Indian Minerals Yearbook 2012

(Part- I)

51st Edition

STATE REVIEWS
(Maharashtra)

(FINAL RELEASE)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

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MAHARASHTRA

Mineral Resources

Maharashtra is the second largest producer of kyanite and the third largest producer of manganese ore. The principal mineral-bearing belts in Maharashtra are Vidarbha area in the east and Konkan area in the west. Important mineral occurrences are **bauxite** in Kolhapur, Raigad, Ratnagiri, Satara, Sindhudurg & Thane districts; **china clay** in Amravati, Bhandara, Chandrapur, Nagpur, Sindhudurg & Thane districts; **chromite** in Bhandara, Chandrapur, Nagpur & Sindhudurg districts; **coal** in Nagpur, Chandrapur & Yavatmal districts; **dolomite** in Chandrapur, Nagpur & Yavatmal districts; **fireclay** in Amravati, Chandrapur, Nagpur & Ratnagiri districts; **fluorite** & **Shale** in Chandrapur district; **iron ore (hematite)** in Chandrapur, Gadchiroli and Sindhudurg districts; **iron ore (magnetite)** in Gondia district; **kyanite** in Bhandara & Nagpur districts; **laterite** in Kolhapur district; **limestone** in Ahmednagar, Chandrapur, Dhule, Gadchiroli, Nagpur, Nanded, Pune, Sangli & Yavatmal districts; **manganese ore** in Bhandara, Nagpur & Ratnagiri districts; **corundum & pyrophyllite** in Bhandara district; **quartz & silica sand** in Bhandara, Chandrapur, Gadchiroli, Gondia, Kolhapur, Nagpur, Ratnagiri & Sindhudurg districts and **quartzite** in Gondia & Nagpur districts; and **sillimanite** in Chandrapur district.

Other minerals that occur in the State are **barytes** in Chandrapur & Gadchiroli districts; **copper** in Bhandara, Chandrapur, Gadchiroli & Nagpur districts; **felspar** in Sindhudurg district; **gold** in Bhandara & Nagpur districts; **granite** in Bhandra, Chandrapur, Dhule, Gadchiroli, Nagpur, Nanded, Nasik, Sindhudurg & Thane districts; **graphite & mica** in Sindhudurg district; **lead-zinc & tungsten** in Nagpur district; **marble** in Bhandara & Nagpur districts; **ochre** in Chandrapur & Nagpur districts; **silver** & **vanadium** in Bhandara district; **steatite** in Bhandara, Ratnagiri & Sindhudurg districts; and **titanium minerals** in Gondia & Ratnagiri districts (Table - 1). The coal reserves and resources along with the various coalfields located in the State are given in Table - 2.

Exploration & Development

The details of exploration activities conducted by various agencies during 2011-12 are furnished in Table - 3.

Table – 2 : Reserves/Resources of Coal as on 1.4.2012 : Maharashtra

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total	**5667.48**	**3104.40**	**2110.21**	**10882.09**
Wardha Valley	3604.85	1415.57	1424.07	6444.49
Kamptee	1276.14	1204.88	505.44	2986.46
Umrer, Makardhokra	308.41	-	160.70	469.11
Nand-Bander	468.08	483.95	-	952.03
Bokhara	10.00	-	20.00	30.00

Source: *Coal Directory of India, 2011-12.*

Table –1: Reserves/Resources of Minerals as on 1.4.2010 : Maharashtra

Mineral	Unit	Reserves				Remaining resources								Total resources (A+B)
		Proved STD 111	Probable		Total (A)	Feasibility STD211	Pre-feasibility		Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)	
			STD121	STD122			STD221	STD222						
Barytes	tonne	-	-	-	-	-	-	-	14800	89450	18610	-	122860	122860
Bauxite	'000 tonnes	14461	4473	7219	26153	16886	6704	12531	52191	10524	49896	-	148732	174885
China clay	'000 tonnes	-	-	-	-	418	256	856	11	184	5523	-	7248	7248
Chromite	'000 tonnes	53	23	-	76	5	-	-	43	67	441	-	556	632
Copper														
Ore	'000 tonnes	-	-	-	-	-	-	-	-	9399	3811	-	13210	13210
Metal	'000 tonnes	-	-	-	-	-	-	-	-	89.65	43.05	-	132.70	132.70
Dolomite	'000 tonnes	22741	11987	13325	48053	5612	1028	3569	7000	18050	337511	-	372771	420824
Felspar	tonne	228655	-	91462	320117	-	-	423180	-	-	485606	-	908786	1228903
Fireclay	'000 tonnes	244	-	388	632	-	-	-	-	-	6850	-	6850	7482
Fluorite	tonne	261843	-	104737	366580	-	-	-	-	-	52369	-	52369	418949
Gold														
Ore (primary)	tonne	-	-	-	-	-	-	-	-	-	1517000	-	1517000	1517000
Metal(primary)	tonne	-	-	-	-	-	-	-	-	-	3.55	-	3.55	3.55
Granite (Dim. stone)	'000 cu m	-	-	-	-	-	6300	-	486925	-	665622	-	1158847	1158847
Graphite	tonne	-	-	-	-	-	-	-	-	-	1160000	-	1160000	1160000
Iron ore (hematite)	'000 tonnes	6937	6460	17	13414	7544	6093	7659	79793	71806	64714	32185	269795	283209
Iron ore (magnetite)	'000 tonnes	559	-	315	875	211	-	60	-	-	215	-	486	1361
Kyanite	tonne	284307	-	96514	380821	-	4317	1167175	-	58500	1713600	-	2943592	3324413
Lead-zinc ore	'000 tonnes	-	-	-	-	-	-	-	1967	6305	1000	-	9272	9272
Zinc metal	'000 tonnes	-	-	-	-	-	-	-	133.56	428.11	28.00	-	589.67	589.67
Laterite	'000 tonnes	-	-	-	-	-	-	-	-	-	4000	-	4000	4000
Limestone	'000 tonnes	589789	176015	60794	826598	464232	176987	52152	28470	159309	1114112	-	1995262	2821860
Manganese ore	'000 tonnes	10000	2210	108	12318	497	3010	12001	-	1589	4655	84	21835	34153
Marble	'000 tonnes	-	324	-	324	-	-	81	-	-	57642	-	57723	58047
Mica	kg	-	-	-	-	-	-	65916000	-	-	15120000	-	81036000	81036000
Ochre	tonne	22260	-	16000	38260	17680	38080	100980	6010	6010	286000	-	454760	493020

(Contd.)

Table - 1(Concld.)

Mineral	Unit	Reserves				Remaining resources								Total resources (A+B)
		Proved STD 111	Probable		Total (A)	Feasibility STD211	Pre-feasibility		Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)	
			STD121	STD122			STD221	STD222						
Pyrophyllite	tonne	702680	-	281072	983752	-	-	-	958000	-	2185696	-	3143696	4127448
Quartz-silica sand	'000 tonnes	12356	2085	10884	25326	29372	15172	48391	-	355	58374	-	151663	176989
Quartzite	'000 tonnes	48700	-	19480	68180	9516	28	1639	-	-	11353	-	22536	90716
Sillimanite	tonne	145144	-	58058	203202	-	-	-	-	64	2664	-	2728	205930
Silver														
Ore	tonne	-	-	-	-	-	-	-	-	-	235000	-	235000	235000
Metal	tonne	-	-	-	-	-	-	-	-	-	0.23	-	0.23	0.23
Talc/steatite/ soapstone	'000 tonnes	-	-	-	-	-	-	-	-	2565	14262	-	16827	16827
Titanium minerals	tonne	293539	-	117416	410955	-	151888	-	1020326	846000	1997108	-	4015322	4426277
Tungsten														
Ore	tonne	-	-	-	-	-	-	-	610000	5637250	1830000	-	8077250	8077250
Contained WO_3	tonne	-	-	-	-	-	-	-	1903	10304	3828	-	16035	16035
Vanadium														
Ore	tonne	293539	-	117416	410955	-	-	-	-	-	58708	-	58708	469663
Metal	tonne	1144.80	-	457.92	1602.72	-	-	-	-	-	228.96	-	228.96	1831.68

Figures rounded off.
Resources of ilmenite and zircon as per Department of Atomic Energy are provided in the respective Mineral Reviews.

Table – 3: Details of Exploration Activities in Maharashtra, 2011-12

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks
		Scale	Area (sq km)	No. of boreholes	Meterage		Reserves/Resources estimated
GSI							
Base Metal Chandrapur	Nai Dilli Dighori & Lal Heti Dugula	-	-	-	-	92	Reconnaissance stage investigation (G-4) was taken up during FS. 2010-12, to establish northern strike continuity of Thanewasana copper and associated base metal mineralisation. The area is occupied by gneiss and charnockite in the southern part & granite in the northern part that is traversed by NW-SE trending quartz-barite-chlorite veins. Mineralisation is noticed in the form of specks, blebs and disseminations of sulphides in the quartz-chlorite veins in the shear zone. Soil sampling was carried out in grid pattern in all the blocks. Analytical results of 26 bedrock samples from this blocks show copper values from 10 ppm to 1500 ppm. 22 nos of PTS samples from Dugala block show Cu values from 10 ppm to 80 ppm and 44 nos of PTS samples from Nai Dilli block show Cu values from 10 ppm to 2200 ppm. Cu values in 94 soil samples from Dugala and Nai Dilli areas range between 10 ppm to 1975 ppm. Ore microscopic study reveals the presence of chalcopyrite, pyrite and covellite in quartz-chlorite veins and also inclusion of chalcopyrite found within magnetite. Different Cu ore phases like chalcopyrite, bornite, chalcocite as well as Au and Ag phase have been identified in SEM-EDX study. The work has been completed.

(Contd.)

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks
		Scale	Area (sq km)	No. of boreholes	Meterage		Reserves/Resources estimated
GSI							
Bauxite Sindhudurg & Ratnagiri	River Voghotan	-	-	-	-	-	Reconnaissance stage investigation (G-4) was taken up during FS 2010-12 in the lateritic terrain to search for bauxite potential. In the study area of Konkan, the occurrence of laterites is controlled by ENE-WSW trending lineaments presently drained by River Vaghotan in the south and River Kodavli in the north. With the objective of locating the bauxite rich zones within the laterites, sampling was carried out in areas with thick laterite cover from NE of Hathivale to Sagve and Vijaydurg in the SW. Profile sampling has been carried out in Hativale and Arekarwadi areas where bauxite enrichment is seen at depths greater than Sm. The upper zones are ferruginous in nature. Area SE of Hativale and areas around Nanarwadi show bauxitic nature at shallow levels. Sampling has been done in the intervening areas of explored blocks and to the south of Vaghotan River. The analytical results of samples are awaited. The work has been completed.
Coal							
Yavatmal	Dewala Mangali	-	-	2	-	-	Prospecting stage (G-3) regional exploration initiated during FS 2008-09 has been continuing to establish the strike continuity of Barakar coal seams, already recorded in Asthona-Kothurla-Mangli area in the northwest below the Deccan Traps under favourable structural set up and to assess the coal resource potentiality of the area. One coal seam of 0.60 m in thickness was intersected at 459.40 m depth in Barakar Formation. The work is in progress.

(Contd.)

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks
		Scale	Area (sq km)	No. of boreholes	Meterage		Reserves/Resources estimated
GSI							
Manganese Nagpur	Parseoni	-	-	02	-	62	Prospecting stage investigation (G-3) initiated during FS 2009-10 was continued in collaboration with DGM, Maharashtra to establish manganese ore horizons west of Parseoni mines. The area is occupied by Precambrian metasediments of Sausar Group comprising calc gneiss (Lohangi Formation) and gametiferrous muscovite-quartz-biotite schist (Mansar Formation) with manganese ore horizons. Out of 62 surface bed rock samples analysed for manganese, Mn values range between 9.88 to 43.05% in nineteen samples and remaining samples show <5.40% Mn. Out of 38 pits /trenches samples range of 2 samples is between 10.50 to 41.67% Mn and remaining samples show <5.35% Mn. The gravity and magnetic survey had been conducted in both Savali and Mohagaon blocks and significant gravity and magnetic anomalies have brought out. Some of these anomalies have been recommended for testing manganese mineralisation by shallow drilling under collaborative work and completed two boreholes in Savali and Mohagaon blocks. However the drilling has not intersected any encouraging zone of mineralisation. The analytical results are awaited. The work has been completed.

(Contd.)

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks
		Scale	Area (sq km)	No. of boreholes	Meterage		Reserves/Resources estimated
GSI							
PGE Sindhudurg	Kankvali-Janoli	-	-	-	-	-	Reconnaissance stage investigation (G-4) was taken up to delineate zones of PGE, Ni and Cr mineralisation within the mafic-ultramafics sequence of Sindhudurg belt. The area comprises gneiss-migmatite rocks containing the dismembered lenticular bodies of banded iron formations (BIF) and mafic-ultramafic suite of rocks of Precambrian age. At places basalts of Deccan Volcanic Province cap the entire Precambrian rock assemblage. The mafic-ultramafic suite is characterised by compositional variations within itself and the ternary plots designate them as Stratiform complexes and layered intrusions. The chromite deposits Kankvali, Janoli and Vagde, occurs within mafic-ultramafic suites in the area, and these were not tested for noble and precious metal association in the past. During the present work groove samples were collected across all the ultramafic bodies of Vagde as well as Janoli area. The sample of ultramafic schist (talc tremolite schist) collected from an abandoned chromite mine gives high PGE concentration (650 ppb). Chromitite analysed higher concentration (805 ppb) and remaining talc-tremolite-schist, and serpentinite- schist shows PGE concentrations in decreasing order. Nickel values ranging from 0.12 to 0.30% (n=5) was recorded mainly in chromiferous serpentinite. The chromiferous tremolite schist samples, traced to the north of Vagde gives 2.9% Cr; 791 ppm Ni and 243 ppb PGE. Microprobe studies revealed the presence of Ni-Fe-S, Fe &Cu-Fe-S metallic phase. A sample from talc tremolite schist has yielded 251 ppb PGE (Pt as major PGE), Cr-535ppm, Ni-573 ppm. The item has been completed.

(Contd.)

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks
		Scale	Area (sq km)	No. of boreholes	Meterage		Reserves/Resources estimated
PGE							
Chandrapur	Heti-	-	-	-	-	4	Prospecting stage (G3) investigation was taken up during the FS 2010-12 in western Bastar craton in the mafic ultramafics of this area. SEM-EDX studies of drill core samples from this area identified Moncheite (PtPdTe) and gold grains in association with pyrrhotite-pentalndite chalcopyrite-mileerite-siejenite, galena sphalerite- casiterite-barite, which were later confirmed by EPMA studies. Profuse sphalerite C barite minerals of 2-3 micron size grains are associated with Nickel and PGE mineralisation in drill core samples. So far analytical results of PGE received from different laboratories are not encouraging. But four samples of 1 m width show value of Ni as 335, 414, 428, 571 ppm Ni in BH-3. The work has been completed.
MOIL							
Manganese Bhandara	Chikla	-	-	-	08	1351	Strike length & depth of the deposit was found to be 2100 m & 248.25 m respectively. As on 1.4.2012, the total manganese ore resources were estimated at 5.10 million tonnes of 25%-38% Mn.
-do-	Dongri-Buzurg	-	-	-	03	600	Strike length & depth of the deposit was found out to be 2150 m & 230 m respectively. As on 1.4.2012, the total manganese ore resources were estimated at 11.90 million tonnes.
-do- Nagpur	Gumgaon	-	-	-	047	635	Strike length & depth of the deposit was found to be 900 m & 238 m respectively. As on 1.4.2012, the total manganese ore resources were estimated at 4.11 million tonnes.

(Contd.)

Table - 3 (Concld.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks
		Scale	Area (sq km)	No. of boreholes	Meterage		Reserves/Resources estimated
MOIL							
Manganese Bhandara	Kandri	-	-	15	3561.7	-	Strike length & depth of the deposit was found out to be 600 m & 210 m respectively. As on 1.4.2012, the total manganese ore resources were estimated at 5.53 million tonnes of 25% - 48% Mn grade.
-do-	Mansar	-	-	-	-	-	Strike length & depth of the deposit was found to be 2.7 km & 101 m respectively. As on 1.4.2012, the total manganese ore resources were estimated at 4.64 million tonnes of 25% - 48% Mn grade.

Production

The value of mineral production in Maharashtra during 2011-12 at ₹ 6,294 crore decreased by 2% as compared to that in the previous year. Maharashtra accounted for 2% of the total value of mineral production in the country during the year under review. It was the largest producer of manganese ore (28%) and fluorite (56) during 2011-12 in the country. It is the second largest producer of sand (others) (17%) and third largest producer of bauxite with 15% share in the national output of the mineral. During the year, Maharashtra has emerged as the third largest producer of sulphur (with 14%) due to commissioning of a new oil refinery by BPCL in the State. Coal alone contributed 84%, manganese ore 7% and iron ore and limestone 2% each of the total value of mineral production in the state during the year under review.

Among the important minerals, the production of quartz increased by about double, dolomite 97%, shale 19%, sand (others) 16%, limestone 14% and silica sand 9% whereas fall in production was reported in manganese ore (3%), iron ore (4%), bauxite (9%), quartzite (21%), pyrophyllite (29%), fluorite (58%) and sillimanite (79%). A small quantity of laterite production was also reported in the current year (Table-4).

The production value of minor minerals was estimated at ₹ 213 crore for the year 2011-12.

The number of reporting mines was 154 in 2011-12 as against 161 in the previous year.

The index of mineral production in Maharashtra (base 2004-05 = 100) in 2011-12 was 113.63 as compared to 114.12 in the previous year.

Mineral-based Industry

The important large and medium-scale mineral-based industries in the organised sector in the State are given in Table-5.

Table – 4 : Mineral Production in Maharashtra, 2009-10 to 2011-12
(Excluding Atomic Minerals)

(Value in ₹ '000)

Mineral	Unit	2009-10			2010-11			2011-12 (P)		
		No. of mines	Quantity	Value	No. of mines	Quantity	Value	No. of mines	Quantity	Value
All Minerals		**158**		**58641888**	**161**		**63890822**	**154**		**62941524**
Coal	'000t	55	41005	50887500	55	39336	53628800	57*	39159	53112600
Bauxite	t	13	1985006	628556	15	2133736	549201	13	1937898	505268
Chromite	t	1	66	489	-	-	-	-	-	-
Iron Ore	'000t	12	283	221777	15	1525	1332628	14	1470	1302353
Manganese Ore	t	15	613520	4618651	20	672828	4984603	19	649898	4347624
Corundum	kg	-	6600	20	-	-	-	-	-	-
Dolomite	t	5	76625	15566	6	64865	13867	6	127857	29095
Fireclay	t	2	6744	641	2	3334	391	2	9512	1284
Fluorite	t	1	4931	20473	1	6469	32456	1	2740	10645
Kyanite	t	3	1075	950	4	2407	2084	1	53	45
Sillimanite	t	2	9539	7093	2	4653	3652	2	984	1754
Laterite	t	2	108901	15615	-	-	-	1	6500	553
Limestone	'000t	26	9433	1069248	21	9905	1120117	19	11330	1347140
Pyrophyllite	t	-	1446	461	-	1485	368	-	1054	337
Quartz	t	4	12650	2761	4	10505	2363	4	30694	10557
Quartzite	t	-	2481	620	-	2455	614	-	1944	588
Silica Sand	t	15	271517	90831	13	256817	65828	12	281043	96396
Sand (others)	t	2	395910	26316	3	373746	17033	3	435159	23649
Shale	t	-	405085	17458	-	297375	9600	-	352872	24419
Sulphur#	t	-	-	-	-	-	-	-	54850	-
Minor Minerals@		-	-	1016862	-	-	2127217	-	-	2127217

Note: *The number of mines excludes minor minerals.*

** Relates to coal mines as on 31.03.2011.*

@ Figures for earlier years have been repeated as estimates wherever necessary, because of non-receipt of data.

Table – 5 : Principal Mineral-based Industries in Maharashtra

Industry/plant	Capacity ('000 tpy)
Abrasives	
Associated Abrasives Ltd, Nasik.	NA
Flexoplast Abrasives (I) Ltd, Chikalthana Dist. Aurangabad.	500000 (sq m)
Grindwell Norton Ltd, Mora, Uraon, Raigad.	NA
Aluminium products	
Hindalco, Recycling plant, Taloja.	50
Hindalco, Mouda, dist. Nagpur.	30 (rolling mill) 14 (conductor rod)
Asbestos Products	
Everest Building Products Ltd, Mulund.	NA
Hyderabad Industries Ltd, Musarane	60.0
Newkem Products Corp, Mumbai.	9.9
Cement	
ACC Ltd., Chanda, Dist. Chandrapur.	1000
Ambuja Cement Ltd, (Maratha Cement Works), Upparwahi, Chandrapur.	2850
Indo Rama Cement Ltd. Khar Kavari, Dist. Raigad (G).	1000
Manikgarh Cement, Gadchandur, Dist. Chandrapur.	1900
Orient Cement, Jalgaon (G).	800
Rajashree Cement, Hotgi (G).	1400
Ultra Tech Cement Ltd, Awarpur, Dist. Chandrapur.	3600
Ultra Tech Cement Ltd, (Narmada Cement), Ratnagiri Works (G), Dist. Ratnagiri.	400
Ceramics	
Four Field, Pimpri, Dist. Pune.	1.2
H & R Johnson (India) Ltd, Pen.	154.8
Joglekar Refractory & Ceramics Pvt Ltd, Rabale, Dist. Thane.	364.8

(Contd.)

Table - 5 (Contd.)

Industry/plant	Capacity ('000 tpy)
NITCO Tiles Ltd, Alibag.	64.8
NECO Ceramics, Nagpur.	8.1
Chemicals	
Borax Morarji Ltd, Ambarnath.	17 (borax) 6 (boric acid)
Century Rayon, Shahad, Dist. Thane.	25 (rayon yarn) 20 (caustic soda)
Foseco India Ltd, Sanswadi.	15 (foundry chemicals)
Gopalchand Rasayan, Tarapur, Dist. Thane.	41.3 (H_2SO_4)
MTZ Industries Ltd, Patalganga.	1.2 (sulphur)
National Peroxide Ltd, Kalyan, Dist. Thane.	1.4 (sodium per borate)
Sudarshan Chemical Ind. Ltd, Roha, Dist. Raigad	5.2 (pigments)
Tecil Chemical & Hydro Power Ltd, Mumbai.	30 (calcium carbide)
Zirconium Chemicals Pvt. Ltd, Taloja, Dist. Raigad.	0.3 (zirconium salt)
Copper Wire Rods	
HCL, Taloja.	60
Electrode	
GEE Ltd., Thane.	4.02 (Mill. m)
Electrolytic Manganese Dioxide	
MOIL, Dist. Bhandara.	1
Fertilizers	
BEC Fertilizer, Gunjakheda, Wardha.	66 (SSP) 33 (SAP) 45 (GSSP)
DFPCL-Taloja.	52.90 (N_2) 52.90 (P_2O_5)
MAIDCL, Nanded.	45 (NPK)
MAIDCL, Rasayani, Dist. Raigad.	45 (SSP)
MAIDCL, Pachora, Dist. Jalgaon.	50 (NPK)

(Contd.)

Table - 5 (Contd.)

Industry/plant	Capacity ('000 tpy)
MAIDCL, Wardha.	45 (NPK)
RCF-Trombay.	300 (NPK) 361 (ANP)
RCF-Thal, Alibag, Dist. Raigad.	1707 (urea)
VCMSL, Butibori, Dist. Nagpur.	42 (NPK)
VCMSL, Badnera Road, Dist. Amravati.	30 (NPK)
Pesticides	
Hindustan Insecticides Ltd, Rasaini, Dist. Raigad.	13.2
Pentacem, Kendgaon, Dist. Ahmednagar.	1.7
Glass	
Ace Glass Containers Ltd, Pimpri, Dist. Nasik.	NA
Apte Flasks & refills Pvt. Ltd, Raigaon.	1500
Astral Glass Pvt. Ltd, Igatpuri.	16.4
Empire Industries Ltd, (Vitrum Glass) Vikroli, Mumbai.	37.5
Hindustan National Glass & Industries Ltd, Nasik.	320 TPD
Paisa Fund Glass Works, Talegaon Dabhade.	0.06
The Mahalaxmi Glass Works Pvt. Ltd, Mumbai.	48.0
Foundry	
CP Foundry Works, Nagpur.	NA
Aditya Foundry Pvt Ltd, Nasik.	NA
S.M. Iron Works, Sinnar, Nasik.	NA
Iron & Steel	
JSW Ispat Steel Ltd, Dolvi, Raigad.	2240 (sinter) 1600 (DRI) 3000 (HRC) 3000 (CRC) 2000 (pig iron)
Lloyds Steel Ltd, Wardha.	600 (HRC) 350 (CRC) 250 (GPC)

(Contd.)

Table - 5 (Concld.)

Industry/plant	Capacity ('000 tpy)
Indian Seamless Steel & Alloys Ltd, Jejuri, Dist. Pune.	450 (seamless tubes) 350 (alloy & carbon steel)
Sunflag Iron & Steel Co. Ltd, Bhandara.	150 (sponge iron) 200 (alloy steel)
Usha Ispat Ltd, Satara, Sawantwadi.	300
Pig Iron	
Ispat Metallics India Ltd, Dolvi, Raigad.	2000
Tata Metalics Ltd (Usha Ispat Ltd, Redi), Dist. Sindhudurg.	300
Sponge Iron	
Ambey Iron Pvt. Ltd, Chincholi, Solapur.	45
Dhanalakshmi Sponge Iron, Daregaon, Dist. Jalana.	60
Lloyds Metals & Engineers, Ghugus, Chandrapur.	270
Vikram Ispat, Salav, Dist. Raigad.	900
Welspum Max Steel Ltd, Salav, Dist. Raigad.	900
Ferro-alloys	
Bharat Pulverising Mills Ltd, Mumbai.	0.2
Chandrapur Alloys Ltd, Chandrapur (formerly, Maharashtra Electrosmelt Ltd).	100
Natural Sugar & Allied Industries Ltd, Sai Nagar, Ranjani, Dist. Osmanabad.	11 MVA
Sunbel Alloys Co. Ltd, Thane-Belapur.	0.3
Welspun Maxsteel Ltd, Salav, Raigad.	90
Refractory	
ACE Refractories, Nagpur.	60
Petroleum Refinery	
BPCL, Mumbai.	12000
HPCL, Mumbai.	6500

(G) : *Grinding units.*