

STATE REVIEWS



# Indian Minerals Yearbook 2013

(Part- I)

**52<sup>nd</sup> Edition**

**STATE REVIEWS  
(Maharashtra)**

**(FINAL RELEASE)**

**GOVERNMENT OF INDIA  
MINISTRY OF MINES  
INDIAN BUREAU OF MINES**

Indira Bhavan, Civil Lines,  
NAGPUR – 440 001

PHONE/FAX NO. (0712) 2565471  
PBX : (0712) 2562649, 2560544, 2560648  
E-MAIL : [cme@ibm.gov.in](mailto:cme@ibm.gov.in)  
Website: [www.ibm.gov.in](http://www.ibm.gov.in)

**September, 2015**

## MAHARASHTRA

### Mineral Resources

Maharashtra is the second largest producer of kyanite and the second 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 Bhandara and 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 Bhandara, 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 2012-13 are furnished in Table - 3.

**Table – 2 : Reserves/Resources of Coal as on 1.4.2013 : Maharashtra**

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
<b>Total</b>	<b>5667.48</b>	<b>3186.35</b>	<b>2110.21</b>	<b>10964.04</b>
Wardha Valley	3604.85	1497.52	1424.07	6526.44
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, 2012-13.*

## STATE REVIEWS

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	52191	10524	49896	-	148732	174885	
China clay	'000 tonnes	-	-	-	-	418	256	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	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	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	28470	159309	1114112	-	1995262	2821860	
Manganese ore	'000 tonnes	10000	2210	108	12318	497	3010	-	1589	4655	84	21835	34153	
Marble	'000 tonnes	-	324	-	324	-	-	-	-	57642	-	57723	58047	
Mica	kg	-	-	-	-	-	-	65916000	-	15120000	-	81036000	81036000	
Ochre	tonne	22260	-	16000	38260	17680	38080	6010	6010	286000	-	454760	493020	

(Contd.)

Table - 1(Concl.d.)

Mineral	Unit	Reserves										Total resources (A+B)		
		Proved					Remaining resources							
		Proved STD 111	Probable STD121	STD122	Total (A)	Feasibility STD211	Pre-feasibility STD221	STD222	Measured STD331	Indicated STD332	Inferred STD333		Reconnaissance STD334	Total (B)
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 <sub>3</sub>	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.

## STATE REVIEWS

## STATE REVIEWS

**Table – 3: Details of Exploration Activities in Maharashtra, 2012-13**

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI Coal</b>							
Yavatmal	Dewala - Mangali (Wardha Valley Coalfield)	-	-	02	-	-	Prospecting stage (G-3) exploration initiated during the year 2008-09 has been continuing in this block of Wardha Valley Coalfield to establish the strike continuity of Barakar coal seams, already recorded in Asthona- Kothurla-Mangli area in the north-west below the Deccan Traps under favourable structural set up and to assess the coal resource potentiality of the area. During this period, two boreholes were drilled and one coal seam of 0.60 m in thickness was intersected at 459.40 m depth in Barakar Formation. The work is in progress.
- do -	Jhamkola	1 : 25,000	10.0	3	896.0	-	Regional exploration for coal (G-2 stage) was carried out in this area to establish Barakar coal seams below Deccan Trap, south-west of Parsoda-Ghonsa coal belt and to assess coal resource potentiality of the area. The borehole (BH-1) intersected Deccan traps, Motur Formation and Barakar Formation whereas the boreholes (BH-2) and (BH-3) intersected Deccan Traps and Motur Formation. The work is in progress.

(Contd.)

## STATE REVIEWS

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI</b>							
<b>Diamond</b>							
Nagpur & Bhandara	Tirodi & Amgaon	-	-	-	-	211	Reconnaissance stage investigation (G-4) was carried out for search of kimberlite clan of rocks based on diamond indicator minerals in Tirodi and Amgaon gneiss, Nagpur and Bhandara districts. Regionally, the area exposes Tirodi Gneissic Complex in the southern part and Amgaon Gneissic Complex in the south-eastern part. Rocks of Sausar Group are exposed in the northern part. Sulphide mineralisation (chalcopyrite & pyrite) was observed in mafic enclaves within the gneiss near Kindgipar area (21°31'53"; 79°58'42"; T.S. no. 550/14). Stream sediment samples, petrographic samples and petrochemical samples were collected during the period. The stream sediment samples were processed for heavy mineral separation at Dhargaon Beneficiation Plant. Magnetic minerals were separated from the processed stream sediment samples by hand magnet. The remaining part was treated with bromoform for separation of heavy minerals. Under binocular microscope, 85 grains of red & light pink garnet, diopside and ilmenite were picked up from stream sediment samples and analysed by SEM – EDX. The garnet grains are of low magnesian variety, while two grains show MgO content up to 7%. A diopside grain was identified, however, no chrome diopside has been recovered. EPMA study will be done for another 35 grains of garnet, ilmenite and spinel. The investigation has been completed.

(Contd.)

## STATE REVIEWS

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI</b>							
<b>Gold</b>							
Nagpur	Gothangaon-	1 : 10,000	50.0				Reconnaissance stage investigation (G-4) was carried out in Sakoli fold belt to explore the noble metal potentiality in the acid volcanic vents. Large scale mapping & detailed mapping was carried out in the area NW of Gothangaon. The area exposes massive rhyolite with flow banding, tadpole quartz and sulphide bearing quartz vein in foliated rhyolite, which indicates the proximal part of volcanic vent. Quartz veins contain pyrite, arsenopyrite and chalcopyrite, which are traced for 120 m. Sulphide mineralisation has been identified near old working of Rengatur and Marupar area within foliated rhyolite and quartz chlorite mica schist. The quantum of field achievement includes collection of soil samples, 100 cu. m of pitting/trenching and ground geophysical survey of 20.79 L km (gravity, magnetic, IP & resistivity). Ag and Au values are <2 ppm and <2 ppb respectively. Different ore phases like pyrite, chalcopyrite, arsenopyrite, covelite as well as Au and Ag alloy phase were identified in SEM-EDX study. The investigation has been terminated as the operational areas are within Tiger Reserve Forest.
	Goharli area	1 : 2,000	1.0	-	-	201	

(Contd.)

## STATE REVIEWS

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI</b> <b>PGE</b> Nandurbar & Dhule	Vadbare, Shanimandal & Khondaimali	1 : 12,500	75.0	-	-	-	Reconnaissance stage investigation (G-4) was carried out in Deccan basalt to locate and assess PGE and gold mineralisation and its potentiality of dykes from Deccan trap terrain. IRS-1D (FCC) images were studied as a part of the investigation. Based on the observations made in the aerial as well as ground reconnaissance, three blocks with higher frequency of dykes were identified for further study and sampling. The identified blocks are Vadbare, Shanimandal and Khondaimali. Area was covered by Large-Scale Mapping in the three blocks. A total of fifty eight dykes have been mapped with cumulative length of over 90 km. Minor pyrite and chalcopyrite are present in some of the dykes. SEM-EDX and EPMA studies of selected dyke rock samples revealed occurrence of PGE mineral (Sudburyite hosted in Niccolite) in dyke of Vadbare and an gold speck in dyke- of Shanimandal. Normally bed rock samples (BRS) are collected from each dyke maintaining the groove length of about 10 m. Considering that the dyke manifests visible mineral layering, smaller groove lengths of 2 and 0.5 m have been maintained for collection of BRS. The bed rock samples were collected to identify and assess PGE potential of the dykes. In addition, colluvial material and the first-order stream sediments originating from the dykes have been collected. However, during panning no visible grains of gold have been noticed.

(Contd.)

## STATE REVIEWS

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI RM/REE</b>							
Bhandara	Sausar- mobile belt	1 : 10,000	80.0	-	-	-	Reconnaissance stage investigation(G-4) was carried out for regional assessment of REE & RM with the objective to delineate pegmatite bodies within Sausar mobile belt and petrochemical characterization of the pegmatites for evaluation of REE and RM potentiality. The area comprises, dolomitic marble, quartzite, quartz mica schist, calc silicates and marble, which are occasionally intruded by granite, pegmatite and quartz veins. The pegmatites are aligned both along and across the regional foliation of the country rocks and varies in length from few centimetres to more than 0.5 km and width varying from 1 to 50 m. Pegmatites are of simple and complex types and are composed of quartz, K-feldspar, plagioclase and muscovite with or without tourmaline, garnet and beryl. Big columns of yellowish green coloured beryl are reported from the pegmatite of Mehandi village. The accessory minerals are zircon, monazite and opaque. SEM-EDX studies indicated the presence of REE minerals viz. monazite and xenotime. The analytical results indicate that the highest concentration of REE is 2470.48 ppm in the foliated granite from Ghuksi area. Pegmatite vein assay highest concentration of REE to be 1173.50 ppm. One stream sediment sample from north of Satrapur area shows REE of 1468.53 ppm. Analytical result also indicates Be and Rb concentration up to 601.7 ppm and 565 ppm.
<b>DGM Bauxite</b>							
Ratnagiri	Guhaghar area	-	-	-	-	-	The area wholly comprised of basalt which is overlain by laterite above 80-100 m countour level. The area shows existence of low grade bauxite & laterite.

(Contd.)

## STATE REVIEWS

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>DGM</b>							
<b>Coal</b>							
Chandrapur	Challbardi	-	-	-	1422.0	-	Based on the regional bore hole taken in this area coal seam with thickness of 5.20 m intersected at the depth of 355.05 m. Further drilling is essential to know the existence of coal. About 1.28 million tonnes of coal resources were estimated.
- do -	Nandori	-	-	-	1581.0	-	Exposures of Gondwanas & Kamthis were seen mostly in this area. Based on exploration, middle workable composite coal seam ranges in thickness 10 m - 18.60 m upto a depth 378.15 m was established. About 9.15 million tonnes of coal resources were estimated during the year. So far about 188.70 million tonnes resources were estimated.
- do -	Wilson	-	-	-	1096.0	-	Based on exploration workable composite coal seam ranges in thickness from 11 m-18 m within depth range 174 m to 342 m. About 11.14 million tonnes of coal resources were estimated during the year. So far 52.60 million tonnes resources were estimated.
<b>Nagpur</b>	Dawa- Phukeshwar	-	-	-	281.65	-	Main objective was to assess the quality & reserves of coal. Exploration work established five coal seams ranging 1.30 to 3.65 m. The depth range of coal seam ranges 30 m - 420 m. About 1.23 million tonnes of coal resources were estimated during the year. So far 9.84 million tonnes resources were estimated.
- do-	Nand- Panjrepar	-	-	-	4082.95	-	Main objective was to assess the quality & reserves of coal. Exploration work established six coal seams ranging 0.30 - 5.82 m in thickness up to a depth range from 50.25 m to 435.60 m. About 2.18 million tonnes of coal resources were estimated during the year. So far 29.40 million tonnes resources were estimated.

(Contd.)

## STATE REVIEWS

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>DGM</b>							
<b>Coal</b>							
Yavatmal	Adkoli- Khadakdoh	-	-	-	1231.50	-	Main objective was to assess the quality & reserves of coal. Exploration work established only one coal seams ranging in thickness from 4.81 m - 9.65 m within depth ranges 143 m to 250 m. About 0.36 million tonnes of coal resources were estimated during the year. So far 3.02 million tonnes resources were estimated.
<b>Construction minerals</b>							
Ahmednagar	Around Saewadi Todamalwadi	-	-	-	-	-	Main objective was to assess and to locate construction minerals & mineral of economic importance. The area is covered by Deccan trap which is suitable for excavating construction minerals which are located around the villages Kapurwadi, Wani & Sasewadi. Resources were not estimated.
<b>Manganese Ore</b>							
Nagpur	Parseoni- block	-	-	-	81.90	-	Main objective was to locate manganese ore & also to assess the quality & quantity. The analytical results borehole sample received shows that manganese encountered is of low grade. Resources were not estimated.
<b>Pyrophyllite/ sillimanite</b>							
Chandrapur	Walni - Khatgaon	-	-	-	633.05	-	Main objective of exploration was to assess the quantity & quality of sillimanite/pyrophyllite zone. As a result of work carried out presence of quartz-quartzite, pyrophyllite-sillimanite rock were noticed in the area. About 0.07 million tonnes of sillimanite / pyrophyllite resources were estimated during the year. So far 3.26 million tonnes resources were estimated.
<b>MOIL</b>							
<b>Manganese</b>							
Bhandara	Chikla	-	-	13	1636.30	-	Strike length & depth of the deposit were 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.
-do-	Dongri- Buzurg	-	-	03	402	-	Main objective of exploration was to prove ore body below 154 MRL. Strike length & depth of the deposit were found to be around 2200 m & 230 m, respectively. As on 1.4.2012, the total manganese ore resources were estimated at 11.90 million tonnes.

(Contd.)

## STATE REVIEWS

Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>MOIL</b>							
<b>Manganese</b>							
Nagpur	Gumgaon	-	-	04	829	-	Main objective of exploration was to prove ore body below (-)700 MRL. Strike length & depth of the deposit were found to be around 900 m & 238 m, respectively.
- do -	Kandri	-	-	03	769	-	Main objective of exploration was to prove the ore body below (-) 650 MRL. Strike length & depth of the deposit were found out to be around 600 m & 210 m, respectively. As on 1.4.2012, the total manganese ore resources were estimated at 5.53 million tonnes.
-do-	Mansar	-	-	01	160	-	Main objective of exploration was to prove the ore body below (-)230 MRL. Strike length & depth of the deposit were found out to be around 2.7 km & 101 m, respectively. As on 1.4.2012, the total manganese ore resources were estimated at 4.64 million tonnes.

**Production**

The value of mineral production in Maharashtra during 2012-13 at ₹14,755 crore increased 7% as compared to that in the previous year. Maharashtra with a share of 5% in the total value of mineral production during the year under review, occupied seventh position in the country. It was the sole producer of fluorite during 2012-13 and second largest producer of manganese ore and sand (others) (29% each), quartzite (14%) and kyanite (5%) in the country. It is also the third largest producer of sulphur (10%) and fourth largest producer of bauxite (13%) and shale (11%) in the national output of the mineral. Coal alone contributed 42%, manganese ore 3% and iron ore and limestone about 1% each of the total value of mineral production in the state during the year under review.

Among the important minerals, the production of dolomite increased to more than double. The production also increased in quartz (93%), sand

(others) (73%), quartzite (33%), fluorite (7%), manganese ore (4%), sillimanite and silica sand (3% each) during the year. However, a fall in production was reported in kyanite (4%), bauxite and sulphur (14% each), shale (17%), fireclay (21%), iron ore (22%), pyrophyllite (33%) and laterite (38%) as compared to the previous year. (Table-4).

The production value of minor minerals was estimated at ₹7,664 crore for the year 2012-13.

The number of reporting mines was 147 in 2012-13 as against 158 in the previous year.

The index of mineral production in Maharashtra (base 2004-05 = 100) in 2012-13 and in the previous year was 114.1.

**Mineral-based Industry**

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

## STATE REVIEWS

**Table – 4 : Mineral Production in Maharashtra, 2010-11 to 2012-13  
(Excluding Atomic Minerals)**

(Value in ₹'000)

Mineral	Unit	2010-11			2011-12			2012-13 (P)		
		No. of mines	Quantity	Value	No. of mines	Quantity	Value	No. of mines	Quantity	Value
<b>All Minerals</b>		<b>161</b>	<b>132903175</b>		<b>158</b>	<b>137908418</b>		<b>147</b>	<b>147547061</b>	
Coal	'000t	55	39336	53628800	57	39159	53112600	58	39134	62356800
Bauxite	t	15	2133736	549201	16	2285443	651353	15	1969843	655045
Iron Ore	'000t	15	1525	1332628	14	1539	1571658	11	1193	1186065
Manganese Ore	t	20	672828	4984603	19	646238	4207142	18	674628	4775282
Corundum	kg	-	-	-	-	37000	130	-	-	-
Dolomite	t	6	64865	13867	6	127857	33125	4	274368	67350
Fireclay	t	2	3334	391	2	9512	1284	1	7547	1073
Fluorite (graded)	t	1	6469	32456	1	2894	11133	1	3107	13448
Kyanite	t	4	2407	2084	2	53	45	3	51	45
Sillimanite	t	2	4653	3652	2	2520	4135	2	2590	3856
Laterite	t	-	-	-	1	6500	553	1	4000	552
Limestone	'000t	21	9905	1120117	19	12281	1516232	14	11927	1639506
Pyrophyllite	t	-	1485	368	-	1054	337	-	705	245
Quartz	t	4	10505	2363	4	5315	2658	5	10267	8508
Quartzite	t	-	2455	614	-	37630	21111	-	50035	37302
Silica Sand	t	13	256817	65828	12	236307	75652	11	243156	88953
Sand (others)	t	3	373746	17033	3	435159	23628	3	750877	34771
Shale	t	-	297375	9600	-	419776	31363	-	346459	33981
Sulphur	t	-	-	-	-	54850	-	-	46991	-
Minor Minerals@		-	-	71139570	-	-	76644279	-	-	76644279

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

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

## STATE REVIEWS

**Table – 5 : Principal Mineral-based Industries in Maharashtra**

Industry/plant	Capacity ('000 tpy)
<b>Abrasives</b>	
Associated Abrasives Ltd, Nashik.	NA
Flexoplast Abrasives (I) Ltd, Chikalthana Dist. Aurangabad.	500000 (sq m)
Grindwell Norton Ltd, Mora, Uraon, Raigad.	NA
<b>Aluminium products</b>	
Hindalco, Recycling plant, Talaja.	50
Hindalco, Mouda, dist. Nagpur.	30 (rolling mill) 14 (conductor rod)
<b>Asbestos Products</b>	
Everest Building Products Ltd, Mulund.	NA
Hyderabad Industries Ltd, Musarane Newkem Products Corp, Mumbai.	60.0 9.9
<b>Cement</b>	
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
<b>Ceramics</b>	
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
<b>Chemicals</b>	
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 <sub>2</sub> SO <sub>4</sub> )
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, Talaja, Dist. Raigad.	0.3 (zirconium salt)
<b>Copper Wire Rods</b>	
HCL, Talaja.	60
<b>Electrode</b>	
GEE Ltd., Thane.	4.02 (Mill. m)
<b>Electrolytic Manganese Dioxide</b>	
MOIL, Dist. Bhandara.	1
<b>Fertilizers</b>	
BEC Fertilizer, Gunjakheda, Wardha.	66 (SSP) 33 (SAP) 45 (GSSP)
DFPCL-Talaja.	52.90 (N <sub>2</sub> ) 52.90 (P <sub>2</sub> O <sub>3</sub> )
MAIDCL, Nanded.	45 (NPK)
MAIDCL, Rasayani, Dist. Raigad.	45 (SSP)
MAIDCL, Pachora, Dist. Jalgaon.	50 (NPK)

(Contd.)

## STATE REVIEWS

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)
<b>Pesticides</b>	
Hindustan Insecticides Ltd, Rasaini, Dist. Raigad.	13.2
Pentacem, Kendgaon, Dist. Ahmednagar.	1.7
<b>Glass</b>	
Ace Glass Containers Ltd, Pimpri, Dist. Nashik.	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, Nashik.	320 TPD
Paisa Fund Glass Works, Talegaon Dabhade.	0.06
The Mahalaxmi Glass Works Pvt. Ltd, Mumbai.	48.0
<b>Foundry</b>	
CP Foundry Works, Nagpur.	NA
Aditya Foundry Pvt Ltd, Nashik.	NA
S.M. Iron Works, Sinnar, Nashik.	NA
<b>Iron &amp; Steel</b>	
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 (Concl.)

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
<b>Pig Iron</b>	
Ispat Metallics India Ltd, Dolvi, Raigad.	2000
Tata Metallics Ltd (Usha Ispat Ltd, Redi), Dist. Sindhudurg.	300
<b>Sponge Iron</b>	
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
<b>Ferro-alloys</b>	
Bharat Pulverising Mills Ltd, Mumbai.	0.2
Chandrapur Alloys Ltd, Chandrapur (formerly, Maharashtra Electros melt 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
<b>Refractory</b>	
ACE Refractories, Nagpur.	60
<b>Petroleum Refinery</b>	
BPCL, Mumbai.	12000
HPCL, Mumbai.	6500

(G) : Grinding units.

