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nent of Foreign Affairs Ministère des Affaires étrangères et du Commerce international

# **FOCUS INDIA**

# THE INDIAN MINING INDUSTRY:

**COMPANY/ORGANIZATIONAL PROFILES OF** THE INDIAN MINING, MACHINERY & EQUIPMENT MANUFACTURING, MINERAL EXPLORATION, **GOVERNMENT AGENCIES AND SERVICE SECTORS** 



# L'INDUSTRIE MINIÈRE EN INDE :

PROFILES D'ENTREPRISE DE L'INDUSTRIE MINIÈRE EN INDE. MACHINERIE ET MATÉRIEL INDUSTRIEL, L'EXPLORATION DES RESSOURCES, SOCIÉTÉ D'ÉTAT ET SECTEUR DE SERVICE

JULY 1996

1996 JUILLET

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Further information can be obtained by contacting Canadian trade offices in India. / On peut obtenir plus de précisions auprès des bureaux commerciaux du Canada en Inde, á savoir.

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Consulate of Canada 4th Floor, 41/42 Maker Chamber VI Jamnalal Bajaj Marg Bombay 400 021 India Tel: 91-22-287-5514 Fax: 91-22-287-5514 eMail: consulate.canada@coc.sprintrpg.sprint.com (for the states of Maharashtra, Gujarat, Goa, Karnataka)

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### Prepared for THE CANADIAN HIGH COMMISSION, NEW DELHI & DEPARTMENT OF FOREIGN AFFAIRS AND INTERNATIONAL TRADE By Sarasuba Entrepreneurs Private Limited, Delhi - 110 092

Document rédigé pour le compte du

HAUT-COMMISSARIAT DU CANADA À NEW DELHI (INDE)

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MINISTÈRE DES AFFAIRES ÉTRANGÈRES ET DU COMMERCE INTERATIONAL

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Sarasuba Entrepreneurs Private Limited, Delhi - 110 092

## MANUFACTURING COMPANIES

# LES ENTREPRISES INDUSTRIELLLES

### ASEA BROWN BOVERI LIMITED

Plot Nos. 5&6, II Phase, Peenya Industrial Area, Bangalore 560 058 Tel: 080-8395181 - 84, Fax: 080-8396537

Chief Executive Officer:	Mr. K.N. Shenoy, Executive Chairman; A.K. Thiagarajan. Managing Director
Ownership:	Private, partly-owned subsidiary of ABB Asea Brown Boveri Ltd., Zurich (Switzerland)
Scale of Operation:	Large
Products/Services:	ABB Mine hoists integrate the mechanical equipment and the drive and control systems offering the benefits of single source supplier.
	500 installations in more than 30 countries. Microprocessor-based control systems for fast and accurate positioning of the conveyance minimizes the hoisting cycle time and boosts productivity.
	Safety functions duplicated in two independent control systems
	High-powered Advant Stations provide the operator with full, graphic, high resolution displays of time critical information in dynamic format.
Turnover:	Rs. 6,435 million in 1994

### ANDREW YULE & CO LTD

8 Clive Row, Calcutta-700 001 West Bengal Tel. 033- 2428210/2428550/2422421, Fax. 033-2422943/2425477

Chief Executive Officer:	Mr. Sujit Chakravorti, Chairman & Managing Director
Year of Establishment:	1919
Ownership:	Government of India
Scale of Operation:	Medium
Turnover:	Rs. 2073.1 million
Products/Services:	Industrial fans, blowers, Tea processing machinery, core lamination products and system related to air pollution control, HT & LT electrical equipment,
Foreign Collaboration:	Beth GmbH, Germany, BTR Belting Ltd, UK, Daihen Corporation Ltd, Japan
Employees	17000

### ATLAS COPCO INDIA LTD

Mahatma Gandhi Memorial Building, Netaji Subhash Road, Bombay-400 002 Maharashtra Tel. 022-2015623, Fax. 022-2064046

Chief Executive Officer:	Mr. Jan Henriksen, Managing Director
Year of Establishment:	1960
Ownership:	Private sector
Scale of Operation:	Large
Products/Services:	Air and gas compressors, rock drills and pusher legs lubricators for rock drills and grinders for rock drill equipment, aqua rigs, mechanised drilling equipment, couplings, rock drilling tools.
Turnover:	Rs. 694.6 million
Foreign Collaboration:	The Atlas Copco Worldwide Group, Stockholm, Sweden
Employees:	620

### BHARAT BHARI UDYOG NIGAM LTD

26, Raja Santosh Road, Calcutta-700 027 West Bengal Tel. 033-4795524, Fax. 033-479-7046

Chief Executive Officer:	Mr. A K Mohapatra, Chairman (Actg)
Year of Establishment:	1986
Ownership:	Government of India
Scale of Operation:	Large
Products/Services:	Mining equipment etc.
Turnover:	Rs. 3427.4 million
Foreign Collaboration:	Eichoff, Germany; Kone Corpn, Finland
Employees:	26403

## BHARAT EARTH MOVERS LTD.

BEML Soudha, 23/1, SR Nagar, Bangalore 560 027 Phone : 91-080-224141, 237897 (14 Lines), Fax : 91-080-226883

Chief Executive Officer :	Mr. T.V.S. Sastry, Chairman & Managing Director
Year of Establishment :	1964
Ownership:	Government of India
Scale of operation:	Large
Annual Turnover :	Rs. 9489 millions in production & Rs. 9006 millions in Sales
Value of Exports :	Rs. 3500 millions
Products Exported:	Bulldozers, Hydraulic Excavators, Wheel Loaders, Rear Dump Trucks, Rail Coaches
Sources of Technology:	Through Collaborations & through in-house development
Foreign Collaboration:	M/s. Komatsu, Japan; M/s. Dressers, USA; M/s Omnipol, Chechoslavakia; M/s Voist Alpine, Austria; M/s. IGM, M/s Mutsui Miike, Bulgaria
Employees :	16,000
Remarks:	Bharat Earth Movers Ltd. (BEML), a public sector company, is an Asian Corporate giant engaged in designing, developing and manufacturing a variety of sophisticated bulk material handling equipments and systems serving the core sections of economy.
	BEML today is a leader in earthmover industry commanding over 70% market share. Some 30,000 of its equipments are productively deployed in India and other countries around the world.
	BEML has established three modernised production units with hi- tech facilities, a composite R&D Centre with laboratories in fluid power engineering, material science, structural engineering and powerline testing with the state-of-the-art facilities.
	BEML offers efficient marketing support to its customers through its wide network of Offices at all major project sites in addition to offering application engineering services to help customers utilise equipments to their best advantage.

### **BHARAT FRITZ WERNER LTD**

Peenya Industrial Area, Yeswanthapur P.O. Bangalore-560 022 Tel. 080-8395221/8395745, Fax. 080-8394816

Chief Executive Officer:	Mr. S.N. Mishra, President & Managing Director
Year of Establishment:	1961
Ownership:	Private sector
Scale of Operation:	Medium
Products/Services:	Manufacture of CNC machining centres, CNC boring & milling machines etc.
Turnover:	Rs. 264.882 million
Foreign Collaboration:	Fritz Werner Werkzeug-Maschinen GmbH, Berlin
Employees:	756

### **BURN STANDARD CO LTD**

10 C Hungerford Street, Calcutta-700 017 West Bengal Tel. 033-2471772/2471067/2471762, Fax. 033-2472788

Chief Executive Officer:	Mr. A.K. Mahapatra, Chairman
Year of Establishment:	1976
Ownership:	Government of India
Scale of Operation:	Large
Products/Services:	Mining accessories and equipment
Turnover:	Rs. 1669.6 million
Employees:	11911

## CARBORUNDUM UNIVERSAL LTD

"Tiam House", 28 Rajaji Road, PB No. 1677, Madras 600 001 Tel. 044-511652/5223365/5225116, Fax: 044-510378

Chief Executive Officer:	Mr. A.M.M. Arunachalam, Chairman
Year of Establishment:	1954
Ownership:	Private sector
Scale of Operation:	Large
Products/Services:	Electrominerals - White aloxite, brown aloxite, silicon carbide grains, calcined bauxite
Turnover:	Rs. 1370 million
Employees:	2147

### CROMPTON GREAVES LTD

1 Dr V B Gandhi Marg, Bombay-400 023 Maharashtra Tel. 022-277525/276610, Fax. 022-2028025/2625814

Chief Executive Officer:	Mr. K.K. Nohria, Managing Director
Year of Establishment:	1937
Ownership:	Private sector
Scale of Operation:	Large
Products/Services:	Dry and mining type transformers
Turnover:	Rs. 8855.8 million
Foreign Collaboration:	Nei Reyrolle Ltd. UK
Employees:	10729

### EIMCO ELECON (INDIA) LTD

#### Anand Sojitra Road Vallabh Vidyanagar 388 120, Gujarat Tel : (02692) 30502, 30902, Fax : (02692) 30067

Chief Executive Officer :	Mr. C.T. Dave, Executive Director
Year of Establishment:	1974
Scale of Operation :	Large
Industrial Classification :	Mining Machinery
Products Manufactured:	Load Haul Dumper, Side Dump Loader, Rocker Shovel Loader, Air Motors, Dump Truck, Auger Cum Drill & Roof Bolter
<b>Products Exported :</b>	Rocker Shovel Loader, Air Motor, Joint Ventures: EIMCO
Annual Turnover :	Rs 500 million
Foreign Collaboration :	TAMROCK, Finland
Employees:	280

### ELECON ENGG. CO. LTD

Anand Sojura Road

Vallabh Vidyanagar - 388 120, Gujarat

Tel : (02692) 30016, 30222, Fax : (02692) 30120, 31277, Telex : 0172-210 ELCN-IN

Chief Executive Officer :	Mr. B.I. Patel, Chairman & Managing Director
Year of Establishment :	1961
Ownership:	Private sector
Scale of Operation :	Large
Industrial Classification :	Material Handling Equipment
Products Manufactured:	Material Handling Equipment & Power Transmission Equipments, Bridge type reclaimer, NU-gears, Wagon Tipples, Barrel type Blender, Crawler Mounted trippers, Helical gears. Striker Reclaimer, Reclaimer, Crushers, Couplings, Scraper Reclaimer, conveyors, Pulleys, Special gears.
Products Exported:	Coal Handling Plants for Power Station/Lignite Mine, Thailand
Annual Turnover :	Rs. 1269 million
Employees :	3000

### **HEAVY ENGINEERING CORPORATION LIMITED**

Ranchi-834004, Bihar Tel: (0651)408571, Fax: (0651) 408571, Telex: 0625-204

Chief Executive Officer:	Mr. A.K. Misra, Chairman & Managing Director
Year of Establishment:	1959-60
Ownership:	Government of India
Scale of Operation:	Large
Product Range:	Manufacturer of mining equipment, such as excavators, overburden drills; wagon tipplers; electric overhead travelling cranes, crushing & grinding equipment; steel plant equipment such as rolling stock items and coal and other mineral processing plants
<b>R&amp;D</b> Facilities:	In-house
Turn over:	Rs. Two billion turnover in 1994-95
Foreign collaboration:	Former USSR for heavy machine building plant; Czechoslovakia for foundry forging plants; Co. Germany for steel plant equipment; Japan for Heavy machines
Employment:	12,500

HINDUSTAN DORR-OLIVER LIMITED

Dorr-Oliver House, Chakala, Andheri (East), Bombay 400 099 Tel. (022) 6325541, Fax: (022) 6365659

Chief Executive Officer:	Mr. M.R. Chhabria, Chairman; Mr. G.K. Apte, Managing Director
Year of Establishment:	1912 (In 1987 became par of the Chhabria Group)
Ownership:	Private Sector
Scale of Operation:	Large
Products/Services:	Equipment used for key applications like classification of bauxite/hydrate, desanding of digested red mud, red mud settlers, washers, and filtration aluminate clarification, hydrate thickening/filtration, cryolite recovery, lime preparation, slurry mixing/pumping, etc., Environmental engineering, Mineral beneficiation
Turnover:	Rs. 625.5 million

### HINDUSTAN MOTORS LIMITED

Earthmoving Equipment Division Menallathur-602 004, Tiruvallur, Tamil Nadu Tel : 0411-6 202, 0411-6 432

Chief Executive Officer :	Mr. A. Sankaranarayanan, Executive Vice President
Year of Establishment :	1969
Scale of Operation :	Large
Products Manufactured	Dumpers : 25, 35, 36, 40, 50, 85 ton capacity Loaders : With buklet capacities from 1.24 to 8 cu.mtr. Crawler Tractor : 165 Flywheel Horse Power Hyd. Excavator : 20 ton class
<b>Products Exported :</b>	Loaders, dumpers, Spare Parts UK, USA, France, Jordan, Mauritius, Bangladesh, Iraq
Investment :	Rs. 15 Crores
Annual Turnover :	Rs. 200 Crores
Foreign Collaboration :	Caterpillar Inc., USA
Employees :	1600

	INGERSOLL RAND (I) LTD pulenc House, S K Ahire Marg, Bombay-400 025 Tel. 022-4936765, Fax. 022-4945051
Chief Executive Officer:	Mr. A R Nagarwadia. Chairman & President
Year of Establishment:	1921
Ownership:	Private sector
>roducts/Services:	Mining & Waterwell drilling equipment
lurnover:	Rs. 2.038 million
Coreign Collaboration:	Subsidiary of Ingersoll-Rand Company, USA
Imployees:	1396

### INCERSOLL DAND (1) LTD

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### JESSOP & CO. LTD.

63, Netaji Subhas Road, Calcutta-700 001 Tel.(033) 255041 - 49, Fax: (033) 2431610

<b>Chief Executive Officer :</b>	Mr. A.K. Sur, Managing Director
Ownership:	Government of India
Scale of Operation :	Large
Product/Services:	Complete Longwall Package Leader and suppliers manufacturer of Powered Roof supports, Hydraulic Props, Yielding Legs, Conveyor Pusher Rams, Face Sprag/Side Shield and Base Lift Rams, Power Pack Tanks, Armoured Conveyors, Underground Coalsizers, Drum Shearers, Aerial Ropeways. Comprehensive pre and post sales services in the areas on System Engineering, equipment and site selection, installation/commissioning and maintenance.
Annual Turnover :	Rs. 105 Crores (91-92)
Foreign Collaboration :	Eichoff, Germany
Employees :	6500
Remarks:	A public sector company manufacturing material handling machineries and road building machineries, besides mining equipment, has undergone heavy losses

### LARSEN & TOUBRO LTD

L&T House, Ballard Estate, P.O. Box 278, Bombay-400 001 Tel. 022-2618181, Fax. 022-2620223

Chief Executive Officer:	Mr. S D Kulkarni
Year of Establishment:	1946
Ownership:	Private sector
Scale of Operation:	Large
Products/Services:	Earthmoving machinery, plant & equipment for core sector industries like power, oil & gas, chemical & petrochemical, cement, fertilizer, food processing, coal and other minerals, steel etc.
Turnover:	Rs. 27880 million
Foreign Collaboration:	T J Gundlach Machine Co., USA
Employees:	22000

### McNALLY BANGALORE INDUSTRIES LIMITED

P.O. Whitefield, Bangalore 560 066 Tel: 845-2596 (4 lines), Fax: (080) 8452764, Telex: 0845 8513 MBE IN

Chief Executive Officer :	Mr. T.R. Venkateswaran, Sr. Vice President
Year of Establishment:	1976
Ownership:	Private Sector, a wholly owned subsidiary of Mcnally Bharat Engg. Co. Ltd. and a member of the Williamson Magor group
Scale of Operation:	Medium
Products/Services:	Provides technology innovation in the field of Mineral beneficiation with latest equipment for slurry pumping, flotation, magnetic separation, metal detection, thickening & dewatering.
Annual Turnover:	Rs. 50 million
Marketing Agents for:	Eriez Magnetics of USA for Separation, Magnamation, Vibratory & Metal Detection Equipment; Outokumpu Mintec of Finland for Ceramec Capillary of Finland for Ceramec Capillary Filers; Kent of USA for Hydraulic and Pneumatic Rock breakers
Foreign Collaboration:	MBE-SALA Slurry Pumps, Sala of Sweden; MBE-Outokumpu Flotation Cells; Outokumpu of Finland, MBE-Supaflo High Rate & Conventional Thickeners: Supaflo of Australia

### MCNALLY BHARAT

44 Park Street (4th floor) Calcutta Tel: 247-3479/5065, Fax: (033) 402086, Telex: 021-2041 & 7119

Chief Executive Officer :	Maj. Gen. (Retd) P.P. Subherwal, Managing Director
Year of Establishment:	1961
Ownership:	Private Sector
Scale of Operation:	Large
Products/Services:	Crushers, Screens, Feeders, Conveyors, Ball & Rod Mills, Wet Scrubbers, Rotary Kilns, Dryers, Coolers, Jigs, Heavy media cycloids, Pneumatic pumps, Cyclones, Classifiers etc. Indigenous process technology, Complete in-house Design & Engineering, Project Planning & Execution Services, Plant commissioning & trouble shooting services
Annual Turnover:	Rs. 600 million
Foreign Collaboration:	Outokumpu, Finland; Supaîlo, Australia; Montan Engineering, Germany; Cominco, Canada
Employees:	1,008

# MINING AND ALLIED MACHINERY CORPORATION LTD.

Durgapur 713210 Dist. Burdwan, West Bengal Tel: 5261-65, Telex: 0205-207

	A star and Managing Director	
Chief Executive Officer:	Mr. P.K. Rohatgi, Chairman and Managing Director	
Year of Establishment:	1965	
Ownership:	Government of India	
Scale of Operation:	Large	
Works/Facilities:	(i) Durgapur-713210, Dist. Burdwan, West Bengal (ii) Regional workshop, 47 MIDC Estate, Nagpur 4400280	
Product/Services:	Manufacturers of mining and allied machinery: (i) Mining equipment (ii) Bulk material handling systems (iii) Conveyors with associated structures (iv) Coal preparation and mineral dressing plants Produced only 6925 MT valued at Rs. 796 Million of various items in 1992- 93 against a capacity of 65,340 MT	
<b>R&amp;D</b> Facilities:	In-house to absorb imported know-how, develop new products. Introduced side discharge loader recently	
Programs:	Modernize and upgrade technology to improve economic viability. develop new product line such as side arm changer; 200 kW compact drive head, and optimising drum design for shearer	
Foreign collaboration:	(i) Polish Kopex for coal preparation plant; (ii) Netherland's Stamicarbon for cyclone processes for coal treatment; Other countries: Former West Germany, UK and former USSR	
Employees:	5682 (1993)	
Remarks:	A sick unit, referred to Board for Industrial and Financial Reconstruction (BIFR) , a Government of India statutory body, for preparing a feasibility package for rehabilitation of the unit	
MACNEILL ENGG LTD 34 & 34/1 Diamond Harbour Road, Calcutta-700 027 Tel. 033-493066, Fax. 033-497043		
Chief Executive Officer:	Mr. S Chakraborty, Managing Director	
Year of Establishment:	1990	
Ownership:	Private (Williamson Magor Group)	
Products/Services:	Materials handling equipment, electrical equipment for mining industry, etc.	

### MAHINDRA ENGG & CHEMICAL PRODUCTS LTD

Engineering Division, 148 Bombay Pune Road, Pimpri Pune- 411 018 Tel. 0212-773577/773578, Fax. 0212-771286

Chief Executive Officer:	Mr. Gurbir Singh, Managing Director
Year of Establishment:	1954
Ownership:	Private sector
Scale of Operation:	Medium
Products/Services:	Chain based bucket elevators, conveyors and feeders
Turnover:	Rs. 244.43 million
Foreign Collaboration:	Tsubakimoto Bulks Systems Corpn, Japan
Employees:	367

OTTO INDIA LTD

9 Camac Street, Calcutta-700 017 Tel. 033- 2426729/2421232/2423422, Fax. 033-2423654

Chief Executive Officer:	Mr. T Bhaskaran, Managing Director
Year of Establishment:	1959
Ownership:	Private sector (single largest shareholder : German collaborator)
Products/Services:	Turnkey contractors catering to steel industry e.g. Coal washery, Iron ore grinding, beneficiation and dewatering plants, Environmental Pollution Control, Material handling systems, Sand preparation plant for foundries, etc.
Turnover:	Rs. 535 million
Foreign Collaboration:	Thyssen Still Otto Anlagentechnik GmbH, Germany
Employees:	920

### SVEDALA INDUSTRI INDIA PVT. LTD.

C/3/1 Vasant Vihar, New Delhi-110 057 Tel: : 011-6881659/605562, Fax : 011-6881745, Telex : 031-72449 SVED IN

Chief Executive Officer :	Mr. Jan Sandberg, Chairman
Year of Establishment :	1992
Scale of Operation :	Large
Products/Services:	Product range includes: A. Crushers/Crusher Parts, Feeders, Foundry Products, Washers, Wear Resistant Parts and Attachments, Screens, Screening Media, Noise/Dust Control Systems, Material Handling Hose systems, Pumpsa, Conveyor Belts, Conveyor Belt Accessories/Components, Compact and Paving Equipment, Concret Products.
	B. Grinding, Mills, Mill Linings, Mineral Separation equipment, Pyro & Pelletizing Equipment etc.
	C. Coal Preparation equipment, Blending/Stacking Reclaiming, Ash Handling equipment, Trucks, Cranes/Platforms, Tanks and Trailers, Loading Systems, Unloading systems, Self-unloading Ships- unloading ships and Fender Systems.
	Svedala also provides software in the form of applications expertise, engineering services and continuous customer support.
Annual Turnover :	Over US \$ 2 Billion
Employees :	Over 10,000
Branch Offices :	Calcutta, Mangalore

### SANDVIK ASIA LTD

Bombay Poona Road, Dapodi, Pune-411 012 Tel. 0212- 776491/776494, Fax. 0212-779339

Chief Executive Officer:	Mr. Wihelm Sebardt, Managing Director
Year of Establishment:	1960
Scale of Operation:	Large
Ownership:	Private sector
Products/Services:	Rock drill steels, Extension drill steel equipment
Turnover:	Rs. 688.85 million
Foreign Collaboration:	AB Sandvik Coromant, Sweden
Employees:	1074

### SIMPLEX ENGG & FOUNDRY WORKS PVT LTD

1515 Hemkunt Tower, 98 Nehru Place, New Delhi-110 019 Tel. 011-6441342/6414846/6431347, Fax. 011-6466303

Chief Executive Officer:	Mr. H.B. Shah, Chairman
Year of Establishment:	1940
Ownership:	Private sector
Scale of Operation:	Large
Products/Services:	Equipments for steel plant, power plant, mining, etc.
Exports:	20% of the total turnover earmarked for exports ehich includes steel plant equipments like cock over door, door frames, etc. quenching car, pusher car, sinter machiner, transfer car, grab bucket, slag pot, coal delivery car, forging and castings etc.
Turnover:	Rs. 3000 million
Turnover: Foreign Collaboration:	Rs. 3000 million Dragon Babbitless Ltd. France, Tyazhpromexport, Russia, China Metalurgical Import Export Corporation, China; Baoshan Iron & Steel Co. China: Dango Dienenthal, Germany; Nippon Steel Corporation, Japan, Pentag Manufacturing Co. Ltd, UK; Schalke Germany, Landers Maschinen Fabric, Germany; Sato Manufacturing Co. Ltd, Japan; Dosco UK; Maanshan Iron & Steel Design Institute, China; Linde A.G., Germany; SMS, Germany; Hitachi Zosen/Kawazaki, Japan

### SOUTHERN STRUCTURALS LTD

No. 226 Kilpauk Garden Road, Kilpauk, Madras-600 010 Tel. 044-5324504/5324505, Fax. 044-5324609

Chief Executive Officer:	Mr. V. Madhavar Nair, Chairman & Managing Director
Year of Establishment:	1956
Ownership:	Private sector
Scale of Operation:	Large
Products/Services:	Conveyor systems, Material handling systems, bucket wheel excavation etc.
Turnover:	Rs. 294.5 million
Foreign Collaboration:	O&K Germany, Ansaldo, Italy

# TATA ENGINEERING & LOCOMOTIVE CO LTD

Telco GMS Office P.O. Jamshedpur-831 010, Bihar Tel. 0657-310026, Fax. 0657-310229/310220

n N Tata, Chairman
ector
oving machinery, etc
1 million
Construction Machinery Co.

### TIL LTD

1 Taratala Road, Garden Reach, Calcutta-700 024 Tel. 033-4793732/4793736/496497, Fax. 033-4792143

Chief Executive Officer:	Mr. A Mazumdar, Chairman & Managing Director
Year of Establishment:	1944
Ownership:	Private sector
Scale of Operation:	Medium
Products/Services:	Mobile cranes, Earthmoving equipment etc.
Turnover:	Rs. 1130 million
Foreign Collaboration:	Yute SL. Spain
Employees:	875

### TRF LTD

11 Station Road, Burmamines, Jamshedpur-831 007 Bihar Tel. 0657-310313/310317, Fax. 0657-310075

Chief Executive Officer:	Mr. S.A. Hasan, Managing Director
Year of Establishment:	1962
Ownership:	Private sector
Products/Services:	Coal cutters, mine winders, wagon tiplers, wagon loaders, belt & chain elevators, screw conveyors, apron feeders, mine car tipplers
Turnover:	Rs. 1022.6 million
Employees:	1399
	JSHA TELEHOIST LIMITED 33, C.R. Avenue, Calcutta-700 012 Tel : 266716/264509, Fax : 033-2488234
Chief Executive Officer :	Mr. M.K. Jhawar, Chairman and Managing Director
Year of Establishment :	1965
Scale of Operation :	Medium
Investment :	Rs. 451.52 Millions
Products Manufactured:	Hydraulic Cylinders, Hydraulic Props, Hydraulic Tipping Gears, hydraulic power pack systems, high pressure jet pumps, gear pumps & motors. high pressure & steam jet cleaning machines. dumper placers, recovery equipment, chain conveyor pushers, hydraulic access platforms, hydraulic lift, under carriage parts, granite slabs/tiles
Annual Turnover :	Rs. 676.90 Millions
Foreign Collaboration:	Telehoist Ltd and Powered Access Ltd, UK Hydraulik Ring GmbH, LM Liftmaterial GmbH, Germany KG, paul Hammelmann Machinefabrik GmbH, Germany The Lantis Corporation USA
Branch Offices	Bangalore, Bombay, Chandigarh, Madras, New Delhi

### **VULCAN ENGINEERS LTD**

427 Unique Indl. Estate. Off Veer Savarkar Marg, Prabhadevi, Bombay-400 025 Tel. 022-4304529/4659/3671, Fax. 022-4225814

Chief Executive Officer:	Mr. Mithu Malaney, Chairman & Managing Director
Year of Establishment:	1963
Ownership:	Private sector
Scale of Operation:	Small
Products/Services:	Non electrical machinery, furnaces. kilns & plants for calcining/sintering of minerals
Turnover:	Rs. 222.334 million
Foreign Collaboration:	Davy International, EW Bowman RCE, Brckenbach, Mendheim. Mediatel
Employees:	210

### WIDIA (INDIA) LTD

8/9th Mile Tumkur Road, Bangalore-560 073 Tel. 080- 8394321, Fax. 080-8394708

Chief Executive Officer:	Mr. R Rajagopalan, Joint Managing Director
Year of Establishment:	1967
Ownership:	Private sector
Scale of Operation:	Medium
Products/Services:	Cutting tools for engineering and mining
Turnover:	Rs. 1000 million
Foreign Collaboration:	Krupp, Germany
Employees:	1400

# MINING COMPANIES

### BHARAT ALUMINIUM COMPANY LIMITED

Aluminium Sadan, Core - 6, SCOPE Office Complex 7, Lodhi Road, New Delhi - 110003 Tel: 4360091, 4360128, 4360129, 4360176, Fax: (11) 4360018

Chief Executive Officer:	Mr. Divakar Dev
Year of Establishment:	
Ownership :	Government of India
Works/Facilities	(i) Bauxite mines in Madhya Pradesh (M.P.) (ii) 100,000 tons smelter at Korba, M. P. (iii) 200,000 tons Alumina plant at Korba, via Champa, Dt. Bilaspur - 495684, M.P. (iv) Downstream facilities : 35,000 TPA of Proper Zi Roads; 40,000 TPA of Rolled Products; 7,000 TPA of Ex- trusions and 18,000 TPA Billets & Slabs, (v) Captive power plant
Investment	Rs. 5 billion (Authorized capital)
Product Range	Aluminium meta and downstream products
Production	(i) 95,000 tons of metal, (ii) Saleable products (extrusion, rods, etc) 94,000 tons in 1994-95
Financial Status	On a turnover of Rs. 6.3 billion, posted a net profit of Rs. 153 million in 1993-94
R & D Facilities:	In-house to improve quality of alumina, reduce consumption of materials (caustic soda) and energy
Programs	(i) Modernisation of aluminium foundry, (ii) installation of a new 40,000 TPA cold rolling mill at a cost of Rs. 1.4 billion, and (iii) computerizing process control cells in smelter and other areas, such as marketing functions
Foreign Collaboration	(i) Hungary for Alumina, and (ii) former USSR for smelter
Employment	7,780

### BHARAT GOLD MINES LIMITED

Suvarna Bhawan, Oorgaum (KGF) 563120, Karnataka Tel : 081538-60274, 081538-60330

Chief Executive Officer:	Mr. P.A.K. Shettigar, Managing Director
Year of Establishment:	Though in operation for years, it was incorporated as Public Sector Company in 1972
Ownership:	Government of India
Facilities:	(i) two mines in Kolar Gold Fields (KGF) viz., Mysore/Champion Amalgamated Mine and Nundydroog Mine, besides the Yeppamana Mine in the Anantpur District of Andhra Pradesh. Recently con- structed a new gold mine at Chigargunta in Chittoor District of Andhra Pradesh to exploit the potential gold deposit there. (ii) three metallur- gical plants viz., Mysore Mine Mill and Nundydroog Mill to serve KGF and Yeppamana Mine in the Ramagiri Gold Fields to process; (iii) four well-equipped Mechanical & Electrical Workshops in KGF, where a variety of mining machinery and equipment are manufactured for captive use as also for sale to other mining industries in coal and metal mining sectors.
Nature of Operation:	(i) gold production; (ii) shaft sinking and other mine construction activities for different mining companies in the country (recent ac- tivity) (iii) manufacturing a variety of mining machinery for sale in the country and also fabricates small and medium scale structures for other PSU's (also recent addition) and (iv) undertaking turnkey jobs like coal handling plants, mine car circuit systems in underground and on surface, etc.
Investment:	Paid up capital of Rs. 460 million
Program:	(i) opening up new gold mining centres, (ii) recovery of gold from the old mill tailings by way of risk ventures.
Branch Offices	1. Bharat Gold Mines Limited, 6, Basant Enclave, New Delhi 110 057 2. Bharat Gold Mines Limited, Britto Complex, 10/7. VI Cross, Victoria Layout, Bangalore 560 047
Yeppamana Mine	Bharat Gold Mines Limited, Yeppamana Mine, Ramagiri Gold Fields, Via Dharmavaram, Anantpur District, Andhra Pradesh 515 671
Employment:	7600
Remarks:	A loss making concern. Available for sale/private participation

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### COAL INDIA LTD

Coal Bhawan, 10. Netaji Subhash Road, Calcutta 700 001 Tel. 220-9980, Fax. 033-220-5316

Chief Executive Officer:	Mr. P.K. Sengupta, Chairman
Year of Establishment:	1975
Ownership:	Government of India
Scale of Operations:	Large scale
Works/Facilities:	457 mines and 16 washeries
Products/Services:	Coal, hard coke, soft coke etc.
Production:	In 1993-94, 216 MT coal was produced and target for 1994-95 is 223 MT
Capital Employed:	Rs. 76530 million
Turnover:	Rs. 111040 million
Employees:	700.000

### **GUJARAT MINERAL DEVELOPMENT CORPN. LTD**

Khanij Bhawan, Ashram Road, Ahmedabad 380 009 Tel: 402475-9, 469406, 469512, Telex: GMDC AM 0121-320 MINCORP

Ownership:	Gujarat State Government undertaking
Year of establishment:	1963
Nature of operation:	Mining of important minerals and developing mineral industries in the State.
Facilities:	<ol> <li>(1) A lignite mine producing 9 lakh tpa. at panandhro in Kutch district. Recently Corporation has taken up an expansion scheme at a cost of Rs. 100 crores by introducing Bucket Wheel Excavator technology for augmenting the capacity to about 20 lakh tonnes per year.</li> <li>(2) A lignite mine producing 2,50,000 tpa. of lignite near Rajpardi in Broach district. Lignite is being mined here in combination of manual mining and mechanised mining by use of conventional equipments.</li> <li>(3) Fluospar Project consisting of a mine producing 1,25,000 tpa of graded ore and a benefication plant producing 16,000 to 18,000 tpa. of beneficiated fluorspar. This project is located at Kadipani in Chhotaudepur taluka of Baroda district.</li> <li>(4) Bauxite mines near Naredi in Kutch district and near Bhatia in Jamnagar district producing a total of about 70,000 tonnes per year of graded bauxite.</li> </ol>
Programs:	Multimetal Project planned for mining of base metal ore and produc-

tion of Copper, Lead and Zinc concentrates through a benefication process. This project is located near Ambani town in Banaskantha district.

Services:	Identifying economically viable mineral deposits Preparing detailed project report, techno-economic feasibility report
	for investment decision
	Preparing mining plan under MCR, 1960 & MCDR, 1988 Preparing environment management plan which includes EIA & EMP as per guidelines of MOEF and IBM Technical know-how for mineral based industries Dealing with various minerals like lignite, fluorspar, bauxite, lime-
	stone, multimetal-ore, granite, marble, China clay, etc.

#### **Employees:**

3700

# HINDUSTAN ALUMINIUM COMPANY LTD

Century Bhawan, 3rd floor, Dr. Annie Beseant Rd, Bombay 400 025 Tel: 022- 4308491, 4308362, 4308893, Fax: 022-4227586, Telex: 011-74405 HINDON

Chief Executive:	Mr. A.V. Birla
Ownership:	Private sector (owned by Birla Group)
Works:	(i) Aluminium plant, Renukoot, Dist. Sonebhadra, U.P. (ii) Captive power facility
Investment:	Rs. 705 million (authorised capital)
Product Range:	Aluminium metal and down stream products
Financial Status:	Rs. 1.1 billion net profit in 1993
Performance:	Sales amounted to Rs. 9.8 billion in 1993
Foreign Collaboration:	KAISER, USA

### HINDUSTAN COPPER LIMITED

Industry House, 10 Camac Street, Calcutta 700 017 Tel: 033-2428518 / 3156 / 1886, Fax: 033-2429536 / 7966, Telex: 021-5112 / 2248

Chief Executive Officer:	Mr. Ved Leekha, Chairman & Managing Director
Year of Establishment:	1967
Ownership:	Government of India
Nature of Operation:	Developing indigenous mining and metallurgical copper industry, ex- ploration, mining beneficiation, smelting, refining and production of wire-bar and CCR copper as saleable products, and recovering various by-products associated with the copper ore. HCL is the sole producer of primary copper in the country.
Facilities:	<ul> <li>(a) 8 underground and two open pit mines</li> <li>(b) Khetri Copper Complex, at Khetri, Rajasthan, comprising Khetri, Kolihan, Chandmari and Dariba Mines, Concentrators at Khetri and Dariba, 31,000 TPA Smelter, Refinery, sulfuric acid and fertiliser plants at Khetri.</li> <li>(c) Indian Copper Complex at Ghatsila, Bihar comprising Mosabani, South Bank and Rakha, (16,500 TPA) Refinery, Smelter, Sulfuric Acid and By- product recovery plants at Moubhandar.</li> <li>(d) Malanjkhand Copper Project in Madhya Pradesh, comprising an open pit mine, concentrator and leach copper plant.</li> <li>(e) Taloja Copper Project at Taloja, Maharashtra, for conversion of cathodes into continuous cast copper wirerods. (60,000 TPA)</li> <li>(f) Six beneficiation plants located at its 3 mining sectors. The concentrator plants are located near the producing mines and have matching capacities with those of the mines.</li> </ul>
Production:	During 1992-93, HCl produced and treated 5.25 million tonnes of ore and produced 51827 tonnes of metal in concentrates. The blister production during the year was 48006 tonnes.
By-product recovered:	The by-product recovery plant at ICC processes anode slimes generated at ICC and KCC and produces gold, silver etc. as by- products. In addition, HCL produces sulphuric acid, recovered as SO <sub>2</sub> from flash furnaces gases of both its smelters.
Financial Status:	Estimated profit of Rs. 250 million in 1992-93
R&D Facilities :	Efforts are on for bioleaching of lean chalcopyrite ores at Malanjkhand and for reducing energy consumption
Programs:	<ul> <li>(i) Expansion of Khetri smelter to 45,000 TPA</li> <li>(ii) Opening of a underground mine at Malanjkhand with an annual capacity of 3 million tonnes of high grade ore and a matching concentrator plant of 1 million tonnes.</li> </ul>

 Foreign Collaboration:
 (i) In both he smelters Outokumpu flash smelting technology is being used followed by Piere Smith Conversion and electro refining to produce cathodes.

 (ii) Southwine of USA for Taloga plant.

 23240

 HINDUSTAN ZINC LIMITED

 6, New Fatehpura, Udaipur-313001

 Tel: 0294-523854, Fax: 0294-25765 / 26443

Chief Executive Officer:	Mr. A.C. Wadhawan
Year of Establishment:	1966
Ownership:	Government of India
Production:	105,000 tonnes of zinc; 37,000 tonnes of lead; cadmium, 28 tonnes and silver, 44 tonnes (last two as by-products) in 1992- 93.

**Product Range:** 

Present annual capacities of different products are:

Indread a second a se	
	Tonnes
	2.322.000
Mining (Lead-Zinc ore)	180,000
Mining (Rock Phosphate)	79.000
Zinc Metal	30.000
Lead Metal	48.5
Silver	I Deimon

	Silver	
Facilities:		<ul> <li>(i) Lead-zinc mines at Zawar area, Rampura-Agucha and Rajpura-Dariba (Rajasthan) Sarigapali (Orissa); Agrigundla (Andhra Pradesh); and Rock Phosphate mines at Meton (Rajasthan)</li> <li>(ii) 49000 TPA zinc other by-product smelter at Debori (Rajasthan)</li> <li>Zinc smelter of 30.000 TPA and 22,000 TPA lead facility at Vishakapat-nam (Andhra Pradesh)</li> <li>70,000 TPA zinc and 35000 TPA zinc and lead facilities at Chouderia (Rajasthan)</li> </ul>
Investment:		Rs. 5 billion (authorised capital)
Financial Status:		Profit of Rs. 700 million in 1992-93
<b>R&amp;D</b> Facilities:		Has well organised facilities. Efforts presently are on (i) solvent extrac- tion process to recover cobalt from zinc smelter waste; (ii) bioleaching of zinc tailings; and (iii) establishing copper, nickel and cobalt recoveries from deep manganese nodules as an assignment from the Department of Ocean, Govt. of India
Program:		(i) Revamping/replacing roaster at Debari; (ii) set up a 200 TPA chromium plant; (iii) recover cobalt and indium; and (iv) take up additional mining leases for lead-zinc mining.

#### HUTTI GOLD MINES COMPANY LIMITED

P.O. Hutti - 584115, Karnataka Tel: (08532) 565529, 567540, 565422

**Chief Executive Officer:** 

Mr. B. Easwarappa

Year of Establishment:

**Ownership:** 

**Facilities:** 

Performance:

**R&D** Facilities:

**Remarks:** 

1948

**Government of India** 

Foundries and workshop for manufacture and repairs of all plant, equipment and spare parts. Under the diversification programme the Company has reclaimed the old Mangalur Mines in the backward district of Gulbarga during 1980 and the oreshoot delineated upto 500; level was being stopped

During the periods 1990-91 and 1991-92 it had mined and milled 2,02,476 tonnes and 2,04,510 tonnes of ore and recovered 1.05 tonnes and 1.08 tonnes of gold metal respectively, and is the leading gold producer in the country now. To reclaim the old Main Mine which was worked between 1902 and 1918 when extensive mining was done on Main Reef down to a depth of 3,460 ft (1,053 m).

Bio-Processing of Hutti Ores, Concentrates and tailings" in collaboration with Indian Institute of Sciences, Bangalore.

The present ore production of about 700 tonnes per day comes from six parallel to sub-parallel lodes reached by three major shafts. The total ore reserves proved by mine development to a depth of 743 mts. (22nd level) are estimated at 5.06 million tonnes ( $\hat{q}$ : 6.74 g/t grade.

### INDIAN ALUMINIUM COMPANY LTD

1 Middleton Street, Calcutta 700 071 Tel. 033-402210, Fax. 033-403964/294464, Telex. 021-4700 INDAL IN

Chief Executive Officer:	Mr. Tapan Mitra, Vice Chairman & Managing Director
Year of Establishment:	1938
Ownership:	Private sector (Major equity holder: Alcan of Canada)
Scale of Operation:	Large
Products/Services:	Rolled products, foils, extruded products, ingot billet, properzi rods, power, paste & dried filter cake, hydrate and alumina, carbon, electrode paste, pre-baked carbon blocks, minerals, vanadium sludge, etc.
Turnover:	Rs. 10,378 million
Exports:	Rs. 1446 million
Employees:	8167

### INDIAN METALS & FERRO ALLOYS LTD

IMFA Building, Rasulgarh, Bhubaneshwar-751 010 Orissa Tel. 0674-480270/480540, Fax. 0674-480020

Chief Executive Officer:	Mr. B Panda, Chairman & MD
Year of Establishment:	1961
Ownership:	Private sector
Products/Services:	Alloys, Ores, export
Turnover:	Rs. 135 million
Foreign Collaboration:	Power Plant imported from Sweden, Ferro Alloy Smelters from Nor- way, Japan
Employees:	1700

### INDIAN RARE EARTHS LTD

"Sherbanoo" 6th Floor, 111 M.K. Road, Bombay 400 020 Tel. 022-2030914/5, Fax. 022-2004430

Chief Executive Officer:	Mr. M.S. Nagar, Chairman & MD
Year of Establishment:	1950
Ownership:	Government of India
Products/Services:	Principal exportable products are ilmenite ore, synthetic rutile, mixed rare earths chloride, cerium hydrate
Turnover:	Rs. 182.935 million
Employees:	4500

### KUDREMUKH IRON ORE COMPANY LIMITED

11 Block, Koramangala, Bangalore - 560 034, Karnataka Tel. (080) 576605

Chief Executive Officer:	Mr. A. Krishnamurthy
Ownership:	Government of India
Year of establishment:	1976
Size of Operation:	Large
Facilities:	Iron ore concentrate plant of 7.5 million tonnes capacity in Kudremukh, a 3 million tonnes per year capacity pellet plan in Man- galore.
Production:	Target of 6.2 million tonnes and 2.15 million tonnes has been set for proudction of iron ore concentrate and iron ore pellets respectively during the year 1993-94. For the period April to October 1993, the acutal production was 3.37 million tonnes, production of pellets was 1.24.
Exports:	Iron ore concentrate and pellets was 4.73 million tonnes in 1993-94.
Foreign Collaboration:	Met-Chem, Canada
Employees:	2499

### MANGANESE ORE (INDIA) LIMITED

West Court, Katol Road . Nagpur-440001 Tel: 531241, 526114, 526112, 534529, Fax: 0712-526113

Chief Executive Officer:	Dr. M.P. Dewangan, Chairman & Managing Director
Year of Establishment:	1962
Ownership:	51% by the Government of India. the balance between the Govern- ments of Maharashtra and Madhya Pradesh.
Size of Operation:	Large
Facilities:	MOIL has set up a plant, based on indigenous technology, to manufac- ture Electrolytic Manganese Dioxide.
	(i) 10 mines in different states. In the state of Madhya Pradesh, it has mines at Balaghat, Ukwa, Tirodi and Sitapatore, while in the State of Maharashtra, it has mines at Chikla, Dongri Buzurg, Munsur, Kandri, Beldongri and Gumagaon. In Andhra Pradesh, it has a lease at Adilabad. (ii) Electrolytic Manganese Dioxide Plant
Product Range:	High grade ores for production of Ferro Manganese: Blast furnace grade ore required for production of Hot Metal and Dioxide ore which goes into the production of Dry Battery Cells.

#### **Performance:**

S.No.		1993-94 (Approximately)
1.	Production (lakh tonnes)	7.043
2.	Turnover (Rs. crores)	91.63
3.	Profit before Tax (Rs. crores)	21.32

**R&D** Facilities:

Beneficiation of medium and low grade ores as well as medium grade dioxide ores to battery grade; Use of cable bolting and steel roof supports in underground mines; Improvement in mining methods: Diamond drilling to locate new manganese bearing areas and to establish the existence of further reserves in the existing areas; Optimisation of process parameters for Electrolytic Manganese Dioxide Plant; Undertaking exploration by diamond drilling, trenching, pitting, underground drivage etc. for locating new managanese ore bearing areas and proving manganese ore deposits in and around its leasehold areas; Premining support by cable bolting and use of steel supports in place of timber are being carried out in undergound working on experimental basis; trying to develop beneficiation processes to upgrade medium and low grade manganese ores to high grade.

**Employees:** 

10,000

### **MYSORE MINERALS LIMITED**

39 Mahatma Gandhi Road, Bangalore Tel: 575622, 575623, 575624, Telex: 0845-2432 My Mineral

Chief Executive Officer:	H.P. Srinivasa
Year of Establishment:	1966
Ownership:	Government of Karnataka
Nature of Operations:	Exploring the mineral wealth of the State in a planned and systematic manner and marketing the same in India and abroad.
Product range:	Chromite, Felsper, Bauxite, Clay, Quartz, Manganese, Iron Ore, Mag- nesite, Limestone, Dolomite, Corrundum, Kyanite, Soapstone and Vermiculite. These mines are located in 13 districts of the state. (ii) various coloured granite i.e. Black, Pink/Red, Yellow, Grey, Red Mul- ticolour, Green Chocolate Brown, Mottled Pink located in about 6 districts of the state. (iii) a stoneware Pipe manufacturing unit in the industrially backward are i.e. Bageshpura of Hassan district. This factory is based on the raw material available within the Company, produces 8,000 Mts of stoneware pipes per annum.
Turnover:	Rs. 200 million
Employees:	5,460

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# NATIONAL ALUMINIUM COMPANY LIMITED

IDCO Tower, Jsnpath, Bhubaneswar-751007, Orissa Tel: 0674-404233, 405552, Fax: 0674-402713, 407966

Chief Executive Officer:	Mr. S K Tamotia, Chairman & MD
Ownership:	Government of India
Works/Facilities:	2.4 million tons per annum Bauxite Mines at Panchpatmali (Dt. Koraput, Orissa); 800,000 TPA Alumina Refinery at Damanjodi (Dt. Koraput); 218,000 tons per annum Aluminium smelter at Angul, Orissa; 720 MW capacity captive power plant at Angul; port facilities at Visakhapatnam (Andhra Pradesh) for export of Alumina and import of caustic soda
Turnover:	Rs. 11959.6 million
Product Range:	(i) Alumina/hydrate (ii) Aluminium metal
Production:	Aluminium metal - 200.000 tonnes (1993-94)
Exports:	(i) Alumina 420,000 tonnes (ii) Aluminium metal, 90,000 tonnes (1993-94)
Financial Status:	A profit-making company
<b>R&amp;D</b> Facilities:	In-house
Program:	<ul> <li>(i) Expansion bauzite mine from the present 2.4 to 4.8 MTPA and Alumina refinery from 800,000 TPA to 1.35 MTPA</li> <li>(ii) Setting up of a 900,000 TPA Hydro Aluminium plant jointly with Norweign Hydro Aluminium.</li> </ul>
Foreign Collaboration:	Aluminium Pechiney (France) for technical know-how and Engineer- ing package
Employees:	5810

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### NATIONAL MINERAL DEVELOPMENT CORPN. LTD

10-3-311/A, Khanji Bhavan, Masab Tank, Hyderabad-500 028 (AP) Tel: 040-222071, Fax : 044-22236

<b>Chief Executive Officer :</b>	Mr. C.S. Mohan, Chairman
Year of Establishment:	1958
Scale of Operations:	Large
Investment :	Rs. 30 million (paid up capital)
Value of Exports :	Rs. 4086 million
Products Manufactured:	Iron Ore (Lumps, Fines) Diamonds, Natural Pellets
Programs:	<ul> <li>NMDC has launched huge expansion and diversification programs estimated to cost Rs. 1000 crores, a major portion of which will be met by internal sources</li> <li>Setting up a sponge iron plant base on Baildadila iron ore to produce value added products</li> <li>Setting up of ferrite grade ferric oxide production plant based on the natural ferric oxide of Bailadila (various grades have been found suitable by actual users in India &amp; abroad).</li> <li>Production of reduced iron powder/iron dust for use in PM parts manufacture, cores, welding electrodes, based on super concentrate of Bailadila ore.</li> <li>Setting up pelletisation plant based on Bailadila iron or fines.</li> <li>Development of lime stone and dolomite deposit to meet the future requirements of steel plant</li> <li>Development of Magnesite Deposit and setting up of dead burnt Magnesite plant in J&amp;K.</li> <li>Turned waste 'blue dust' into ferric oxide, iron powder and ferrites - value added materials required in powder metallurgy and for producing hi-tech electronic components.</li> </ul>
Annual Turnover :	Rs. 2585 million
Foreign Collaboration :	Iron Ore (Lumps, Fines), Japan, S. Korea Natural Pellets, Malaysia
Employees :	6962
Branch Offices:	Iron ore projects in Bailadila (MP), Donimalai (Karnataka) and Diamond mines at Panna (Madhya Pradesh)

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### NEYVELI LIGNITE CORPORATION LTD.

Neyveli P.O. Tamil Nadu 607 801 Tel : 04148-280, Fax : 04148-646

Chief Executive Officer :	Mr. S. Bandopadhay, Chairman & Managing Director
Ownership:	Government of India
Year of Establishment :	14.11.1956
Products Manufactured:	Excavation of Lignite. Generation of Electricity, Production of Urea. Production of Coke Fines
Authorised capital:	Rs. Two billion
Investment :	Rs. 4150 crores
Annual Turnover :	Rs. 666,68 crores (1992-93)
Nature of Operations:	Mining of lignite and its utilisation, contractual drilling in Rajasthan, Gujarat and Kerala.
Programs:	<ul> <li>(i) opening a Third Mine of 11 million tonnes capacity to feed a Third Thermal Power Station of 1500 MW (3x 500) capacity Further explora- tion work carried out in the Neyveli Belt have revealed that there is potential to open three more mines and connected power stations.</li> <li>(ii) Expansion of First Thermal power station 420 MW</li> <li>(iii) Revamping of urea and briquetting and carbonisation plants</li> </ul>
Facilities:	<ul> <li>(i) Two open pit mines of 6.5 MT/A and 10.5 MT/A</li> <li>(ii) Two thermal power stations (600 MW and 1470 MW)</li> <li>(iii) Urea plant of 1.52.000 TPA</li> <li>(iv) Briquetting &amp; Carbonisation Plant: 327,000 TPA</li> </ul>
Employees :	24139

RAJASTHAN MINERAL DEVELOPMENT CORPORATION LIMITED

Khanij Bhawan. Tilak marg, C-Scheme, Jaipur 302 005 Tel: 380938, 380690. Telex: 0365-2302, Fax: 380148, Telegram: RIMDCO

Year of establishment:	22nd Nov. 1979
Ownership:	A Govt. of Rajasthan undertaking
Scale of Operation :	Large
Products manufactured:	Limestone, Gypsum, Lead Zinc Copper, rock phosphate fluorsper etc.
Branches/Regional offices:	Jodhpur, Bikaner, Jaisalmer, Udaipur, Deri, Jalore, Barmer, Banswara, Dungarpur, Hanumangarh

### SANDUR MANGANESE & IRON ORES LIMITED

Lohadri Bhavan, Yeshwantnagar 583124, via. Sandur, Bellary Dist. Karnataka Tel: 336191, Grams: SMIORE

Chief Executive Officer:	Mr. Y.R. Ghorpade, Chairman
Year of Establishment:	1954
Ownership:	Private sector
Scale of Operation:	Medium Scale
Nature of Operations:	Manufacture of manganese ore, ferrosilicon, ferro manganese, pig iron, silicomanganese and dot matrix printers.
Production:	The company has infrastructure to produce annually 350,000 tonnes of manganese ore, one of the largest deposits in India. The company has two beneficiation plants and an electro- metallurgical industry, producing low phosphate pig iron and low aluminium ferro-silicon.
Paid up Capital:	Rs. 1.80,73,000
Employees:	3000

### SESA GOA LIMITED

Sesa Ghor, 20 EDC Complex, Patto, Panjim, Goa 403 001 Tel: (0832) 220160, Fax: (0832) 225156, 224735

Chief Executive Officer:	Mr. A. Giovinazzo, Managing director
Year of Establishment:	1965
Ownership:	Private sector
Scale of Operation:	Medium scale
Production:	2 million tonnes of iron ore annually from 3 major iron ore mines.
Works/Facilities:	Has two washing plants with classifier and hydrocyclone facility.
Nature of Operations:	Mining of iron ore and building of deep sea fishing, trawlers. Sea Seat Information Systems Ltd. is a subsidiary company.
Authorised Capital:	Rs. 10,00,00,000
Paid up Capital:	Rs. 7,30,59,000
Foreign Collaboration:	Ferraro, Italy, I.M.E. Snc Di Zuccarini M&C
Employees:	1851
### STEEL AUTHORITY OF INDIA LIMITED

Ispat Bhavan, P.B. No. 3049, Lodi Road, New Delhi 110 003 Tel. 4011-690481, Fax. 011-4694015

Chief Executive Officer:	Mr. M.R.R. Nair, Chairman
Year of Establishment:	1972
Ownership:	Government of India
Scale of Operation:	Large scale
Nature of Operations:	Operates 5 steel plants and owns captive mines for coking coal, iron ore. limestone, dolomite, etc. Produced 8.7 million of saleable steel in 1993-94.
Turnover:	Rs. 59601 million (between April to September 1994)
Employees:	187,900 as of March 31, 1994

### SPONGE IRON INDIA LIMITED

10-3-311/A, Castle Hills, Masab Tank, Hyderabad - 500028 Tel. (040) 227643, 227343; Fax: (040) 220531

Chief Executive Officer:	Mr. N.K. Patnaik
Year of Establishment:	1980
Ownership :	Government of India and Government of Andhra Pradesh
Works/Facilities:	Set up with UNDP/UNIDO assistance; based on the basic SL/RN Technology developed by Lurgi of West Germany; built a paint for briquetting of sponge iron fines below 6 mm size.
Production:	Produced in 1992-93 : 49110 tonnes, Capacity utilisation 82%; Sales turnover : Rs. 213 million
Nature of Operation:	A separate Engineering and Projects Division has been operating in the Company since 1981 for undertaking Design and Engineering work for commercial Sponge Iron Plants. An MoU has also been signed with M/s RPG Industries for setting up two kilns of 60,000 tpa each with the engineering and know-how developed by SIIL, in the joint sector. The sponge iron plant of M/s Hindustan Electro Graphites Limited which has been commissioned with the Engineering Assistance of M/s Sponge Iron India Limited has been functioning satisfactorily operat- ing at more or less at 100% capacity utilisation level.
<b>R&amp;D</b> Facilities:	Constant efforts are being made to indigenise critical spares, thereby reducing dependence on imports and saving valuable foreign exchange.

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#### TATA IRON & STEEL CO. LTD

Jamshedpur-831 001, Bihar Tel: 0657-310024, Fax: 0657- 310818

hief Executive Officer:	Mr. Jamshed J Irani, Managing Director
ear of Establishment:	1907
cale of Operation:	Large
wnership:	Private sector
roducts/Services:	captive iron ore mines
urnover:	Rs. 37910 million
mployees:	77107

# SERVICES

## CENTRAL MINING RESEARCH STATION

Barwa Road, Dhanbad, Bihar Tel. (0326) 822156; Fax: (0326) 822214

Chief Executive Officer:	Mr. B. Dhar
Year of Establishment:	1955
Ownership:	Council of Scientific & Industrial Research, Government of India
Function:	Central Mining Research Station (CMRS), a laboratory of the Council of Scientific and Industrial Research, Government of India, carries out R&D activities in the fields of Rock Mechanics and Mining Methods, Mine Environment and Safety as well as Mine Machinery, Equipment and Instruments to make mining safe, productive and economical as well as reduce environmental pollution due to mining and health hazards to miners.
R&D Facilities:	<ul> <li>Geomechanics and Mining Methods</li> <li>Stability analysis and design of coal and metal mines</li> <li>Design and development of mine support system</li> <li>Mine subsidence prediction, control and analysis</li> <li>Numerical modelling and computer programming</li> <li>Physical modelling</li> <li>Assessment of cavability and estimation of support capacity of longwall faces</li> <li>Slope stability analysis and design in rocks and waste spoils</li> <li>Mine fill practices (stowing for stabilization and optimum exploitation)</li> <li>Stabilization and rehabilitation of old mine workings</li> <li>Design, development and monitoring of blasting operations, vibration monitoring and control</li> <li>Biodegasification and bio-leaching</li> <li>Stability analysis, design and development of tunnels, dams and underground caverns.</li> <li>Mine Environment and Safety</li> <li>Fire hazard evaluation and control</li> <li>Assessment, design and development of pollution control measures in mines and mining areas</li> <li>Reclamation and management of mine waste dumps</li> <li>Sustainable development of fragile mining areas</li> <li>Ventilation network planning and design</li> <li>Mining Equipment and Machinery</li> <li>Design and development of mine safety equipment</li> </ul>

Services Offered

.

• Testing/Analysis/Evaluation/Standardization including calibration of: Mining Equipment, Explosives, Coal/Rock Samples, Mine Environment and Ventilation Instruments, Flameproof Equipment, Safety Equipment, Materials

#### Services to Industries:

**Contract Research:** Contract research comprises all R&D projects, which fall within the purview of approved research areas of CMRS undertaken through specific contractual arrangement agreed upon for the purpose. Contract research covers:

(i) Sponsored Projects, (ii) Collaborative Projects, and (iii) Grant-in-Aid Projects in areas of CMRS specialisation listed above.

**Consultancy Services:** include scientific, technical, engineering or other professional advice/assistance based on available knowledge/expertise of CMRS. These comprise:

(i) testing and analysis (including certification and calibration),(ii) training,

(iii) technical assistance of an advisory nature,

(iv) fabrication/production of special products,

(v) repair and maintenance, and

(vi) supply of information/data base.

Major Programmes (1992-97)

Minor Programmes

**New Introduction/creation** 

(i) Development of Mining Technology for the Exploitation of Complex Coal Deposits; (ii) Development of Total packages for Optimal Exploitation of Mineral Deposits using Improved Technologies; (iii) Numerical Modelling of Rock Excavation and Computer Application in Mine Planning and Designing from Stability and Safety Point of View; and (iv) Development of Underground Space Technology.

(i) Prediction of Ground Stability by Acoustic Emission Measurement,
(ii) Studies on the Parameters contributing to Air Pollution in Mines,
(iii) Feasibility of Use of Aluminium Alloy for Support/Equipment in Mines,

(iv) Ergonomics in Mining Operations,

(v) Corrosion in Mines,

(vi) Design of Rock Bolting Equipment,

(vii) Design of Chock for Bord and Pillar Workings,

(viii) Evaluation and Testing of Powered Supports,

(ix) Physical Modelling of Coal Mining Systems,

(x) Development of Communication Systems for Mines, Methods for Ventilation and Safety in Mines, Mining Machinery and Equipment as well as Methods for Reclamation of Mined Areas

Testing Cell (TC): CMRS has recently reorganised its testing facility procedure and created a "CMRS Testing Cell" to provide a 'Single Window Assistance' to the mining and allied industries and manufacturers of mining equipment/machinery in all its matters related to testing and calibration. Mineral Resouce Cell (MRC): MRC is constituted to collect, store and disseminate information on country's mineral resources and investment conditions, structure of mining industry, environmental obligations, status of mining codes and laws, etc.

Small Scale Mining Cell (SSMC): In operation since January 1992, it caters to the need of small mines of the country related to assess feasibility, planning of operations, evaluation of environmental impact, etc.

Human Resource Development Cell (HRDC): This was set up for the dissemination of knowledge and experience gained through research for application in mining and allied industries.

#### CENTRAL MINE PLANNING AND DESIGN INSTITUTE LTD.

Gondwana Place, Kanke Road, Ranchi 834 008, Bihar Tel: 0651- 301522, 305456, Fax: 0651-305447, 301851

Chief Executive Officer:	Mr. B.C. Misra, Chairman & Managing Director
Year of Establishment:	1974
Ownership:	Government of India
Scale of Operation:	Large
Nature of Operations:	Consultancy from concept to commissioning of coal mines
Employment:	1200 skilled professionals

#### ENGINEERS INDIA LIMITED

Bhikaji Cama Place, R.K. Puram, New Delhi 110 066 Tel:011-602121, 603475, Fax: 011-6872693, 6886245

Chief Executive Officer:	Mr. P K Rudra, Chairman & Managing Director
Year of Establishment:	1965
Ownership:	Government of India
Facilities:	Provides specialised services in respect of process design/development, heat & mass transfer equipment design, energy conservation, environ- mental engineering, advanced control/optimisation, systems engineer- ing & computerisation, specialised materials management and maintenance, and operations and safety including HAZOP studies and Risk Analysis.
Turnover:	Sales Turnover in 1992-93 was Rs. 15741 lakhs

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Year of comp	in. Projects	Client	Services Offered
1973	100 tpd copper	Hindustan Copper	Commissioning assistance,
	concentrator at Dariba		project management.
	Rajasthan.		
1975	100 tpd copper	Hindustan Cooper	Commissioning assistance,
	concentrator at		project management.
	Agnigundia, Andhra		
	Pradesh		
1979	30,000 tpy zinc smelter at	Front-end engineering,	
	Vasakhapatnam, Andhra	detailed engineering,	
	Pradesh	procurement, construction	
		supervision and project	-
1070		management.	_
1979	10,000 tpy lead smelter at	Hindustan Zinc	Front-end engineering,
	Visakhapatnam, Andhra Pradesh		detailed engineering,
	FIDUESII		procurement, construction
			supervision and project
1980	120 tpd zinc roaster	Hindustan Zinc	management.
	revamp at Debari,		Basic engineering package, detailed
	Rajasthan		engineering, procurement,
	· ·		construction supervision
			and project management.
1980	60 tpa siler refinery at	Hindustan Zinc	Process design, basic
	Visakhapatnam, Andhra		engg. package, detailed
	Pradesh		engineering, procurement,
			construction supervision,
	·.		commissioning assistance
			and project management.
1982	200 tpd semi-industrial	Rajasthan, Rajasthan State	Process selection, process
	rock phosphate	Mines & Minerals Limited	design, basic engineering,
	beneficiation plant at		detailed engineering,
	Jhamarkotra ·		procurement, construction
			supervision,
			commissioning assistance
			and project management
1982	2 million tpy copper	Hindustan Copper	Front-end engineering,
	concentrator at		detailed engineering,
	Malanjkhand, Madhya		procurement, construction
	Pradesh		supervision,
			commissioning assistance
			and project management.

### List of Projects Handled by Metallurgy Division

Year of compin.	Projects	Client	Services Offered
1983	Lead smelter expansion	Hindustan Zinc	Study, basic engineering
	by 12,000 tpy at		package, detailed
	Visakhapatnam, Andhra Pradesh		engineering, procurement,
	Flauesh		construction supervision, commissioning assisatance
			and project management.
1983	Modemisation of	Hindustan Zinc	Study, basic engineering
1303	purification system in zinc	HINDUSIAN ZINC	package, detailed
	electrolysis plant at		engineering, procurement,
	Visakhapatnam, Andhra		construction supervision,
	Pradesh		commissioning assisatance
			and project management.
1985	200 tpd cement plant at	Karnataka Mineral & Mfg. Co.	
	Mathod, Karnataka	······································	procurement, construction
	•	•	supervision,
			commissioning assistance
			and project management.
1988	200 tpd cement plant at	South India Cements	Limestone deposit
	Malkhed, Karnataka		evaluation, mine planning,
			detailed engineering,
			procurement, construction
			supervision,
			commissioning assistance
1000	•••••		and project management.
1988	Alumina & aluminium	National Aluminium	
	projects in Orissa. Bauxite	Company, Detailed	
	Mining 2.4 m. tpy, Alumina	engineering, procurement,	
	0.8 m tpy, Aluminium	construction supervision,	
	218,00 tpy	commissioning assistance and project management.	
1988	Copper refinery	Hindustan Copper	Detailed engineering,
1500	modernisation at Ghatsila,	ninuusian copper	procurement, construction
	Bihar (Expn. by 8000 tpa)		supervision,
			commissioning assistance
			and project management.
1988	600 tpa mica paper & 300	Mica Trading Corporation	Detailed engineering,
	tpa sulating products		procurement, construction
	project at Hazaribagh,		supervision,
	Bihar		commissioning assistance
			and project management.
1989	Lignite mine expansion by	Gujarat Mineral	
	500 tpa at Panandhro,	Development Corporation,	
	Gujarat	Detailed engineering,	
		procurement, construction	
		supervision and project	
L		management.	

Year of complin	, Projects	Client	Services Offered
1991	1 Mtpy lead-zinc mining and beneficiation project at Jhamarkotra, Rajasthan. 11 million tpa open pit mine. 500,000 tupa crushing plant (HGO). 900,000 tpa beneficiation plant (LGO)	Rajasthan State Mines & Minerals	Study, process design, detailed engineering, procurement, construction supervision and project management.
1994	300,000 tpy SMS grade limestone project at Sanu, Rajasthan	Rajasthan State Mines & Minerals	Study, process design, detailed engineering, procurement, construction supervision, commissioning assistance and project management.
1995	2 Mtpy SMS grade limestone project at Arki, Himachal Pradesh	National Minerals Development Corporation	Study, process design, detailed engineering, procurement, construction supervision, commissioning assistance and project management.

### **GHOSH, BOSE & ASSOCIATES PVT LTD**

8 Harrington Mansion, 8 Ho-Chi-Minh Sarani, Calcutta-700 071 Tel. 033-2427152/2421866/2427036, Fax: 033-2424808

Chief Executive Officer:	Mr. Subimal Ghosh, Managing Director
Year of Establishment:	1972
Ownership:	Private sector
Products/Services:	Planning & environmental studies, Public health & environmental impact assessment, environmental impact etc.
Foreign Collaboration:	EDF International, France.
Employees:	107

### KIRLOSKAR CONSULTANTS LTD

917/19a Shivaji Nagar, Fergusson College Road, Pune-411 004 Tel. 0212-344495, Fax: 0212-342894

Chief Executive Officer:	Mr. D.V. Tikekar, Managing Director
Year of Establishment:	1963
Ownership:	Private sector
Products/Services:	. Environmental, engineering, environmental planning & management
Turnover:	Rs. 59.635 million
Foreign Collaboration:	WS Atkins International Trafic and Transportation UK, IGIP Consult- ing Engg
Employees:	225

# MINERAL EXPLORATION CORPORATION LIMITED

Dr. Baba Saheb Ambedkar Bhawan, High Land Drive Road,

Seminary Hills, Nagpur 440 006 Tel: 0712-522141, Fax: 0712-531080

Chief Executive Officer:	Mr. M Kumar, Chairman & Managing Director
Year of Establishment:	1972
Ownership:	Government of India
Production/Service:	MEC is the premier exploration agency in the country established for systematic detailed exploration of minerals to bridge the gap between the initial discovery of a prospect and its eventual exploitation.
-	The company has full fledged integrated services covering all aspects of exploration including, exploration geology, geohydrology, rock mechanics, environmental impact studies, computerised geostatistical analysis, remote sensing, mineralogical and petrological studies chemi- cal & physical analysis, exploration geophysics, survey, drawing etc, apart from a large fleet of about 250 drills and 15 mining units.
	undertakes mine construction foundation engineering studies, tubewell construction, restoration of archeological monuments and manufacture of drilling and geological accessories.
Authorised Capital:	Rs. 60 million
Performance:	(i) Since its inception, the company, has proved about 55,000 million tonnes of different minerals/ores coal, bauxite, base metals, gold, iron ore, limestone etc. (ii) It has conducted some 5 million meters of drilling and 20,000 meters of mining.
Employment:	5000

### METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED

Sri Aurobindo Marg, Hauz Khas, New Delhi Tel: 667370, 668667

Chief Executive Officer:	Mr. S R Sarkar, Chairman & Managing Director
Year of Establishment:	1972
Ownership:	Government of India
Works/Facilities:	Rendering consultancy, detailed engineering and technical services to Iron and steel industry, non-ferrous metals, power plants, chemicals, general engineering, environmental engineering, ocean engineering and defence.
Authorised Capital:	Rs. 40 million
Performance:	Turnover during 1992-93 was Rs. 114.00 crores against Rs. 117.76 crores during 1991-92.
Overseas Operation:	MECON is rendering project management and technical services in association with Pan African Consultancy Services (PACS); established Overseas Offices at Dubai, UAE and Dusseldorf, Germany; detailed engineering, consultancy and site supervision services for a Copper extrusion and wire rod plant in Oman as well as Cold Rolling Mill Complex in Indonesia; undertaken Feasibility Studies for a 40,000 tonnes per year Steel Plant complex in Oman and 500,000 tonnes/yr Steel Plant in the UAE; carrying out, design & engineering services for clients in the USA and Germany
R&D Facilities:	An off-line software for optimizing operation of cold rolling mills in steel plants; a laser spotting system for accurate alignment of coke over pusher cars with the over doors is to be installed at Rourkela Steel plant. Hydraulic automatic gauge control system for control of strip thickeness in cold rolling mills to close tolerances is also now ready for commercial marketing.
Programs:	The R&D plan also places emphais on attaining technological self reliance, fostering and accelerating development and implementation of indigenous technology in iron and steel, high tech system and non-conventional and renewable energy sources; MOU with R&D Institutions, manufacturing organisations project execution agencies and Foreign consultants; Vendor development for improved quality assurance; Cooperation with Engineering & Consultancy Organisa- tions for joint development efforts; Management by policy evolution through participation by employees; Project-by-project Quality im- provement efforts.

#### NATIONAL INSTITUTE OF ROCK MECHANICS

P.O. Champion Reefs, Kolar Gold Fields, Karnataka 563 117 Tel: (08153)60937, 61169, 60263, Fax: 08153-60937, Telex: 0843-215 KIRM IN

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Chief Executive Officer:	
Ownership:	Government of India
Facilities:	State-of-the-art facilities and expertise to address a variety of problems related to ground control and mine design in metal mines, coal mines and hydro-power projects
Specialists in :	Mine design, ground control, numerical modelling, geotechnical studies, rock blasting, seismology, instrumentation, rock testing, materials testing

#### WESTERN INDIA ENVIRONMENTAL TECHNOLOGIES LTD

870/1 Bhandarkar Instt Road, Pune-411 006, Maharashtra Tel. 0212-344346, Fax. 0212-345316

Chief Executive Officer:	Mr. Chandan Gadgil, Chairman & Managing Director
Year of Establishment:	1991
Ownership:	Private sector
Products/Services:	Environmental engineering
Turnover:	Rs. 24.966 million
Foreign Collaboration:	Paques B V, Netherlands
Employees:	166

#### ITALAB PRIVATE LIMITED

Meher House, 15 Cawasji Patel Street, Fort, Bombay 400 001 Tel: 022-2873882, 2873667, 2872545, 2874096, Telex: 011-85801 ITAL IN

Year of Establishment:	1948
Programs:	Undertake prompt and accurate analysis of ores, minerals and metals, analysis of drugs for raw materials and their finished products, water, chemicals, oils, paints and fertilizers.
Branches:	Calcutta, Madras, Visakhapatnam, Bellary, Cochin, Jamnagar

### **GOVERNMENT AGENCIES**

### DIRECTORATE GENERAL OF MINES SAFETY

Dhanbad-826 001, Tel: (0326) 822911

Chief Executive Officer:	Mr. V. Mahajan, Acting Director General
Nature of Operations:	Under the constitution of India, Safety, Welfare and Health of workers employed in mines are the concern of the Central Government. The objective is regulated by the Mines Act and various rules and regula- tions made thereunder and is administered by the Directorate General Mines Safety (DGMS) under the Union Ministry of Labour.
Regional Offices	Dy. Director-General of Mines Safety, Central Zone. Dhanbad-826 001
	Dy. Director-General of Mines Safety, Eastern Zone, P.O. Sitarampur, Dist. Burdwan, West Bengal
• •	Dy. Director-General of Mines Safety, Southern Zone, Hill Fort Road, P.O. Adarshnagar, Hyderabad (A.P.)
	Dy. Director-General of Mines Safety, South-Eastern Zone, Harihar Singh Road, Morabadi, Ranchi 834 008
	OLOGICAL SURVEY OF INDIA
	Jawaharlal Nehru Road, Calcutta 700 016
Tel	: 249-6976, 249-6941, Fax: 091-33-249695ô
Chief Executive Officer:	Mr. D.B. Dimri, Director General
Year of Establishment:	1851
Ownership:	Government of India
Functions	The Geological Survey of India is a premier Geoscientific Organisation not only in the country but in the world. (i) Geological mapping continued to be one of the most important functions of GSI for genera- tion of basic data for subsequent geological and various development activities in the country. (ii) on locating mineral and energy resources, harnessing of land and water resources for meeting the growing demands of mineral/metal industries, power, agricultural, irrigation sectors etc, (iii) continuous updating and refinement of National Geos- cience Knowledge base through geological mapping, specialised thematic studies and airborne geophysical surveys, and (iv) mapping and preparation of inventory of resources on or below the Seabed in Exclusive Economic Zone (EEZ) in the surrounding ocean.
Organisational Set Up	The GSI, administered by the Ministry of Mines has a Director General

as its head and based in Calcutta and six regional offices at Lucknow, Jaipur, Nagpur, Hyderabad, Calcutta and Shillong. It has three specialised Wings, viz. Coal, Marine and Airborne Mineral Surveys and Exploration, a Training Institute located at Hyderabad and five satellite Activities

training centres. It has operational offices in every State, excepting Manipur, Mizoram, Himachal Pradesh, Goa & Pondicherry.

The major activities of the Geological Survey of India are summarised below:

1) Mineral Exploration

a) Coal and Lignite

b) Ores and Minerals (non-coal minerals/metals)

2) Systematic Geological Mapping

3) Specialised Thematic Studies

4) Airborne Geophysical Surveys

5) Marine Surveys

6) Geotechnical investigation

a) Sponsored Schemes: Water Resources Development Projects like Irrigation, Hydel Power etc.

b) Communication Projects: Geotechnical evaluation of major river basin

7) Management of Natural Hazard

a) Seismotectonic studies

b) Studies on Landslides, Floods, Volcanism etc.

8) Environmental Geology Studies

a) Environmental resource appraisal

b) Studies on environmental impact, mitigation of effect of hazard and urban/rural development

c) Global Change Programme

9) Geothermal Studies

10) Glaciological and melt water regime assessment

11) Expedition to Antarctica

12) Geodata and Information Management

13) Dissemination of Information

a) Map Compilation & Printing

b) Publication

c) Curatorial activity

14) Laboratory Studies, Research and Development

a) Petrology and Mineralogy

b) Palaeontology

c) Geochronology & Isotope Geology

d) Photogeology & Remote Sensing

e) Analytical Chemistry

f) Geophysics

g) Geotechnical Labs

15) Collaboration and International activities

a) Collaboration with national and international agencies

b) Bhutan Scheme

16) Human Resources Development

a) Departmental Training Programmes

b) Extradepartmental Training in India

c) Training abroad

Annually conducts some 800 geoscientific investigations embracing all the above activities with principal thrust on mineral exploration programmes.

GSI covered about 95 per cent of the total mappable land are (3.16 million sq. km) of the country by systematic mapping and about 65 per cent of Exclusive Economic Zone (EEZ) of the country (2.02 million sq. km) by reconnaissance mapping through marine surveys by the organisation's own vessels — one ocean going and two coastal launches. While total coverage under the National Aeromagnetic Survey Programme has been about 52% of the targetted area (1.88 million sq. km), the Multisensor Surveys have been conducted over 55,277 sq. km by the Survey's own Twin Otter Aircraft.

As a Govt. Department, GSI renders geological advice not only to the Ministry of Mines but also various other Central/State Govt. Department. Public Sector Undertakings and other institutions.

The total strength of the personnel in the GSI as sanctioned is 18153 as on 1.12.92 and usually about 80% of the above strength are available for deployment. 10,873 personnel of all categories belong to the scientific and technical streams and 3454 personnel to administrative and related streams and 3826 personnel to Gr. 'D' category.

Puspa Bhawan, 2nd floor, Madangir Road, New Delhi 110 062

- 1. Central (Maharashtra & Madhya Pradesh): Dy. Director General, GSI complex, Seminary Hills, Nagpur 440 006
- Eastern (West Bengal, Bihar, Orissa, Sikkim & Andaman-Nicobar Island): Dy. Director General, 12 A &B Russel Street, Calcutta 700071
- North Eastern (Assam, Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh): Dy. Director General, Asha Kutir, Laitumkhrah, Shillong 793 003
- Northern (Uttar Pradesh, Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir): Dy. Director General, Plot No. 2, Sector 'E', Aligunj, Lucknow- 226 020
- Southern (Andhra Pradesh, Karnataka, Tamil Nadu, Kerala, Goa & Pondicherry): Dy. Director General, GSI Complex, Bangalguda, Hyderabad - 500 660
- Western (Rajasthan & Gujarat): Dy. Director General, GSI Complex, 15-16 Jhalana Doongri, Jagatpura Road, Jaipur-302 004

**Employment:** 

Liaison Office

Regions

### INDIAN BUREAU OF MINES

Indira Bhawan, Civil Lines, Nagpur Tel. 0712-534642, Fax : 0712-533041

**Chief Executive Officer:** 

Year of Establishment:

**Ownership:** 

**Functions:** 

Mr. O.P. Sachdeva, Controller-General

1948

**Government** of India

Conservation and systematic development of India's mineral resources It was with this basic objective that the Bureau was formed in March 1948. The tool provided is the Mines and Minerals (Regulation and Development) Act and Mineral Conservation and Development Rules framed thereunder, and the authority vested in the IBM under this Act and Rules.

1. (a) Enforcing conservation and systematic development of mineral resources through inspection of mines, beneficiation plants, and mineral-based industries.

;

(b) Conducting geological, mining, beneficiation and other related techno-economic field studies and applied research on mining geological problems.

2. Conducting studies on environmental protection and pollution control in regard to the mining and mineral beneficition operations.

3. Preparation of mineral maps and the inventory of mineral resources of India.

4. Providing technical consultancy services on suitable terms within the country and abroad in connection with:

(i) appraisal and exploitation of mineral deposits including ore dressing investigations and analysis of ores and minerals and preparation of feasibility reports and detailed project of mines/ore-dressing projects,
(ii) improving efficiencies and reducing operation costs

(iii) market surveys

(iv) financial analysis of capital requirements, and

(v) matters related to any of the functions enunciated in this charter. 5. Conducting under the departmental programme testing and analysis of ores and minerals, mineral beneficiation and related technological studies on samples obtained from land and sea; research on fundamental aspects of mineral beneficiation.

6. Collection, processing and storage of data on mines, minerals and mineral-based industries, collection and maintenance of world mineral intelligence, foreign mineral legislation and other related matters.

7. Publication of bulletins, monographs, information circulars and reports of investigations relating to mining, mineral beneficiation and mineral beneficiation and mineral-based industries.

8. Publication of statistics relating to mineral production in India, mineral stocks, exports, local consumption, etc., rendering assistance to the mineral trade in the marketing of minerals.

9. Advising the Government on matters in regard to the mineral

industry particularly on planning for exploitation and utilisation of the country's mineral resources and those of the sea, infrastructural requirements, environmental protection and pollution control. export and import policies, trade, mineral legislation, wages, taxes, royalty and related matters.

10. Training of scientific, technical and other cadres of the department and persons from the mineral industry and other agencies in India and abroad.

11. Promoting awareness regarding the conservation and systematic development of mineral deposits through museums, exhibitions and other audio-visual media.

12. Undertaking such other activities as may become necessary in the light of the developments in the field of mining, mineral beneficiation and related technology.

Pushpa Bhawan, 2nd floor, Madangir Road, New Delhi 110 062

#### **Delhi Office:**

## ALLIED COMPANIES

#### IDL India Ltd

DLF Centre 5th floor, Sansad Marg, New Delhi-110 001 Tel. 011-3718260, Fax. 011-3718259

Chief Executive Officer:	Mr. G. Ewart, Chairman & MD
Year of Establishment:	1955
Ownership:	Private sector
Products/Services:	Commercial blasting explosives products etc.
Turnover:	Rs. 750 million
Foreign Collaboration:	Nallo Chem Ltd USA
Employees:	4200

#### M S A INDIA LTD

P-25, Transport Depot Road, Calcutta-700 088 Tel. 033- 456904/459773/491707, Fax. 033-497368

Chief Executive Officer:	Mr. Subir Chakraborty
Year of Establishment:	1965
Scale of Operation:	Medium
Ownership:	Private sector
Products/Services:	Safety Equipments for Mining & industries
Turnover:	Rs. 33.6 million
Employees:	85

#### **NETEL CHROMATOGRAPHS**

S V Road, Manpada, Thane-400 607 Maharashtra Tel. 0215- 5344107/5343279/5344721, Fax. 0215-5346433

Chief Executive Officer:	Mr. V R Bhave
Year of Establishment:	1979
Ownership:	Private sector
Products/Services:	Gas chromatographs and pollution monitoring instruments
Turnover:	Rs. 70 million
Foreign Collaboration:	Gastech Inc USA
Employees:	120

## JINDAL ALUMINIUM LIMITED

Jindal Nagar, Tumkur Road, Bangalore 560 073, Karnataka Tel: 8394255/56/57, 8395946, Fax: 080-8394258

Chief Executive Officer:	Mr. S.R. Jindal, Chairman & Managing Director
Year of Establishment:	1970
Ownership:	Private sector
Scale of Operation:	Large
Product/Services:	Manufacturing over 3500 profiles in different alloys for use in as diverse areas as transport, communications, agriculture, atomic energy, etc.
Works/Facilities:	World class quality assurance systems, the most modern micro-proces- sor based extrusion press, computerised Spectrovac for metal analysis, computer-aided die manufacturing facilities and a state-of-the-art R&D centre recognized by the Department of Science and Technology, Government of India. The Company has received the ISO 9002 cer- tification.
Turnover:	Rs. 1,000 million; covers 30% of the Indian market with only 50% capacity utilisation
Foreign Collaboration:	None
Employees:	500

# ORISSA EXTRUSIONS LTD

Ganeswarpur Indl Estate, Balasore-756 019 Orissa Tel. 006782-62976/63078/64093/64732, Fax. 06782-62975

Chief Executive Officer:	Mr. Anjan Sen, Chief Executive & Manager
Year of Establishment:	1986
Ownership:	Private sector
Scale of Operation:	Medium
Products/Services:	Aluminium extrusions
Turnover:	Rs. 311 million
Collaboration:	Indian Aluminium Company Ltd, Industrial Promotion & Investment Corporation of Orissa Ltd
Employees:	160



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