

# Indian Minerals Yearbook 2021

(Part-I)

60<sup>th</sup> Edition

# STATE REVIEWS (Chhattisgarh)

(ADVANCE RELEASE)

GOVERNMENT OF INDIA MINISTRY OF MINES INDIAN BUREAU OF MINES

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# **CHHATTISGARH**

#### **Mineral Resources**

Chhattisgarh is the sole producer of tin concentrates and moulding sand. It is one of the leading producers of coal, dolomite, bauxite and iron ore. The State accounts for about 36% tin ore, 20% iron ore (haematite), 18% coal, 11% dolomite and 4% each diamond & marble resources of the country. Important mineral occurrences in the State are bauxite in Bastar, Bilaspur, Dantewada, Jashpur, Kanker, Kawardha (Kabirdham), Korba, Raigarh & Sarguja districts; china clay in Durg & Rajnandgaon districts; coal in Korea, Korba, Raigarh & Sarguja districts; dolomite in Bastar, Bilaspur, Durg, Janjgir-Champa, Raigarh & Raipur districts; and iron ore (haematite) in Bastar district, Bailadila deposit in Dantewada district, Chhote Dongar deposit in Kanker district, Rowghat, Chargaon, Metabodeli & Hahaladdi deposits in Rajnandgaon district and Boria Tibbu deposits in Dalli-Rajhara area, Durg district. Bailadila-Rowghat hill ranges in the State are considered to be one of the biggest iron ore fields in India. Limestone occurs in Bastar, Bilaspur, Durg, Janjgir-Champa, Kawardha (Kabirdham), Raigarh, Raipur & Rajnandgaon districts; quartzite in Durg, Raipur, Rajnandgaon & Raigarh districts; and talc/soapstone/steatite in Durg & Kanker districts.

Other minerals found in the State are corundum in Dantewada district; diamond and other gemstones in Raipur, Mahasamund & Dhamtari districts; fire clay in Bilaspur, Raigarh & Rajnandgaon districts; fluorite in Rajnandgaon district; garnet & marble in Bastar district; emerald & gold in Raipur district; granite in Bastar, Kanker & Raipur districts; quartz/silica sand in Durg, Jashpur, Raigarh, Raipur & Rajnandgaon districts; and tin in Bastar & Dantewada districts (Table - 1). The reserves/resources of coal are furnished in Table - 2.

# **Exploration & Development**

The details of exploration activities conducted by GSI, NMDC and State DGM during 2019-20 are furnished in Table - 3.

#### **Production**

Coal, Bauxite, Iron Ore, Tin Conc., Graphite (r.o.m.), Limestone and Moulding Sand are the major minerals produced in Chhattisgarh. The value of minor mineral's production is estimated as ₹ 1,037 crore for the year 2020-21. There was 100 reporting mines in 2020-21 in case of MCDR minerals (Table - 4).

# **Mineral-based Industry**

The present status of each mineral-based industry is not readily available. However, the principal mineral-based industries in the organised sector in the State are furnished in Table - 5.

Table - 1: Reserves/Resources of Minerals as on 1.4.2020: Chhattisgarh

			Rese	Reserves					Remaining	Remaining resources				E C
Mineral	Unit	Proved	Probable	able	Total	Feasibility	Pre-feasibility	sibility	Measured	Indicated	Inferred	Reconnaissance Total	ance Total	resources
		310 111	STD121	STD122	(A)	31D211	STD221	STD222	166716	31D332	CCCTIC	SILVIS	(a) +	(d A)
Bauxite	000' tonne	000' tonnes 19202	1073	3420	23695	14306	4727	46620	37763	75682	771015	18747	098896	992555
Diamond	carat	1	•	•	1	•	•	•	•	•	1304000	•	1304000	1304000
Fluorite	tonne	1	•	•	•	68859	153132	9288	185485	5573	126088	•	545455	545455
Garnet	tonne	•	•	•	•	•	•		•	•	28800	•	28800	28800
Gold														
Ore	tonne	1	•	•	•	•	•		•	000009	4241033	•	4841033	4841033
(Primary)														
Metal	tonne	1	•	1	1	1	1		•	1.8	3.71	•	5.51	5.51
(Primary)														
Graphite	tonne	5282	•	•	5282	•	1330		•	•	•	•	1330	6612
Iron Ore	000' tonne	000' tonnes1289443	99927	204363	1593732	348648	17215	46166	171548	552653	993652	868497	2998379	4592111
(Haematite)														
Iron Ore	000' tonne	000' tonnes 29319	•	46557	75876	12263		17782	•	•	•	•	30045	105921
(Magnetite)														
Limestone	000' tonne	000' tonnes1364595	65530	56227	1486351	1658144	903350	298720	1456579	1778018	5630057	•	11724867	13211218
Tin														
Ore	tonne	2075	•	25	2101	1791	2560	94	168457	559914	29062361	•	29795176	29797277
Metal	tonne	963.19	•	10.8	973.99	1122.95	603.94	29.07	813.29	209.43	13130.9	1	15909.58	16883.57

Figures rounded off. # Declared as minor mineral vide Gazette notification dated 10.02.2015.

Table - 2: Reserves/Resources of Coal as on 1.4.2021: Chhattisgarh

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total	31562	40425	1437	73424
Sohagpur	94	10	-	104
Sonhat	365	2304	2	2671
Jhilimili	228	39	-	267
Chirimiri	320.33	11	3 1	362
Bisrampur	1735	696	5	2436
East Bisrampur	=	165	-	165
Lakhanpur	456	3	-	459
Panchbahini	-	11	-	11
Hasdeo-Arand	2032	3273	223	5529
Sendurgarh	153	126.	-	279
Korba	7055	5763	159	12976
Mand-Raigarh	17978	24859	924	43761
Tatapani-Ramkola	1145	3165	93	4403

Source: Coal Directory of India, 2020-21.

Table – 3: Details of Exploration Activities in Chhattisgarh, 2020-21

Agency/	Location	Maj	pping	Dri	lling	C 1:	D 1
Mineral/ District		Scale	Area (sq. km)	No. of boreholes	Meterage	Sampling (No.)	Remarks Reserves/Resources estimated
GSI Diamond							
Diamond Jashpur, Sarguja & Raigarh	Kansabel, Chandarpur & Raigarh	-				124	Reconnaissance survey (G4) was taken up for search of source rocks of diamond around Kansabel, Chandarpur and Ludeg areas. The study area falls in the Chhotanagpur Gneissic Complex (CGC) in the proximity of the Raigarh Metamorphic Belt in Toposheet no 64N/10. Incidences of diamond and indicator minerals were reported from Ib and Mand Rivers by previous studies. The study area comprised of granite gneiss and other granitoids along with quartzite, quartz-mica schist, chlorite schist, metagabbro and metadolerite. A total of 96 stream sediment samples, 11. PCS, 11. PS samples and 04PTS from 1 Trench (3x1x1 m dimension) and 1 Pit (1x1x1 m dimension) were collected. Reconnaissance survey of the area reveal that the area was mainly covered by different varieties of granitoids. At places granites were altered into unakite.

(contd)

#### Table - 3 (contd)

Agency/ Mineral/	Location	Maj	pping	Dri	illing	Sampling	Remarks
District		Scale	Area (sq km)	No. of boreholes	Meterage	(No.)	Reserves/Resources estimated
							During panning of stream sediments samples from 3rd order streams in Hathgara, Pemla and Village Pongo near Kansabel found specks of gold grains.

#### Base metal

Mahasamund & Chhirrabhara- 1:12500 100 - - - - Raigarh Potapara area

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Reconnaissance survey to search for mineralisation of base metal and associated elements in Chhirrabhara-Potapara involved large scale mapping. LSM carried out in an area of 100 sq km on 1:12500 scale in Chirrabhara-Potapara Different lithounits observed in the area were granite gneiss of Bengpal Group followed by quartz-chlorite schist, talc-actinolite schist, massive amygdular metabasalt, pyroxenite and amphibolite of Baghmara Formation metarhyolite of Laghdabri Formation within Sonakhan Group followed by porphyritic granite and quartz vein of Dongargarh Formation followed by quartz vein as post orogenic intrusive within Dongargarh Granite followed by Glauconitic gritty sandstone of Kansapathar Formation and Shale of Chapordih Formation within Chandarpur Group. The available analytical value indicated presence of anomalous molybdenite and Pb mineralisation within smoky quartz vein hosted in Dongargarh Granite and within Dongargarh Granite along the contact zones. Three zones have been identified, i.e, Zone-I (near Village Kotendarha), Zone-II (near Village Bichhiya) and Zone-III (near Village Kapudih) based on the available chemical analysis data. Sample nos. CP/BRS/ 4 & CP/BRS/117 showed maximum value of molybdenum (950.41 and 1,210 ppm respectively) was from Smoky Quartz vein collected within Dongargarh granite near Village Sagarpali. The data statistics show variation with the minimum and maximum value of 0.85 ppm to 1,210 ppm. Molybdenum value

(contd)

Table - 3 (contd)

Agency/ Mineral/	Location	Мар	ping	Dri	lling	Sampling	Remarks
District		Scale	Area (sq km)	No. of boreholes	Meterage	(No.)	Reserves/Resources estimated

ranges from 145-1,210 ppm in 6 samples with highest value observed in CP/BRS/04 (950.41 ppm) and CP/ BRS/117 (1,210 ppm) respectively. Mo value ranged 179-632 ppm in 4 samples with highest value observed in CP/BRS/116 (632 ppm).

Surajpur & Toni-Kadaura 1:12500 265 Balarampur block

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Reconnaissance survey for base metal and associated mineralisation were carried out in Toni-Kadaura block, Surajpur and Balrampur districts of Chhattisgarh as part of regular project during FSP: 2020-21. Geologically, the area is located in western part of Chhotanagpur Gneissic Complex (CGC) and bounded by regional Balrampur-Tatapani Shear Zone (BTSZ) in north. The area is mainly occupied by CGC with older metasedimentary enclaves. Largescale mapping of 100 sq. km area covered on 1:12500 scale which showed that the dominant lithounits were foliated monzogranite with less deformed patches of syenite. Pitting/ trenching of 52.6 cu.m was carried out and 50 pit/trench sample submitted for analysis along with 111 bedrock samples, 22 petrochemical samples and 50 stream sediment samples. Also, 32 petrological samples were collected for petrographic studies. Analytical results of stream sediments samples (from vicinity of oxidised zone) received so far showed anomalous value of tungsten up to 555.42 ppm. Out of 111 BRS samples, data of 67 samples were received so far for base metal and some other elements. The maximum value of Zn is 0.14% and Pb is 0.19% in the study area. The concentration of Ti varied from 591 to 7,343 ppm. Nb with highest value of 209.87 ppm, Zr with highest value of 1,937 ppm, Nd with highest value of 392.55 ppm and V with a value of 509 ppm, were reported from the analytical results received so far.

(contd)

Table - 3 (contd)

Revatipur area

Agency/ Mineral/	Location	Map	ping	Dri	lling	Sampling	Remarks
District		Scale	Area (sq km)	No. of boreholes	Meterage	(No.)	Reserves/Resources estimated
Graphite Balrampur	Oranga –	1:4000	3.6	-	-	85	Preliminary exploration (G3) for

graphite was carried out in Oranga-Revatipur area. The study area falls in the northern part of Chhattisgarh, in Toposheet no. 64M/5 and belonged to Bilaspur-Raigarh-Surguja (BRS) metamorphic belt. The area mainly comprises of meta-sedimentary sequences of the Older Metamorphic Group and consisted of quartzite, quartz mica schist, graphite mica schist, calc silicate and amphibolite. An area of 3.6 sq. km. was covered by Detailed Mapping on 1:4000 scale followed by geophysical survey of 12 L.km. A total of 59.2 cu. m of trenching were carried out and 55 trench/pit samples were submitted for fixed carbon analysis. A total of 10 petrochemical samples (PCS) and 20 petrological samples (PS) were also submitted. In Borehole CBO-2, graphite mica schist of 9.7 m and 0.57 m thick were intersected. Analytical result of four graphite mica schist from Borehole no. CBO-2 revealed the fixed carbon content that ranged from 4.47% to 10.33%. In Borehole CBO-3, graphite was found associated with graphite mica schist with thickness varying from 1.99 m to 4.78 m and as intercalations within talc± chlorite schist with a thickness of a few cm to 2.03 m. Analytical results received for Borehole CBO- 3 indicated that out of the 26 graphite mica schist samples, 24 of them had fixed carbon content ranging from 2.3% to 10.19%. Two of the samples had values less than 2% due to intercalations. In Borehole CBO-4. graphite mica schist had thickness varying from 0.49m to 6.38m. Analytical results received for 9 graphite mica schist samples in CBO-4 indicated fixed carbon ranging from 2.56% to 9.92%. In Borehole CBO-5, graphite mica schist had thickness varying from 0.68 m to 6.14 m. In Borehole CBO-6, graphite mica schist had thickness varying from 0.2 m to 5.47 m. In Borehole CBO-7 the thickness of the ore body was 1.32 to 6.04 m. Fixed carbon analytical results of CBO-5, 6 & 7 have not been

Table	_ 3	(contd)
Table	- 5 1	(Conta)

Agency/	Location	Map	pping	Dri	lling	G 1'	p. 1
Mineral/ District		Scale	Area (sq km)	No. of boreholes	Meterage	Sampling (No.)	Remarks Reserves/Resources estimated
							received. Available chemical result of 18 trench samples revealed that graphite mica schist contained <1 to 14.62 % fixed carbon content, moisture content of 0.04 to 1.78%, volatile matter of 1.50 to 10.40% and ash content of 81.59 to 91.55%.
Bauxite Jashpur	Chichili block Kandai block	1:4000	4	13	197.65	-	The G3 preliminary exploration of bauxite was carried out with DM on 1:4000 scale covering an area of 4 sq

of on 1:4000 scale covering an area of 4 sq km around Village Chichili in TS. 64M/12 along with drilling in 200x200 m grid spacing. The Chichili block is a part of Pandrapat plateau which forms a marked topographical feature in the Jashpur district where occurrence of bauxite was reported. Geologically the study area comprised laterite, aluminious laterite and bauxite and Deccan basalts at the base of the scarp surface. The bauxite occurred as irregular lenticular bodies within the aluminous laterite/ laterite. A total of 197.65 m drilling were completed in 13 boreholes at 400 m X 400m spacing. During the drilling programme, two bauxite zones were demarcated in the 13 boreholes at a spacing of 200 X 200 m. The thickness of bauxite zone intersected in boreholes varied from 0.6 m to 2.2 m and bauxite was mainly located between RL from 1,091.62 m to 1,076.389. total of 81 core samples, 10. BRS, 10. PCS, 10. XRD, 05. of reactive silica. 05 nos. OM were collected and submitted for chemical analysis. The chemical analyses of BRS samples received showed  $\mathbf{A}_{2}\mathbf{O}_{3}$  varying from 48.07%to 59.57%, SiO, from 0.87% to 3.85% and MgO from 0.01% to 0.06%. It also showed good concentration of Ga (61 ppm to 118 ppm) and vanadium (676 ppm to 1256 ppm).

Table - 3 (contd)

Agency/	Location	Map	pping	Dri	lling	G 1'	D 1
Mineral/ District		Scale	Area (sq km)	No. of boreholes	Meterage	Sampling (No.)	Remarks Reserves/Resources estimated
CMDC Bauxite							CMDC carried out exploration in four mines, i.e, Kudaridih, Narmadapur, Sukjhar and Kamleshwarpur in Surguja district in Kabirdham district respectively. Objective of exploration was to meet the entire raw material demand of the present & proposed industries.
Surguja & Kabirdhan	Kudaridih,	1:1000	3.7	255	2934	-	In Kudaridih mine, exploration comprised geological & geophysical mapping of 3.70 sq. km area on 1:1000 scale & 3.70 sq. km area, respectively. A total of 255 boreholes were drilled to a cumulative depth of 2,934.0 m.
	Narmadapur,	1:1000	1.49	95	1061	-	In Narmadapur/Kunia mine, geophysical mapping along with geological mapping of 1.49 km area on 1:1000 scale was completed. A total of 95 boreholes were drilled to a cumulative depth of 1,061.0 m.
	Sukjhar	1:1000	2.94	109	1283	-	In Sukjhar mine, geophysical mapping along with geological mapping of 2.94 km area on 1:1000 scale was completed. A total of 109 boreholes were drilled to a cumulative depth of 1,283.0 m.
	Kamleshwarpur,	1:1000	1.47	197	2758		In Kamleshwarpur mine, geophysical mapping alongwith geological mapping of 1.47 km area on 1:1000 scale was completed and a total of 197 boreholes were drilled to a cumulative depth of 2,758.0 m. During the exploration, a total 3,603 samples were collected. So far in this mine, a total of 384 boreholes were drilled to a cumulative depth of 5,588.0 m. The total reserves/resources in Kamleshwarpur block (147.62 hectare) was estimated at about 4.46 million tonnes under Measured category and 0.70 million tonnes under indicated category.

Table -4: Mineral Production in Chhattisgarh, 2018-19 to 2020-21 (Excluding Atomic Minerals)

(Value in ₹'000)

	** **		2018-1	19		2019-	-20		2020	-21 (P)
Mineral	Unit	No. of mines	Quantit	y Value <sup>s</sup>	No. o	٠.	y Value <sup>s</sup>	No.	of Quant	tity Value <sup>§</sup>
All Minerals		105		117345916	102		118108145	100		154776623
Coal	'000t	-	161893	-	-	157745	-	-	158410	-
Bauxite	t	16	1502350	1607698	15	1565307	1609377	14	715296	751480
Iron Ore	'000t	18	34893	96985465	20	34728	99153323	21	36989	134222836
Tin Conc.	kg	6	21212	14627	6	15530	10337	6	16865	9413
Graphite (r.o.m.)	t	-	-	-	1	908	409	1	1701	1765
Limestone	'000t	62	42398	9663426	57	42699	10200663	54	40378	9416969
Moulding Sand	t	3	14805	4145	3	12905	3766	4	11737	3419
Minor Minerals		-	-	9070555	-	-	7130270	-	-	10370741

Table - 5 (contd)

Note: The number of mines excludes Fuel and minor minerals.

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

	Capacity	Industry/plant	Capacity ('000 tpy)
	('000 tpy)	Lafarge India Pvt. Ltd, Arasmeta, Distt Janjgir-Champa.	1.8
Aluminium			Raipur 550
Bharat Aluminium Co. Ltd (Unit I & II), Korba.	200# (Alumina) 570 (Aluminium)	Lafarge India Pvt. Ltd, Sonadih, Distt	1
(*Plants remained non-operational durin	` /	NUVOCO Vistas Co. Ltd Sonadih Cement Plant, Rasedi, Baloda Bazar	1000
Cement		,	2000
ACC Ltd, Jamul, Distt Durg.	2400	Shree Cement, Baloda Bazar, Distt Rai	•
Ambuja Cements Ltd, Bhatapara, Distt. Raipur.	3500	Shree Cement Ltd, Khapradih Simga, Balrampur.	3000
Bhilai Jaypee Cement Ltd,	2200	UltraTech Cement Ltd, Hirmi, Distt Rai	pur. 1900
Bhilai, Distt Durg (G).		UltraTech Cement Ltd, Rawan, Distt Ra	ipur. 2500
Century Cement, Baikunth, Distt Raipur.	2100	Charles Conon Ed, Raman, Bist Ra	2300
Century Textile & Industires Ltd,	2400	Chemical	
Tandwa, Tilda	2100	Indu Ragukul Food &	1.5 (Sodium Dicromate)
Emami Ltd, Baloda Bazar, Distt Raipur	2500	Chemical Pvt. Ltd,	2.7 (Sodium chromate)
•	3200 (clinkar)	Rajghatta, Kharsia	1.35 (Sodium sulphate)
Emami Ltd, Risda Baloda Bazar, Distt Raipur	2500	Electrode	1 /
Emami Cement Ltd, Risda Baloda Bazar	3000	Calcutta Electrode Pvt. Ltd, Bhanpuri, Raipur	7.40
J. K. Laxmi, Durg	2.7	Bianpari, Raipar	
J. K. Laxmi Cement Ltd, Malpurikhurd,	2400	Fertilizer	
khasadhe, Dhamdha		BEC Fertilizers, Sirgitti, Distt Bilaspur	850000
	(contd)		(contd)

<sup>\$</sup> Excludes the value of Fuel minerals.

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Table - 5	(contd)
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Table - 5 (contu)			Table - 5 (conta)	
Industry/plant		npacity 00 tpy)	Industry/plant	Capacity ('000 tpy)
Dharamsi Morarji Chemical Co. Ltd, Kumhari, Distt. Durg.	18	3 (SSP & H <sub>2</sub> SO <sub>4</sub> )	Godavari Power & Ispat Ltd, Siltara, Distt Raipur	495 2100 (pellets)
Khaitan Chemicals & Fertilizers Ltd, Distt Rajnandgaon.		66 (SSP) (H <sub>2</sub> SO <sub>4</sub> )	Gopal Sponge & Power Pvt Ltd, Siltara, Distt Raipur	30
Iron & Steel Bhilai Steel Plant, Bhilai	6334	(Sinters)	Gitanjali Ispat & Power Pvt Ltd, Sirgititi, Distt Bilaspur	10
,	4700 (	Pig iron)	GR Sponge & Power Ltd, Siltara, Distt Raipur	72
	3925 (crude/lique) 30 (Refractor)		Shree Hare Krishna Sponge Iron Ltd, Siltara, Distt Raipur	12000
Jindal Steel & Power Ltd, Raigarh	2500 1320 (Spor 8600 (Cru	_	Jai Shree Balaji Steel Pvt Ltd (HEG Ltd), Borai, Distt Durg	120 (Sponge iron)
Jayaswal NECO Industries Ltd,	·	steel) Pig iron)	Hi-Tech Power & Steel Ltd, Parsada, Distt Raipur	60
Siltara, Distt Raipur.	255 (Spor	nge iron) (pellets)	Khetan Sponge & Infrastructure Pvt. Ltd, Sarora, Distt Raipur	30
		0 (Steel)	Maa Kali Alloys (Ind.) Pvt Ltd, Pali, Distt Raig	arh 60
Monnet Ispat & Energy Ltd, Naharpalli, Raigarh	612.5 (	(Sinters) Pig iron) AS billet)	MSP Steel & Power Ltd, Raigarh	192 900 (pellets)
Sarda Energy & Minerals Ltd, (former Raipur Alloys & Steel Ltd), IGC,	450 (T	MT Bar) (Pellets)		300 i-finished Steel) (Finished Steel)
Siltara, Distt Raipur.	240 (Finish		Monnet Ispat & Energy Ltd, Naharpalli, Raigar	
Shri Bajrang Power & Ispat Ltd, Borjhara, Distt Raipur.	210 (Spor	nge iron) 0 (Steel)	NR Sponge Pvt. Ltd, Raipur	90
Borjiara, Biste Raipui.		(pellets)	Nalwa Steel & Power Ltd, Taraimal, Raigarh	198
Sponge Iron		210	Nakoda Ispat Ltd, Siltara, Raipur	171
A.P.I. Ispat & Power Tech. Pvt. Ltd, Siltara Billets, Raipur		210	Niros Ispat Pvt. Ltd, Hathkhoj, Bhilai	97.5
Alliance Integrated Metallics Ltd, Bemta, Distt Raipur.		500	Nova Iron & Steel Ltd, Dagori, Bilaspur	150
Anjani Steel Ltd, Ujalpur, Distt Raigar	·h	108	Nutan Ispat & Power Ltd, Jaroda, Raipur	60
Arti Sponge & Power Ltd, Siltara, Dist	t Raipur	60	PD Industries Pvt. Ltd, Siltara, Raipur	60
Ambika Ispat (I) Pvt Ltd, Tarainal, Di	stt Raigarh	30	Prakash Industries Ltd, Hathenewra,	1000
Baldev Alloys Pvt. Ltd, Siltara, Raipu	r	30	Janjgir-Champa	
Bhagavati Power & Steel Pvt Ltd, Siltara, Distt Raipur		60	Raigarh Ispat & Power Ltd, Delari, Distt Raigar	
B.S. Sponge Pvt Ltd, Taraimal, Raigar	h	90	Rameswaram Steel & Power Ltd, Gharghoda, Distt Raigarh	72
Crest Steel & Power Pvt. Ltd, IGC Borai, Distt Durg		231	Real Ispat and Power Ltd, Borjhara, Raipur. 460 (	60 (Finished Steel)
Devi Iron & Power Pvt Ltd, Tandira,	Distt Raipur	90	Sarda Energy & Minerals Ltd, Mandhar, Raipur	150
Drolia Electro Steel Pvt Ltd, Siltara, R	laipur	66	Hanumant Alloys (India) Pvt. Ltd,	16.5
Euro Pratik Ispat Pvt Ltd, Charoda, D	istt Raipur	30	Hardikala, Distt Bilaspur	
Gravity Treksim Pvt Ltd, Siltara, Dist	t Raipur	30	Shivalaya Ispat & Power Pvt Ltd, Guma, Distt Raipur	90
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Table - 5 (concld)

Industry/plant	Capacity ('000 tpy)	, i	Capacity 000 tpy)	
Shivshakti Steel Pvt. Ltd, Chakradharpur,	97.5	Hira Ferro alloys Ltd, Urla, Distt Raipur	61.5	
Distt Raigarh		Jindal Steel & Power Ltd, Kharsia, Distt Raigarh	36	
Shree Shyam Ispat (India) Pvt. Ltd, Taraimal, Raigarh	120		00 (Pellets) ponge Iron)	
Singhal Enterprises Pvt Ltd, Taraimal, Distt Raigarh	253.5	Electricity Co. Ltd) 410 (Finish Siltara, Distt Raipur 150 (Silico & Ferro-		
Singhal Energy Pvt. Ltd, Taraimal, Raigarh	60	Nav-chrome Ltd, Urla, Distt Raipur	50	
Sree Nakoda Ispat Ltd, Siltara, Distt Raipur	66	Orion Ferroalloy Pvt. Ltd	8	
Sunil Sponge Iron Ltd, Chiraipani, Distt Raigarh	60	Punjipathra, Gharghora		
Sunil Sponge Pvt. Ltd, Munrethi, Dharsiwa	60	V.A. Power & Steel Pvt. Ltd Punjipathra, Gharghoda 14	8.1(Fe-Si) .4(Si-Mn)	
Topworth Steel Pvt Ltd, Rasmada, Distt Durg	165	Manganese Oxide	,	
Trimula Sponge Iron Pvt Ltd, Siltara, Raipur	30	Vandana Allied Minerals and alloy Bodegaon, Durg	3.6	
Vandana Global Ltd, Siltara, Distt Raipur	216	Bodegaon, Duig		
Vasvani Industries Ltd, Siltara, Distt Raipur	90	Refractory		
Vidhyan Minerals India Pvt. Ltd, Bilaspur	30	SAIL Refractory Unit (formerly Bharat Refractories Ltd), Bhilai, Distt Durg	60	
Ferro Alloys		Vishva Vishal Engineering Ltd, Bhilai, Distt Durg	8.2	
Alok Ferro Alloys Ltd, Urla, Raipur	18	(G); Grinding Unit		
Deepak Ferro Alloys Ltd, Urla, Distt Raipur	5	Note: Data, not readily available for fertilizer and cement industries on respective websites, is taken from Indian Fertilizer Scenario, FAI Statistics, and Survey of Cement Industry & Directory, respectively.		
Indsil Energy & Electro Chemical Ltd, Urla, Distt Raipur	19.2			
	(contd)	# plant remained unoperational during the year		