SiO_2 Al_2O_3 P	60.70 3.05 3.70 0.08	**Val. Mineral** Hematite, Martitised Magnetite **Gangue** Quartz Clay & Gibbsite	18.47 68.93	+10mm Fe SiO_2 Al_2O_3 -10mm +200 mesh Fe SiO_2 Al_2O_3	62.33 1.98 2.42 63.00 2.06 2.27	18.92 71.35	Scrubbing and sizing
36.	531	Beneficiation of iron ore sample from Vaglore Mines, Goa (GOA/BP/C/607/LP)	Fe Al_2O_3 SiO_2	63.30 4.71 1.22	**Val. Mineral** Magnetite, Hematite, Goethite **Gangue** Quartz, Clay & Gibbsite	77.3	Fe Al_2O_3 SiO_2	67.18 3.08 0.98	81.5	Magnetic separation and Tabling.
37.	532	Beneficiation of an iron ore sample from Shiago Mines, Goa (GOA/BP/C/254/LGBD).	Fe Al_2O_3 SiO_2	61.76 4.30 2.22	**Val. Mineral** Hematite **Gangue** Quartz Clay & Gibbsite	57.36	+10 mm Fe Al_2O_3 SiO_2	61.94 4.41 2.44	58.04	Sizing
38.	536	Beneficiation of a Lumpy iron ore (Sample No.3) from Codli Mines, Goa (Goa/BP/D/314/LP).	Fe Al_2O_3 SiO_2	62.40 4.88 1.41	**Val. Mineral** Magnetite, Hematite **Gangue** Quartz Clay & Gibbsite	78.59	Lumps Fe Al_2O_3 SiO_2 -10mm+200 mesh Fe Al_2O_3 SiO_2	63.16 4.67 1.38 63.29 3.90 1.42	79.57	Sizing Scrubbing and sizing.

IRON ORE