Indian Minerals Yearbook 2022

(Part- I)

61st Edition

STATE REVIEWS
(Tamil Nadu)

(ADVANCE RELEASE)

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MINISTRY OF MINES
INDIAN BUREAU OF MINES

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TAMIL NADU

Mineral Resources

Tamil Nadu is the leading holder of country's resources of vermiculite, molybdenum, dunite, rutile, garnet and ilmenite. The State accounts for the country's 79% vermiculite, 65% dunite, 48% garnet, 52% molybdenum, 25% sillimanite and 16% fire clay resources. As per AMD of the Department of Atomic Energy, Tamil Nadu accounted for 167.70 million tonnes of ilmenite resources and 7.85 million tonnes of rutile resources.

Important minerals that are found to occur in the State are: **bauxite** in Dindigul, Namakkal, Nilgiris & Salem districts; **dunite/pyroxenite** in Salem district; **felspar** in Coimbatore, Dindigul, Erode, Kanchipuram, Karur, Namakkal, Salem & Tiruchirapalli districts; **fireclay** in Cuddalore, Kanchipuram, Perambalur, Pudukottai, Sivaganga, Thiruvallur, Tiruchirapalli, Vellore & Villupuram districts; **garnet** in Ramanathapuram, Tiruchirapalli, Tiruvarur, Kanyakumari, Thanjavur & Tirunelveli districts; **granite** in Dharmapuri, Erode, Kanchipuram, Madurai, Salem, Thiruvannamalai, Tiruchirapalli, Tirunelveli, Vellore & Villupuram districts; **graphite** in Madurai, Ramnathapuram, Sivaganga & Vellore districts; and **gypsum** in Coimbatore, Perambalur, Ramnathapuram, Tiruchirapalli, Tirunelveli, Thoothukudi & Virudhunagar districts. Similarly, occurrences of minerals, such as, **lignite** deposits are located in Cuddalore, Ariyalur, Thanjavur, Thiruvarur, Nagapattinam, Ramnad, Shivganga & Ramanathapuram districts; **limestone** in Coimbatore, Cuddalore, Dindigul, Kanchipuram, Karur, Madurai, Nagapattinam, Namakkal, Perambalur, Ramnathapuram, Salem, Thiruvallur, Tiruchirapalli, Tirunelveli, Vellore, Villupuram & Virudhunagar districts; **magnesite** in Coimbatore, Dharmapuri, Karur, Namakkal, Nilgiri, Salem, Tiruchirapalli, Tirunelveli & Vellore districts; **quartz/silica sand** in Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Kanchipuram, Karur, Madurai, Namakkal, Periyar, Perambalur, Salem, Thiruvallur, Thiruvarur, Nagapattinam, Tiruchirapalli, Villupuram, Virudhunagar & Vellore districts; **talc/steatite/soapstone** in Coimbatore, Salem, Tiruchirapalli & Vellore districts; **titanium minerals** in Kanyakumari, Nagapattinam, Ramanathapuram, Thiruvallur, Tirunelveli & Thoothukudi districts; **vermiculite** in Dharmapuri, Tiruchirapalli & Vellore districts; and **zircon** in Kanyakumari district have been established.

Other minerals that occur in the State are: **apatite** in Dharmapuri & Vellore districts; **barytes** in Erode, Madurai, Perambalur, Tirunelveli & Vellore districts; **bentonite** in Chengai-Anna district; **calcite** in Salem district; **china clay** in Cuddalore, Dharmapuri, Kanchipuram, Nilgiris, Sivaganga, Thiruvallur, Tiruvannamalai, Tiruchirapalli & Villupuram districts; **chromite** in Coimbatore & Salem districts; **copper, lead-zinc & silver** in Villupuram district; **corundum & gold** in Dharmapuri district; **dolomite** in Salem & Tirunelveli districts; **emerald** in Coimbatore district; **iron ore (magnetite)** in Dharmapuri, Erode, Nilgiris, Salem, Thiruvannamalai, Tiruchirapalli & Villupuram districts; **kyanite** in Kanyakumari & Tirunelveli districts; **molybdenum** in Dharmapuri, Dindigul & Vellore districts; **pyrite** in Vellore district; **sillimanite** in Kanyakumari, Karur & Tirunelveli districts; **tungsten** in Madurai & Dindigul districts; and **wollastonite** in Dharmapuri & Tirunelveli districts (Table-1). District-wise reserves/resources of lignite are provided in Table-2.

In addition to the above, petroleum and natural gas deposits are found to be located in Cauvery basin area.

Exploration & Development

The details of exploration activities conducted by GSI for Gold, PGE, REE & RM, Graphite and Lignite during 2021-22 are furnished in Table - 3.

Production

The principal minerals produced in the state were Lignite, Natural Gas (utilised), Petroleum (crude), Limestone, Magnesite and Vermiculite in 2021-22.

The value of minor minerals' production was estimated at ₹226 crore for the year 2021-22.

The number of reporting mines was 86 in 2021-22 in case of MCDR minerals.(Table-4).

Table – 1: Reserves/Resources of Minerals as on 1.4.2020: Tamil Nadu

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						
Apatite	Tonne	-	-	-	-	-	-	-	-	-	240000	-	240000	240000
Bauxite	000 Tonnes	-	-	-	-	-	1141	3564	960	10084	8363	-	24112	24112
Chromite	000 Tonnes	-	-	-	-	-	-	-	7	-	276	-	282	282
Copper														
Ore	000 Tonnes	-	-	-	-	-	-	-	200	590	-	-	790	790
Metal	000 Tonnes	-	-	-	-	-	-	-	1.08	2.73	-	-	3.81	3.81
Garnet	Tonne	52538	-	-	52538	266555	1153976	3094811	36000	1408995	19871019	-	25831356	25883894
Gold														
Ore (Primary)	Tonne	-	-	-	-	-	-	-	-	-	67000	-	67000	67000
Metal (Primary)	Tonne	-	-	-	-	-	-	-	-	-	1	-	1	1
Graphite	Tonne	2289743	-	810450	3100193	39	39535	2486	29136	647500	5886390	-	6605086	9705279
Iron Ore (Magnetite)	000 Tonnes	-	-	-	-	-	-	-	-	169388	110728	248785	528901	528901
Kyanite	Tonne	1683	-	-	1683	578	117	-	700	167000	79434	-	247829	249512
Lead-Zinc Ore														
Ore	000 Tonnes	-	-	-	-	-	-	-	200	590	-	-	790	790
Lead metal	000 Tonnes	-	-	-	-	-	-	-	2.26	5.48	-	-	7.74	7.74
Zinc metal	000 Tonnes	-	-	-	-	-	-	-	11.76	24.76	-	-	36.52	36.52
Limestone	000 Tonnes	537272	3836	5915	547024	317801	239742	120594	95885	114647	687457	900	1577025	2124049
Magnesite	000 Tonnes	48760	6324	-	55084	71885	21695	3944	17	737	2124	-	100402	155486
Molybdenum														
Ore	Tonne	-	-	-	-	-	1500000	-	2382000	3269204	10563494	167800	17882498	17882498
Contained MOS_2	Tonne	-	-	-	-	-	1050	-	1599.54	1733.29	5718.69	50.34	10151.86	10151.86
Pt. Group of Metals	Tonne	-	-	-	-	-	-	-	-	0.61	0.72	0.36	1.69	1.69

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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						
Pyrite	000 Tonnes	-	-	-	-	-	-	-	-	-	24	-	24	24
Sillimanite	Tonne	134030	-	-	134030	55288	12336	13529146	92400	-	3529577	-	17218747	17352777
Silver														
Ore	Tonne	-	-	-	-	-	-	-	-	330000	460000	-	790000	790000
Metal	Tonne	-	-	-	-	-	-	-	-	15.87	26.68	-	42.55	42.55
Titanium	Tonne	670221	-	-	670221	306876	60463	-	488404	19687147	93134394	-	113677284	114347505
Tungsten														
Ore	Tonne	-	-	-	-	-	-	-	-	-	-	250000	250000	250000
Contained WO_3	Tonne	-	-	-	-	-	-	-	-	-	-	50	50	50
Vermiculite	Tonne	1516803	-	-	1516803	-	-	-	-	-	343051	-	343051	1859854
Wollastonite	Tonne	-	-	-	-	-	-	-	-	-	3533	-	3533	3533
Zircon	Tonne	36285	-	-	36285	22108	4225	-	17500	-	-	-	43833	80118

Fgure rounded off.

Table – 2 : Reserves/Resources of Lignite as on 1.4.2023 : Tamil Nadu

(In million tonnes)

District	Proved	Indicated	Inferred	Total
Total	**5023**	**21910.06**	**9652.62**	**36489.60**
Cuddalore	4119	1419	1302	6840
Ariyalur	904	303	512	1719
Thanjavur & Thiruvarur	–	17203	3058	20261
Thanjavur	–	2351	222	2573
Thanjavur & Nagapattinam	–	359	927	1286
Thiruvarur & Nagapattinam	–	–	574	574
Ramanathapuram	–	169	3108	3277
Ramnad	–	71	965	1036
Ramand & Sivaganga	–	–	20	20

Source: *Coal Directory of India, 2022-23*

Table –3 : Details of Exploration Activities in Tamil Nadu, 2021-22

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI							
Gold							
Tiruvannamalai	Chengam-Uchimalaikuppam area	1:12500	100	-	-	-	Reconnaissance survey was carried out in Chengam and Uchimalaikuppam areas to delineate potential zones for gold and associated mineralisation with large scale mapping (LSM) on 1:12500 scale covering 100sq km and collection of bedrock, groove as well as stream sediment samples. LSM has brought out seven lithologies in the investigated area. They are charnockite, pyroxene granulite, banded magnetite quartzite (BMQ), granite gneiss, quartzofeldspathic rock, dolerite dyke and milky white quartz vein. Charnockite is the major lithounit. Pyroxene granulite is associated with BMQ as inter-bands. Three nos of parallel linear BMQ bands were demarcated from north to south occurring in close association with pyroxene granulite and charnockite. Out of three BMQ bands, only two are persistent and extending for cumulative distance of 10-15 kms from west to east; while the third one occurred as floats. Yellowish quartz vein occurring within the silicified BMQ in Seeranthangal village showed broad folding as well as pinch and swell structure. Highly

(contd)

Table – 3 (contd)

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							modified boxwork structure (comb and crustification i.e., caries texture) are also observed showing dental cavities type appearance; from where sulphides are leach out forming the cavities. Ore microscopic study revealed that the sulphide phases like chalcopyrite and pyrite occur as disseminations in association with oxides and silicates. Sulphides also occurred along the fracture planes of garnet grains. The oxide phases include magnetite, hematite and ilmenite. Magnetite crystal retained its idiomorphic form but totally replaced by haematite giving rise to martitisation texture. 50 nos samples were collected from higher to lower order streams covering the whole investigated area to delineate source of gold. Out of 50, 42 nos of stream sediment samples were collected from 2nd/ 3rd order stream which were cutting across the BMQ bands. Out of 50, 9 nos of stream yielded gold specks along with heavies during panning. The gold grains showed spherical, elliptical, dumble and ameboid shape and size varies from 252.17µm to 1610.65µm. However, analytical results of 50 nos of stream sediment did not yield any gold value. 100 nos BRS were collected from BMQ and associated litho-units. Out of 40 nos of BRS, 3 samples showed Au values ranging from 48ppb to 102 ppb. Maximum values of Arsenic (As), Bismuth (Bi), Molybdenum (Mo) and Tungsten (W) are 14.74 ppm, 0.18 ppm, 44.45 ppm and 11.53 ppm respectively. Out of 10 prioritised samples collected from silicified BMQ, 2 samples showed Au value ranging from 0.08 ppm to 0.18 ppm. Cu values varies from 130 ppm to 1160 ppm. Cobalt (Co) values vary from 30 ppm to100 ppm, Nickel (Ni) values vary from 40 ppm to 390 ppm and FeO (%) is analysed up to 31.38% in silicified BMQ. Out of 100 nos of groove samples,

(contd)

Table – 3 (contd)

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							7 nos of samples are showing gold values varying from 26 ppb to 340 ppb. These 7 nos of groove samples were collected from silicified and gossanised BMQ bands in the south-western part of Uchimalaikuppam RF and northeast of Pudur.
PGE							
Erode	Mettuppalaiyam Mafic-Ultramafic Belt	1:12500	-	-	-	-	Large Scale Mapping on 1:12,500 scale was carried out to delineate PGE mineralisation. The major lithologies exposed in the area are hornblende-biotite gneiss, biotite gneiss gabbro + garnet, meta-pyroxenite, anthophyllite schist and pegmatite. Based on the mineralogy and reaction textures, it can be inferred that the rocks of the study area have undergone granulite facies to amphibolites facies metamorphism. A total of ten pyroxenite bands of various dimensions were delineated. Groove sampling were done on pyroxenite bodies, whereas grab samples were collected from pyroxenite, gabbro and anthophyllite schist. From the analysis of bed rock groove samples, the highest chromium value of 3037 ppm is noted in groove KTP-2 at Kuttipalaiyam village and the highest Ni value of 574 ppm is noted in groove CVP-1 at Chinna Vadamalapalaiyam village. Maximum Cr value of 3301 ppm and Ni value of 763 ppm for BRS grab samples were noted in anthophyllite schist sample from Oricheripudur. From the BRS samples, twenty samples which showed higher Cr and Ni content and sulphide mineralisation were prioritised for PGE analysis and submitted for analysis. Trenching was made to confirm the strike continuity of pyroxenite bodies near Periya Vadamalapalaiyam, Siraimittanpalaiyam, Karattupalaiyam and Jambai villages.

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Table – 3 (contd)

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
REE and RM							
Vellore	Rasimalai Syenite Complex	1:12500	104	-	-	-	Large-scale mapping on 1: 12,500 scale was carried out in an area of 104 sq. km along with Pitting / Trenching to delineate the REE and RM mineralisation. The dominant lithology mapped during the investigation are charnockite, epidote-hornblende-biotite gneiss, syenite (pink syenite and grey syenite), dolerite dyke, metagabbro, pyroxene-granulite, pegmatite veins, quartzo-feldspathic vein, quartz vein and quartz-baryte vein. The Sannankuppam RF (western part) area is dominated by garnetiferous charnockite with or without garnet. Garnetiferous charnockite are intruded by several criss-cross quartz veins which contain molybdenum mineralisation. Molybdenum occurs in the form of flakes as well as in the form of dissemination. From the analytical result of bed rock samples (BRS), it is observed that pegmatite exposed in the upstream direction of unit cell (63-C) has yielded SREE of 498 ppm and the pink syenite in the Rasimalaiarea shows SREE up to 566ppm and grey syenite has shown a maximum of 178 ppm SREE. Apart from REE, Ba occurrence in syenite ranges from 814 ppm to 2010 ppm and Sr varies from 374 ppm to 1375 ppm. In south western part of Rasimalai area, quartz-baryte vein (~20m width and ~200m length) contains Ba value of 16.23%, Sr of 2704 ppm and SREE of 575 ppm and Mo 104 ppm. In regolith samples, SREE (La to Lu) ranges from 64.17 ppm to 3014.83 ppm with mean value of 283.80 ppm. In colluvial samples, SREE (La to Lu) is obtained up to 400 ppm. Ba value ranges up to 6.67% in colluvial sample of quartz barite vein.

(contd)

Table – 3 (contd)

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
Graphite							
Sivaganga	Sivaganga Block	1:12500	100	-	-	142	Large Scale Geological mapping was carried out in an area of 100 sq.km on 1:12,500 scale and mapped various litho-units quartzite, dolomite, biotite gneiss, quartz biotite gneiss ± epidote, graphite gneiss ± carbonate vein, quartzofeldspathic gneiss/ epidotised quartzofeldspathic gneiss ± graphite, charnockite, laterite and calcrete and studied its potentiality of having graphite mineralisation if any. The general trend of the rock type noticed in the study area is N80°E-S80°W with dipping towards south direction but in some of the trenches dipping towards northernly. Based on LSM mapping graphite mineralisation associated with epidotised quartzo-feldspathic rock and carbonate vein reported in north of Ulaganathapuram village. The strike continuity extends 500 m long and trends in WSW- ENE direction. Flake nature of graphite mineralisation concentrated in sheared portion of host rock. Analytical results of 142 trench samples collected from 7 graphite occurring trenches and it indicates that the FC varies from 0.01 % to 31.63 %, VM varies from 2.03 % to 28.03 %, Moisture varies from 0.07 to 4.82 % and Ash varies from 60.88 to 92.61 %. However, 34 trench samples showing >20 % FC, 66 trench samples showing >10 and <20 % FC, 20 trench samples showing> 5 and <10 % FC value.
Lignite							
Ramanathapuram	Tiruppullani West Sector, Ramnad sub basin	-	22	2	1200	13	Lignite investigation was taken up in Tiruppullani West Sector, over an area of about 22 Sq. Km. A total of about 1200 m drilling by two (02) number of boreholes, covering an area of 11 Sq. Km each and a depth range of 550–600 m (+20%) to assess the regional continuity of lignite seams towards east of already explored Kalari East Sector. The borehole

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Table – 3 (concld)

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							TRTW-01 was closed at the depth of 603 after intersection of lignite seams. The first seam was intersected from 543 m to 561 m and second seam was intersected from 570 m to 570.90 m. Carbonaceous clay and sandstone (at places sand horizons) were encountered down from 570.90 m. Geophysical logging was carried out down to a depth of 602 m and delineated two lignite seams (as mentioned above) and also delineated one thinner seam (third seam) from 598 m to 599m. 13 number of lignite samples were submitted and results were received. All the samples are having re calculated Calorific value between 2372 Kcal/Kg and 2990 Kcal/Kg and belongs to Lignite – "B" grade.

Table – 4 : Mineral Production in Tamil Nadu, 2019-20 to 2021-22 (Excluding Atomic Minerals)

(Value in ₹ '000)

Mineral	Unit	2019-20			2020-21			2021-22 (P)		
		No. of mines	Qty	Value$	No. of mines	Qty	Value$	No. of mines	Qty	Value$
All Minerals		**92**		**9771097**	**98**		**8511562**	**86**		**9106493**
Lignite	'000t	-	23516	-	-	18026	-	-	23635	-
Natural Gas (ut.)	m c m	-	1097	-	-	911	-	-	1067	-
Petroleum(crude)	'000t	-	415	-	-	410	-	-	367	-
Garnet (abrasive)	t	2*	-	-	2*	-	-	1*	-	-
Graphite (r.o.m.)	t	1*	-	-	1	10026	32404	1	36214	31650
Limestone	'000t	82	24461	7151088	89	21144	5813723	78	21334	6265788
Magnesite	t	6	51147	222293	5	43613	227494	5	81012	350856
Marl%	t	-	502750	93752	-	916081	173628	-	952921	193287
Vermiculite	t	1	584	1933	1	510	1688	1	691	2287
Minor Minerals@		-	-	2302031	-	-	2262625	-	-	2262625

Note: *The number of mines excludes Fuel and Minor minerals.*

$ Excludes the value of Fuel minerals.

** Only labour reported.*

% Associated with Limestone.

@ Figures for earlier years have been repeated as estimates because of non-receipt of data for the year 2021-22.

Mineral-based Industry

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

Table – 5 : Principal Mineral-based Industries

Industry/plant	Capacity ('000 tpy)
Abrasives	
Carborandum Universal Ltd, Chennai	NA
Cutfast Abrasives Tools Pvt. Ltd, Chennai	NA
Asbestos Products	
Hyderabad Industries Ltd, Kannigaiper	100
Ramco Industries Ltd, Arakkonam, Distt. Vellore	NA
Southern Asbestos Cement Ltd, Arrakonam Distt. Vellore	NA
Tamil Nadu Asbestos, Alangulam, Distt. Virudhunagar	28.5
Cement	
ACC Ltd, Madukkarai, Distt. Coimbatore	1000
Chettinad Cement Corpn. Ltd, Puliyar, Distt. Karur	1700
Chettinad Cement Corpn. Ltd, Karikalli Distt. Dindigul	4500
Chettinad Cement Corpn. Ltd, Ariyalur	5500
Dalmia Cements, Dalmiapuram, Distt. Tiruchirapalli	3400
Dalmia Cements, Ariyalur	3000
Dhandhapani Cement Pvt. Ltd Thathamangalam,Manachanallur	225
India Cements Ltd, Sankarnagar, Distt. Tirunelveli	2050
India Cements Ltd, Sankaridurg, Distt. Salem (G)	860
India Cements Ltd, Dalavoi, Distt. Ariyalur	2160
India Cements Ltd, Vallur, Distt. Chennai (G)	1100
India Cements Ltd, Panaiveedu, Thiruchengodu	1400
My Home Industries Ltd. Tuticor	1500
Ultra-Tech Cement Ltd, Reddipalayam, Distt. Ariyalur	1400
Ultra-Tech Cement Works (ARCW), Arakkonam (G)	1100
Ramco Cement (formerly Madras Cement), R.S. Raja Nagar, Distt. Virudhunagar	2000
Ramco Cement (formerly Madras Cement), Alathiyur Works, Distt. Ariyalur	3050
Ramco Cement (formerly Madras Cement), Ariyalur Plant, Govindpuram, Distt. Ariyalur	3500

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Table - 5 (contd)

Industry/plant	Capacity ('000 tpy)
Ramco Cement (formerly Madras Cement), Chengalpet Grinding Unit, Uthiramerur, Distt. Kanchipuram (G)	500
Ramco Cement (formerly Madras Cement), Valapady, Distt. Salem (G)	1600
Tamil Nadu Cements, Alangulam, Distt. Virudhunagar	290
Tamil Nadu Cements, Ariyalur, Distt. Ariyalur	500
Tamil Nadu News -print & Paper Ltd. Kagithapuram, Manmangalam	328.5
Vijay Cements Trichy	75
Zuari Cements Ltd, Chennai Grinding Unit, Attipattu, Tiruvallur (G)	900
Ceramics	
Carborandum Universal Ltd, Hosur	NA
Murugappa Morgan Thermal Ceramics Ltd, Ranipet, Distt. Vellore	5.44
Neycer India Ltd, Vadalur, Distt. Cuddalore	9.0
Roca Bathroom Product Pvt Ltd, Ranipet, Distt. Erode	12.6
Roca Bathroom Product Pvt Ltd, Perundurai, Distt. Vellore	24
Spartek Ltd, Chennai	NA
Copper Smelter	
Sterlite Industries (I) Ltd, Thoothukudi	400 (Cu smelting) 205 (Cu cathode) 90 (wire rods) 1050 (H_2SO_4)
Chemicals	
Tanfac Industries Ltd, Cuddalore	16.5 (anhydrous HF), 16.5 (AlF_3) 67.5 (H_2SO_4) 14 (Hydrofluoric acid) 3.4 (speciality fluorides)
Tuticorin Alkali Chemicals & Fertilizers Ltd, Thoothukudi	115 (soda ash) 105 (A/Cl)
Vaiyapuri Shanthi Ferric alum Sellipalayam, Namakal	3.4(Ferric alum)
Electrode	
AVR Electrodes, No1, SIDCO,Indl.Estate, Rajapalyam, Virudhnagar	250
Fertilizer	
Coimbatore Pioneer Fertilizer Ltd,	66 (SSP)
Muthugoundanpudur, Distt. Coimbatore.	30 (H_2SO_4) 3 (oleum)
Coramandal International Ltd, (Formerly EID Parry), Ranipet, Distt. N. Arcot	132 (SSP) 33 (H_2SO_4)

(contd)

Table -5 (contd)

Industry/plant	Capacity ('000 tpy)
Coramandal International Ltd, Ennore, Distt. Thiruvallur.	330 (Complex)
Kothari Industrial Corp. Ltd, Ennore.	66 (SSP)
Madras Fertilizer Ltd, Manali, Distt. Thiruvallur.	486.8 (Urea) 840 (NP/NPKs)
Greenstar Fertilizers Ltd, Guindy.	115 (SSP)
Southern Petrochemical Industries Corpn. Ltd), Thoothukudi.	620 (Urea)
Ferroalloy	
Electralloy Special Steel Casting Pvt. ltd.	1.0 (alloy , Stainless steel casting)
Synthetic Rutile	
DCW Ltd, Sahupuram, Distt. Thoothukudi.	48
TiO_2 Pigment	
VVTi Pigments (P) Ltd, (formerly, Kilburn Chemicals) Distt. Thoothukudi	18 36 (Ferrous Sulphate Heptahydrate)
Iron & Steel	
Salem Steel Plant (SAIL), Salem.	180 (Crude/ Liquid steel)
JSW Steel Plant (acquired Southern Iron & Steel Co. Ltd), Salem.	1180 (sinter) 1000 (pig iron) 1000 (specialised alloy steel) 18000 (Crude/Liquid steel)
Sponge Iron	
Akshara Industries Ltd, Eguvarpalayam, Distt. Thiruvallur.	100
Kaushik Steel Industries Ltd, Pappen Kuppam Distt. Thiruvallur.	60
Agni Steels Pvt Ltd, Olappalayam Road, Ingur, Distt. Erode.	36

(contd)

Table -5 (concld)

Industry/plant	Capacity ('000 tpy)
Refractory	
ABREF Pvt. Ltd, Gummidipoondi, Distt. Thiruvallur.	1.3
Sharda Ceramics Pvt. Ltd, Ambattur, Chennai.	9.9
Shri Natraj Ceramic & Chemical Industries Ltd, Dalmiapuram, Distt. Tiruchirapalli.	42
VRW Refractories, Vanagaram.	21.6
Zirconium Complex, Pazhakayal, Thoothukudi.	0.5 (Zr-Oxide) 0.25 (Zr sponge)
DBM & Calcined Magnesite	
SAIL Refractory Co. Ltd (formerly Burn Standard Co. Ltd), Salem	13(calcined magnesite) 61 (DBM) 15 (refractory bricks) 45(Dunite fracton)
Dalmia Magnesite Corpn., Chettichavadi Distt. Salem.	72 (DBM)
Ramkrishna Magnesite Mines, Salem.	3 (calcined)
Tamil Nadu Magnesite Ltd, Kurumbapatty, Distt. Salem.	19.5(calcined magnesite) 30(DBM)
Sri Pon Kumar Magnesite Ltd, Salem.	26.5 (DBM)
Silicon Carbide	
Carborandum Universal Ltd, Tiruvottiyur.	NA
Petroleum Refinery	
CPCL, Manali, Distt. Thiruvallur.	10500
CPCL, Narimanam.	1000

(G): Grinding unit.

Note: *Data sourced from Indian Fertilizer Scenario, FAI Statistics, and Survey of Cement Industry & Directory, respectively.*