सत्यमेव जयते

ANNUAL REPORT

1994-95

MINISTRY OF STEEL

ANNUAL REPORT 1994-95

Ministry of Steel

CONTENTS

YEAR'S *Highlights*

- Exports of iron and steel in 1993-94 increased to 22.2 lakh tonnes valued at Rs. 1678 crores, an increase of 144% in quantity and 137% in value over the previous year.
- About six million tonnes of steel capacity is at various stages of implementation. M/s Lloyds Steel Industries Ltd. have already commissioned their 0.4 million tonnes hot rolled steel sheets/strips project with captive steel making facilities. Recently M/s Essar Gujarat Ltd. commissioned one electric arc furnace and slab caster.
- Steel Authority of India Limited (SAIL), the 9th largest producer of steel in the world, achieved an all time high production of 8.645 Million Tonnes of saleable steel in 1993-94.
- SAIL's export of steel in 1993-94 increased to an all time high of 6,31,000 tonnes valued at Rs.561 crores.
- SAIL reached its highest level of profits at Rs.545 crores in 1993-94 - paid a total dividend of Rs.159.44 crores to its shareholders, which is 4% of the paid up equity and is double the amount of dividend paid in 1992-93.
- SAIL's half yearly profits during 1994-95 (April-Sept., 1994) increased five fold to Rs.353 crores as compared to corresponding period in previous year.
- Visakhapatnam Steel Plant (VSP) made an operating profit of Rs.114 crores for the first time in 1993-94.
- VSP is set to make a cash profit of Rs.55 crores for the first time in 1994-95.
- VSP's production of Crude Steel increased by 47% in 1993-94 as compared to 1992-93 while saleable steel production increased by 33%.
- VSP recorded a significant improvement in techno-economic norms of performance during 1994-95(April-Nov'94) as compared to 1993-94.
  - Coke rate decreased from 561 Kg to 540 Kg per tonne of hot metal.
  - Specific energy consumption reduced from 8.32 to 7.98 G.Cal per tonne of crude steel.
  - Labour productivity increased from 117.4 to 147.1 tonne of crude steel per year
- Metal Scrap Trade Corporation Ltd. (MSTC's) domestic trade volume increased by 15% and profit by 7% during 1993-94 as compared to 1992-93.
- Ferro Scrap Nigam Ltd. (FSNL) increased production by 11% during 1993-94 as compared to 1992-93, recording its highest ever production of scrap
- Kudremukh Iron Ore Company Ltd. (KIOCL) paid dividend at the rate of 3% on the paid up capital (amounting to Rs. 19.04 crores) for the second year in succession - achieved significant expansion of export market.
- National Mineral Development Corporation Ltd (NMDC) produced 12.75 million tonnes of iron ore and 18517 carats of diamonds during 1993-94 which is an all time record - paid dividend of 20% on paid-up capital (amounting to Rs. 26.43 crores) for the fourth year in succession

THE YEAR *at a glance*

PRODUCTION OF STEEL

Production of Saleable Steel in the five integrated steel plants of Steel Authority of India Ltd. (SAIL) during the year 1994-95 is expected to be about 9.04 million tonnes as against the production of 8.65 million tonnes representing an increase of 4.5 per cent over the production in 1993-94.

Production of Saleable Steel by Visakapatnam Steel Plant is projected at 1.64 million tonnes in 94-95 as against 1.18 million tonnes in 1993-94. TISCO is expected to produce 2.44 million tonnes of Saleable Steel in 1994-95 as against 2.15 million tonnes in 1993-94. Production of saleable steel by the secondary producers is expected to be 3.50 million tonnes as against 2.70 million tonnes in 1993- 94.

Total production of Saleable Steel in 1994-95 is thus expected at about 16.62 million tonnes, as compared to 14.68 million tonnes in 1993-94, representing an increase of 13.2 percent.

DEMAND AND AVAILABILITY OF STEEL

Total demand for finished steel (including demand for export) in 1994-95 is estimated at 19.37 million tonnes. Against this, the domestic availability in the year is expected at 17.84 million tonnes, leaving a gap of 1.47 million tonnes.

In the case of Pig Iron, the domestic availability is estimated at 2.36 million tonnes against an estimated demand of 2.62 million tonnes. The gap is likely to be met to some extent through imports. It is expected that the import of finished steel in 1994-95 may be about one million tonnes and of Pig Iron about 0.05 million tonnes.

PRODUCTION OF SPECIAL STEEL

Production of Saleable Steel in the four integrated and special steel plants of SAIL for 1994-95 (up to November 1994) was 5.662 million tonnes representing an increase of 4% over the production during the corresponding period in 1993-94.

Production of Crude Steel in the four integrated plants of SAIL was 6.347 million tonnes as against 6.096 million tonnes achieved during the corresponding period in 1993-94.

▷ IISCO

Production of saleable steel in IISCO, a subsidiary of SAIL, for 1994-95 (upto November, 1994) was 0.206 million tonnes which was 109% of the target. Production of crude steel in IISCO was 0.214 million .tonnes as against 0.219 million tonnes achieved during the corresponding period in 1993-94.

▷ HALF YEARLY WORKING RESULTS OF SAIL

The net profit of SAIL for six months ended on 30th September, 1994 at Rs.353.14 crores as against Rs.62.47 crores represented a five fold increase over the corresponding period of last year. The Gross margin i.e. profit before depreciation and interest was Rs.964 crores against Rs.846 crores during the corresponding period of last year, i.e. an increase of over 14%. During the first six months of 1994-95 the company has recorded a sales turnover and other income of Rs.5960.66 crores as against Rs.4904 crores during the first six months of the previous year.

▷ MAJOR PROJECTS OF SAIL

The major facilities in the Durgapur Steel Plant modernisation project were commissioned in 1993-94 such as Blast Furnace No.II, Continuous Casting Plant, BOF Shop etc. This project is now expected to be completed by June, 1995.

RSP modernisation is under implementation. Major production facilities envisaged under Phase-I of the project have been commissioned by March, 1994. The works under Phase-II of the project are in various stages of implementation and are likely to be completed by August, 1996.

Government sanction to the modernisation of Bokaro Steel Plant (Phase-I) was issued in July, 1993. The project is scheduled for completion by June, 1997.

VISAKHAPATNAM STEEL PLANT

Visakhapatnam Steel Plant with an annual capacity of 3 million tonnes of Crude Steel was fully commissioned in July 1992 and 1993-94 was the first full year of its operation. During this year the Plant had achieved 70% capacity utilisation in Hot Metal and 45% in Crude Steel. The Steel Melt Shop and the Continuous Casting Department are still in the process of stabilisation. Despite this, there has been consistent growth in production as well as improvement in techno-economic parameters. During the period April-November, 1994, Visakhapatnam Steel Plant has achieved 27% growth in production of Hot Metal (over the corresponding period of the previous year) 47% growth in Crude Steel and 33% growth in Saleable Steel. During 1994-95, the plant is expected to achieve capacity utilisation of 88% in Hot Metal, 67% in Crude Steel and 66% in Saleable Steel. During the year 1993-94 Visakhapatnam Steel Plant surpassed the techno-economic norms envisaged in the DPR (Detailed project report) in some areas. During April-November, 1994 the plant has achieved further reduction in BF Coke rate by 3.7% and 11.3% in specific energy consumption. During 1993-94, Visakhapatnam Steel Plant earned a gross margin of Rs.114 crores for the first time. The financial performance during 1994-95 is showing further improvement as the Plant has already earned a gross margin of Rs.231 crores during April-November, 1994 as against Rs.49 crores for the corresponding period of last year, thereby showing an improvement of 371%.

NATIONAL MINERAL DEVELOPMENT CORPORATION LTD. (NMDC)

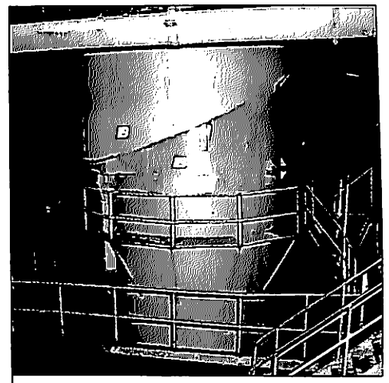
During the year 1993-94, NMDC produced 12.75 million tonnes of iron ore and 18517 carats of diamonds, which is the highest since the inception of the company. It also paid dividend @ 20% on the equity capital amounting to Rs. 26.43 crores for the year, which was the fourth year in succession for payment of dividend

In view of increasing domestic demand for Bailadila iron ore, the Company has formulated plans to open two new iron ore mining projects in the region at Deposits No. 10/11 A and 11 B. Each project is designed to produce 5 million tonnes run-of-mine (ROM) Ore.

KUDREMUKH IRON ORE COMPANY LTD (KIOCL)

KIOCL is the largest 100% EOU in the country engaged in production and export of iron ore concentrates and pellets. During the year, 1993-94, the Company produced 6.2 million tonnes of iron ore concentrates and 2.24 million tonnes of pellets, which is the highest achievement so far. The Company paid dividend @ 3% on the paid up capital amounting to Rs. 19.04 crores for 1993-94 which is the second year in succession for payment of dividend.

As part of its diversification plans, KIOCL has a proposal to set up a plant for manufacture of high grade pig iron and Ductile Iron Spun pipes (DISP) with an annual capacity of 1.55 lakh tonnes and 0.50 lakh tonnes respectively. The capital cost of the project is expected to be around Rs. 233 crores.



METAL SCRAP TRADE CORPORATION LIMITED (MSTC)

During 1993-94, MSTC retained its position as the single largest importer of scrap in the country by importing 3 lakh tonnes against a total import of about 1 million tonne. The domestic trade volume increased to Rs. 240.77 crores representing an increase of 14.7% over the previous year.

The Company formulated diversification plans for evolving into a multi product and multi-functional enterprise. Joint venture partners were identified for taking up shipbreaking operations in Gujarat and manufacture of container castings in West Bengal.

ELECTRIC ARC FURNACE INDUSTRY

At present there are a total of 181 Electric Arc Furnace units, covering a capacity of 7.81 million tonnes per year.

Production of Ingots/Concast Billets/blooms/slabs by EAF units during the last three years and for April-October, 1994 is given below:

(In Thousand Tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (Prev.) (April-Oct.'94)
Mild Steel	2116.1	1789.3	1221.9	[Individual break-up
Medium/ High Carbon Steel	384.7	387.2	329.9	not available]
Alloy Steel	584.8	620.3	713.5	
Stainless steel	210.4	178.8	234.0	
Total (Estimated)	3296.0	2975.6	2499.3	1770.1

SPONGE IRON INDUSTRY

Sponge Iron is a metallic product produced by direct reduction of high grade iron ore or iron ore pellets in the solid state. Also known as Direct Reduced Iron (DRI) or Hot Briquetted Iron (HBI), it contains a large percentage of metallic iron. This is a partial substitute for steel melting scrap used by the secondary steel sector. The indigenous availability of metal scrap is low and large quantities have to be imported in order to meet indigenous demand from the electric arc furnace and induction furnace units. Production of sponge iron is, therefore, being encouraged by the Government in order to conserve foreign exchange.

The installed capacity of sponge iron units till 1988-89 was only 3.3 lakh tonnes. This has increased to 52.2 lakh tonnes. The total sponge iron production in the current year is likely to be about 30 lakh tonnes as against last year's production of 24.2 lakh tonnes The performance of the sponge iron units that are already commissioned is given below :-

Sl. No.	Name of the Unit	Plant Location	Installed Capacity (in lakh tonnes)	Production 1993-94 (in lakh tonnes)
1	2	3	4	5
	(a) Coal based			
1.	Sponge Iron India Ltd.	Kothagudem, Distt. Khammam, Andhra Pradesh	0.6	0.45
2.	Orissa Sponge Iron Ltd.	Palaspanga, Distt Keonjhar, Orissa	1.00 (De-rated capacity)	1.05
3.	IPITATA Sponge Iron Ltd.	Joda, Distt. Keonjhar. Orisaa	1.10	1.10
4.	Bihar Sponge Iron Ltd.	Chandil, Distt. Singhbhum. Bihar	1.50	1.25
5.	Sunflag Iron & Steel Co. Ltd.	Bhandara, Maharashtra	1.50	1.13
6.	Jindal Strips	Raigarh, Madhya Pradesh	2.00	0.99
7.	HEG Ltd.	Durg, Madhya Pradesh	0.60	0.60
8.	Kumar's Metallurgical Corpn. Ltd	Malgonda Andhra Pradesh	0.60	0.25
9.	Bellary Steel & Alloys Ltd.	Bellary, Karnataka	0.60	0.30
10.	Goldstar Steel & Alloys Ltd.	Vizianagram, Andhra Pradesh	2.20	0.80
11.	Prakash Industries Ltd. (Commissioned in Nov. '93)	Champa, Bilaspur, Madhya Prades	2.00	0.66
12.	Nova Iron & Steel Ltd.	Bilaspur, Madhya Pradesh	1.50	-
13.	Raipur Steels & Alloys Ltd.	Raipur, Madhya Pradesh	0.60	0.25
14.	Monnet Ispat Ltd.	Raipur, Madhya Pradesh	1.00	0.09
15.	Tamil Nadu Sponge Ltd.	Salem,Tamil Nadu	0.30	0.05
	TOTAL (a)		17.10	8.97
	(b) Gas based			
1.	Essar Gujarat Ltd.	Hazira, Gujarat	17.60	14.38
2.	Vikram Ispat Ltd.	Raigarh, Maharashtra	7.50	0.85
3	Nippon Denro Ispat Ltd.	Raigarh, Maharashtra	10.00	-
	TOTAL (b)		35.10	15.23
	TOTAL (a) & (b)		52.20	24.20

PIG IRON INDUSTRY

Pig iron is a basic raw material for the foundry and casting industries. So far, the major sources of supply of pig iron are the Integrated Steel Plants, which, however, produce mainly basic grade pig iron, thereby necessitating imports of foundry grade pig iron. However, in recent years, there has been a significant development in the domestic pig iron industry, in the secondary sector, producing mostly foundry grade pig iron.

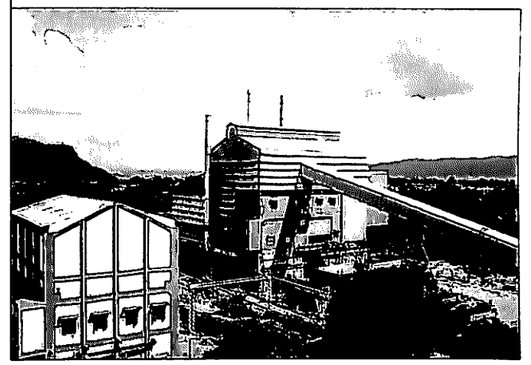
Already nine units with a total capacity of 9.10 lakh tonnes per annum have been commissioned (based on the mini/small blast furnace route) in the secondary (private) sector, as of November, 1994. Several more units with a projected capacity of 15.04 lakh tonnes per annum are in various stages of implementation. The above excludes the old unit of M/s Kalinga Iron Works, with a capacity of 1.40 lakh tonnes per annum, and the recently commissioned pig iron unit of Sponge Iron India Ltd. (a public sector unit), based on sponge iron route with a capacity of 0.45 lakh tpa. Including these two units, the total capacity of the existing units in the secondary sector, as in November, 1994, is 10.95 lakh tonnes per annum.

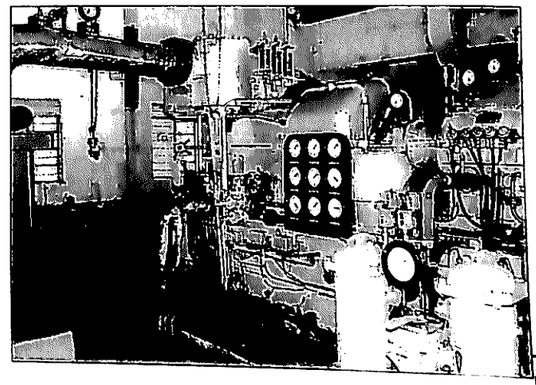
IRON ORE EXPORTS

During the year 1993-94, India exported around 32 million tonnes of Iron Ore. The exports during 1994-95 (upto October, 1994), have been around 14.07 million tonnes.

EXPORT OF OTHER MINERALS

In respect of other minerals, the Government Policy has been in the direction of substituting value added products like ferro alloys in place of raw ores and promoting greater utilisation of the lower grade ores through benefication and other means. In keeping with this policy ceilings were fixed on exports of manganese and other ores.





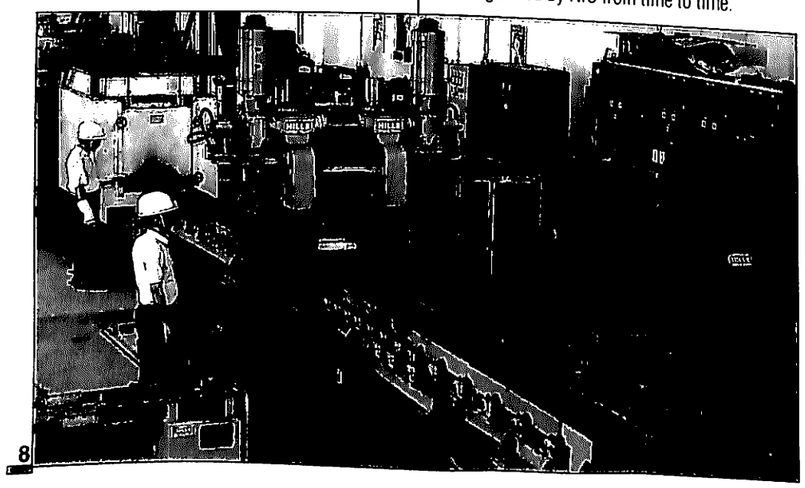
STEEL CONSUMERS COUNCIL

The Steel Consumers Council was constituted on 31.1.1986 under the chairmanship of Minister for Steel and Mines (now Minister for Steel) to provide a forum for interaction between Government and various sections of steel consumers. The main function of the Council is to advise and assist the Central Government on matters relating to availability of steel materials, quality and the market trends in the iron and steel industry in the country.

The last meeting of the Steel Consumers' Council was held on 16th July, 1994 at Bombay.

MANAGEMENT INFORMATION SYSTEM

The computerised MIS introduced in the Ministry of Steel with the assistance of National Informatics Centre (NIC) is functional in the areas of Administration, Public Enterprises Management, Personnel Management, Project Monitoring, Data Bank for Secondary Producers and Financial Accounting and Budgeting. The Computer Centre in the Ministry is equipped with the latest hardware with appropriate linkages with the NIC Super Computer and its Electronic Mail Package. Terminals have been provided to senior officers and also to some sections requiring the facility for interactive usage with the MIS. Training Programmes for the staff for computer usage are also organised by NIC from time to time.



RESEARCH AND DEVELOPMENT

During the year sanction has been given to carry out research to develop an innovative technology to produce steel directly from iron ore by use of non coking coal and to carry out a study on energy conservation in Mini Steel Plants to make them more cost competitive. Besides, the steel plants both in the public and private sectors continued their work to solve plant specific problems which led to reduction in energy consumption, and improvement of productivity in the plants, quality of products and development of products for newer applications. As a result of R & D efforts productivity in sinter plant at DSP increased from 0.59 to 0.734 t/m2/Gr while that of Blast Furnace No. 6 of Bhilai Steel Plant increased by 4.8%. New products like IRS-M41 (SAIL COR) structurals and Duplex Stainless Steel at ASP, have been developed.

ENERGY CONSERVATION

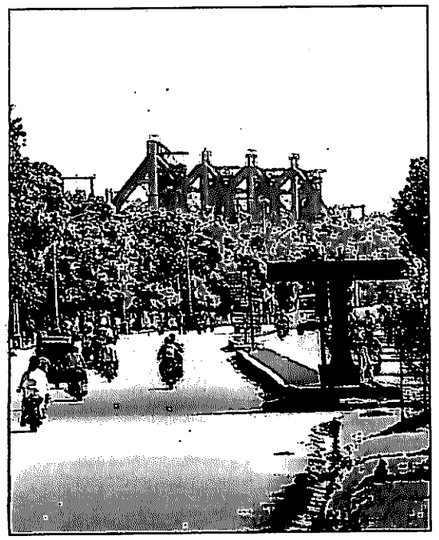
The thrust on energy conservation was sustained, with the result that energy consumption and coke rate have come down in successive years.

▶ In SAIL plants, energy consumption and coke rate have declined for the 7th successive year Energy consumption during April-Sept., 1993 was 8.91 G.Cal/Tonne of Crude Steel (TCS) and during April-Sept., 1994 was 8.85 G.Cal/Tonne of Crude Steel, thereby marking an improvement of 0.67% over the previous year.

BSL have achieved coke rate reduction by 22.5 Kg per tonne of hot metal through increased flame temperature at tuyeres and optimised burden distribution.

▶ In TISCO, the energy and power consumption during April-Sept., 1994 was 9.461 G Cal/Tonne of Crude Steel and 494 KWH/TCS respectively whereas during 1993-94, these were 9.395 G Cal/TCS and 468 KWH/TCS respectively

▶ In Visakhapatnam Steel Plant, there has been consistent improvement in energy conservation During April-November 1994 specific energy consumption has been reduced to 7.98 G Cal per



tonne of Crude Steel from 8.3 G.Cal in 1993-94. The Coke Rate per tonne of Hot Metal was brought down to 540 Kg. during April-November, 1994 from 561 Kg per tonne of Hot Metal in 1993-94.

WELFARE OF SCHEDULED CASTES AND SCHEDULED TRIBES AND WELFARE OF MINORITIES

The Public Sector Undertakings under the administrative control of Ministry of Steel continued their efforts for filling up the backlog vacancies in respect of Scheduled Castes/Scheduled Tribes.

The Public Sector Undertakings have also continued the process of identifying and implementing programme aiming at the upliftment of these communities in the peripheral areas.

ENVIRONMENTAL MANAGEMENT AND POLLUTION CONTROL

The Iron & Steel plants have drawn up short term and long term action plans for expeditious achievement of pollution control norms:-

▶ In SAIL plants and mines, a comprehensive Action Plant is now under implementation to bring the pollution level within norms. During 1993-94, as many as 52 schemes, costing a total of Rs. 130 crores approximately, have been commissioned. Presently, the total emission load (tonnes per day) has been reduced from 321600 (in Dec., 1994) to 303376 (in Dec., 1993) thereby marking a reduction of 6% over the previous year.

▶ TISCO has made considerable progress in the area of environment protection. Till date, Rs. 150 crores has been spent for installation of pollution control measures like O.G.C. car for Coke Oven Batteries, Electrostatic Precipitator for Sinter Plant, Power Plant, Stock House & Cast House in 'G' Blast Furnace; Bag Filters and Dust Suppression System in Raw Material handling area; and close cycle water treatment facility at Rolling Mill etc.

▶ While the compliance by all the mini-steel plants is not upto the mark, some units like Mahindra Ugine Steel Ltd. and Indian Seamless Steel & Alloy Ltd. are by and large complying with the specified pollution control norms.

▶ Visakhapatnam Steel Plant has taken up extensive pollution control measures with sophisticated equipment and technology, at a cost of about Rs. 460 crores, which is about 8% of the cost of the Plant & Equipment. Visakhapatnam Steel Plant has adhered to the pollution control norms & is considered to be the most environment friendly steel plant in the country.

IMPLEMENTATION OF OFFICIAL LANGUAGE POLICY

The progressive use of Hindi in the Ministry, its attached and subordinate offices and public sector undertakings has been actively encouraged and a Hindi fort-night was organised in the Ministry in the month of September, 1994. During the year, the Hindi Salahkar Samiti of the Ministry of Steel held its second meeting under the Chairmanship of Minister of Steel on 14.2.1994 at New Delhi.

The Committee of Parliament on Official Languages invited the Secretary(Steel) as well as the Heads of the PSUs under the administrative control of Ministry of Steel for oral evidence on 22nd Sept., 1994 and discussed and reviewed the progressive use of Hindi in the Ministry and PSUs.

A PERSPECTIVE *View*

1. GLOBAL SCENARIO

1.1 After an extended period of recession, there are positive signs of revival of the steel industry all over the world. Demand is on the rise and the European industry has infact revised its plans to restructure and cut back only 11 million tonnes capacity against 19 million tonnes originally planned. The first eight months of 1994 have shown an encouraging average growth rate in production of about 3%. The increase in demand is particularly significant in developing countries especially in South East Asia and the Pacific Basin. The World Steel Dynamics has predicted that global steel demand will grow to 1070 million tonnes by 2010. This means an increase of about 285 million tonnes in about 17 years. This increase is mainly from developing countries in Asia and in particular China. This is likely to result in an increase in prices as well as increase in world trade and requirement of inputs such as scrap, sponge iron and pig iron.

1.2 The prospects of meeting the bulk of this additional demand from the developing countries are very encouraging. In the developed countries there is likely to be a future shortage of metallics and coke in particular. It is predicted that there will be a shortage of over 100 million tonnes of metallics required for the electric arc furnace industry by 2010.

1.3 In this context, there is a good opportunity for India to become a global player in the industry. India has a strong industrial base and is on the threshold of reaping the benefits of the process of economic liberalisation which started in 1991. India's domestic demand for steel itself is expected to increase to 31 million tonnes by 2001-02 and expectations of growth in demand are more than justified by projections of high economic growth and the performance of the economy so far.

2. DOMESTIC SCENARIO

2.1 India has strong comparative advantages with access to raw materials especially at relatively low cost and lower labour costs. The country has an abundance of technical expertise and skilled manpower. Several important changes have been instituted over the last three years to encourage private sector investment. These are :

i) removal of iron and steel from the list of industries reserved for the public sector;

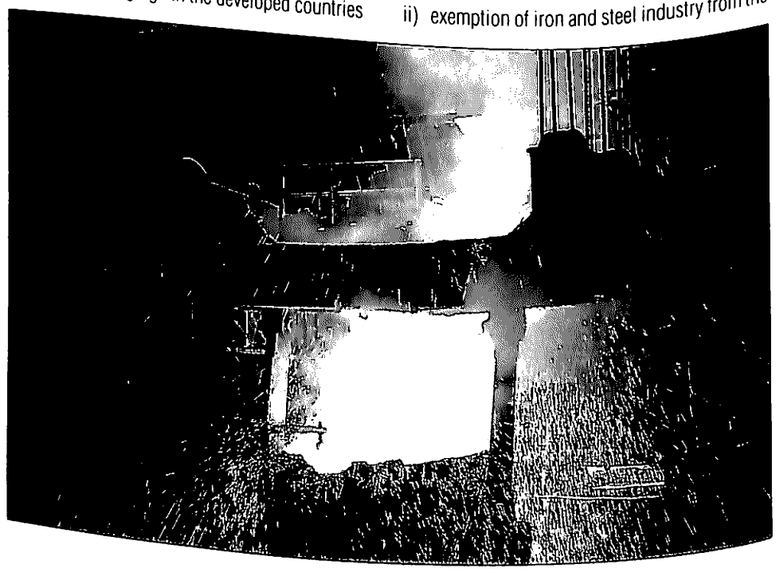
ii) exemption of iron and steel industry from the provisions of compulsory licensing;

iii) inclusion of iron and steel in the list of high priority industries for purposes of foreign investment;

iv) de-regulation of pricing and distribution of iron and steel;

v) reduction of duty on import of capital goods; and

vi) liberalisation of import and export policy.



2.2 The private sector has responded positively to these changes and a number of new units are coming up in various parts of the country. 6 million tonnes of capacity is already being implemented in the private sector with units like Lloyds Steel and Nippon Denro in Maharashtra, Essar Gujarat in Gujarat, Jindal Strips in Madhya Pradesh and Malavika Steel in Uttar Pradesh firmly on track in their development plans. In addition to this, steel units are also expected to come up in Karnataka and Orissa. Many other entrepreneurs have also shown keen interest in setting up steel production facilities at various locations.

2.3 In view of the increase in demand projected for the future in the domestic market, many more units are likely to be established in the coming years. In order to facilitate this progress, the Govt. has responded by decreasing duties on several inputs for the steel industry during the past year. For instance, duty on steel melting scrap was reduced from 12.5% to 5% while duty on iron ore pellets was also brought down to 5%. In addition, duties on almost all finished steel products have been reduced in line with the general economic policy, which will make the domestic steel industry more efficient and competitive.

2.4 The great potential for growth of the steel industry in India is borne out by the current low consumption figures. India as the ninth largest steel producer in the world is currently producing about 18.5 million tonnes of crude steel annually but its per capita steel consumption is only 22 Kg which is one of the lowest in the world. In comparison the world average per capita consumption is 143 Kg. In some of the advanced countries like Japan, Germany and USA the per capita steel consumption is as high as 676 Kg., 477 Kg. and 383 Kg. respectively.

2.5 The projections of increase in steel demand to 31 million tonnes by 2001-02 are based on moderate estimates of growth of GDP (5 - 6% per annum). Similar growth rates have also been predicted by National Council of Applied Economic Research (NCAER) and Centre for Monitoring of Indian Economy (CMIE). These predictions may now appear to be conservative considering the rapid increase in the rate of urbanisation, change in the consumption pattern in the rural areas as well as the growth of the rural market.

3. EXPORT PERSPECTIVE

3.1 Trade in steel is also expected to increase significantly all over the world. A 54% increase in trade of DRI, pig iron and scrap is expected by 2010. Considering these emerging realities, India is taking steps to position itself in the global trade market and the Steel Ministry has estimated 6 million tonnes of steel exports by the turn of the century. These predictions have been justified by the spurt in the export performance over the last few years to over 2 million tonnes in 1993-94 from 0.31 million tonnes in 1990-91. Exports are also likely to pick up as import barriers are brought down in a phased manner. In fact, China alone is expected to be a major importer of steel for a long time to come and their demand has fueled India's industry in the recent past.

3.2 Undoubtedly, India's positioning in this global perspective will depend upon the cost competitiveness of the Indian industry. There must be an increasing focus on quality and cost consciousness so that efficiency and productivity levels are constantly targetted for improvement. At the sametime, the country has to improve its infrastructural facilities so as to invite more foreign investment in the country and reduce export costs. Though India has a distinct comparative advantage in labour costs, improvement of labour efficiency

and productivity must also be targetted by the industry. Technological improvement and conformity to world wide standards of environmental safety and control should also be addressed on priority.

4. PERFORMANCE PROJECTIONS

4.1 The 8th Five Year Plan has been extended and is now terminating in 1996-97. The revised projections of demand and domestic availability of finished steel and pig iron are as follows :

(In million Tonnes)

Financial Year	Total Demand Projection	Estimated Production		Total
		Main Producers	Secondary Producers	
1. FINISHED STEEL				
1994-95	19.37	10.18	7.66	17.84
1996-97 (Projected)	24.14	13.13	10.75	23.88
2. PIG IRON				
1994-95	2.62	1.96	0.40	2.36
1996-97 (Projected)	3.53	2.55	2.10	4.65

5. SOURCES OF FINISHED STEEL

5.1 Producer-wise break-up of the above production levels are as follows :

(In '000 Tonnes)

	FINISHED STEEL		PIG IRON	
	1994-95	1996-97	1994-95	1996-97
SAIL	7519	8746	857	1614
TISCO	1471	1970	-	-
VSP	1190	2410	1103	936
TOTAL MAIN PRODUCERS	10180	13126	1960	2550
SECONDARY PRODUCERS	7660	10754	400	2103
TOTAL	17840	23880	2360	4653

5.2 ACTUAL PRODUCTION OF FINISHED STEEL IN 92-93 AND 93-94 HAS BEEN AS FOLLOWS :-

(In '000 Tonnes)

	1992-93	1993-94 (Prov.)
SAIL	6607	6877
IISCO	322	254
TISCO	945	972
VSP	540	665
TOTAL MAIN PRODUCERS	8414	8768
SECONDARY PRODUCERS	6790	6358
TOTAL :	15204	15126

5.3 SAIL has already embarked on an ambitious modernisation programme of its plants in Durgapur, Rourkela and Bokaro with the objective of reducing energy consumption, improvement in the quality of processes and products and cost reduction so as to make its products competitive in the international market. Likewise TISCO has also implemented its three-phase modernisation programme.

6. STANDING COMMITTEE FOR THE STEEL INDUSTRY

Based on the recommendation of the Task Force, which had been constituted by Government to formulate an Action Plan for the growth of the Indian Steel Industry, Government has constituted a Standing Committee for Steel Industry in October, 1993. The Committee is headed by Minister of State for Steel with MPs, Senior Government functionaries, Chief Executives of financial institutions and PSUs, and leading industrialists from the private sector as its members.

The functions of the Standing Committee are to review the status of the domestic steel industry periodically and recommend to the Government various policy measures required to achieve the targeted levels of production and to make the Indian Steel Industry internationally competitive. It will also conceptualise and oversee long and short-term plans for industry. The committee held two meetings during the year and discussed various issues relating to the growth of the steel industry

RAW *Materials*

1. IRON ORE

1.1 *Reserves*

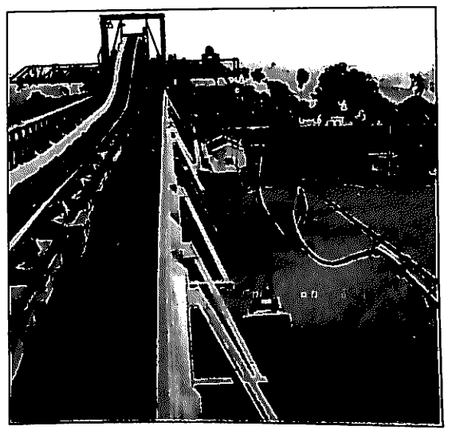
As per mineral inventory prepared by the Indian Bureau of Mines (IBM), the recoverable reserves of Iron Ore, i.e. haematite and magnetite as on 1.4.90 are placed at 9602 and 3143 million tonnes respectively, distributed over five zones in the country. The grade-wise distribution of haematite and magnetite ores in different states/zones is given in the table below :-

RECOVERABLE RESERVES OF IRON ORE (HAEMATITE) AS ON 1.4.90.

(In million tonnes)

Sl. No.	Zone/State	High Grade (+65%)	Medium Grade (62-65%)	Low Grade (-62%)	Unclassified	Total
1	2	3	4	5	6	7
1.	Zone A					
	Bihar	85	1792	903	187	2967
	Orissa	322	1288	752	305	2667
		407	3080	1655	492	5634
2.	Zone B					
	Madhya Pradesh	630	483	516	416	2045
	Maharashtra	-	35	15	126	176
		630	518	531	542	2221
3.	Zone C					
	Karnataka	221	438	73	197	929
4.	Zone D					
	Goa	14	153	465	130	762
5.	Zone E					
	Andhra Pradesh	7	5	32	3	47
	Rajasthan	-	-	7	2	9
		7	5	39	5	56
	TOTAL INDIA	1279	4194	2763	1366	9602

NOTE : Recoverable reserves include Proved, Probable and Possible reserves.



RECOVERABLE RESERVES OF IRON ORE (MAGNETITE) AS ON 1.4.90

(In Million Tonnes)

Sl. No.	State	Metallurgical Grade	Coal Washery Grade	Foundry Grade	Unclassified	Total
1	2	3	4	5	6	7
1.	Andhra Pradesh	37.9	-	-	380.0	417.9
2.	Bihar	-	5.0	-	-	5.0
3.	Goa	98.3	-	-	66.2	164.5
4.	Karnataka	1298.9	-	-	1219.3	2518.2
5.	Kerala	35.4	-	-	-	35.4
6.	Rajasthan	-	-	0.5	-	0.5
7.	Tamil Nadu	1.1	-	-	-	1.1
	TOTAL INDIA	1471.6	5.0	0.5	1665.5	3142.6

NOTE :

i) Metallurgical Grade : (a) Fe -38% minimum (b) Should be in Oxidised State

ii) Coal Washery Grade : (a) Magnetite content : 70 to 75% minimum or as used by the industry.

iii) Recoverable reserves include proved, probable and possible reserves.

1.2 ***Production of Iron Ore***

1.2.1 Production of Iron Ore in the country is through a combination of large mechanised mines in the public sector and several smaller mines operated on manual or semi-manual basis, in the private sector.

These can be broadly grouped under three categories :

a) Captive mines, owned and operated by individual steel plants, mainly for their own use;

b) Public Sector mechanised mines, owned and operated by central and state government undertakings for export and internal consumption of steel plants; and

c) Smaller mines, owned and operated by private parties, mainly by manual and semi-mechanised methods of mining for export and internal consumption.

1.2.2 Production and Despatches

Production of iron ore (including concentrates) during the year 1994-95 is estimated at 58.3 million tonnes which is almost the same as recorded in the previous year. State-wise production figures indicate that Madhya Pradesh would be the chief iron ore producing state accounting for 15.1 million tonnes (25.9%) of the total production during 1994-95 followed by Goa 13.5 million tonnes (23.1%), Karnataka with 11.9 million tonnes (20.5%), Bihar 10.6 million tonnes (18.7%) and Orissa 6.9 million tonnes (11.9%). The remaining production of about 0.3 million tonnes would be from Andhra Pradesh, Maharashtra, Rajasthan and Haryana.

Despatches of iron ore (including concentrates) in 1994-95 are estimated at 54.4 million tonnes. The share of despatches for internal consumption and exports would be 29.6 million tonnes and 24.8 million tonnes respectively.

2. MANGANESE ORE

2.1 ***Reserves***

As per the latest inventory the reserves of manganese ore are estimated at 176 million tonnes. The main reserves found in India are of blast furnace grade. the reserves of ferro manganese grade are very limited i.e. 12% of the total reserves only

2.2 ***Production***

The production of manganese ore during 1993-94 and estimated during 1994-95 is indicated below :

Year	Qty. (in million tonnes)	Value (Rs. in crores)
1993-94	1.68	138.05
1994-95 (Estimated)	1.55	127.29

Orissa, Karnataka, Madhya Pradesh and Maharashtra would be the principal producing states accounting for 38%, 22%, 18% and 17% respectively of the total production of manganese ore in 1994-95.

2.3 ***Despatches***

Despatches of manganese ore are estimated to be of the order of 1.55 million tonnes during 1994-95 of which 1.47 million tonnes would be for internal consumption and 0.08 million tonnes for exports.

2.4 ***Exports***

Because of limited reserves of high grade ore, only limited quantities of certain grades are permitted for export. Along with this, effort is also made to replace the export of ores with export of value added items. From the year 1993-94, a 3-year Export Policy has been decided upon by Govt. so as to enable the exporters to establish their presence in the international market. The maximum ceilings of manganese ore are as under :-

a) Medium grade manganese ore/blended ore containing 38% to 44% manganese and more than 0.22% phos. - 1.00 lakh tonnes. Govt. has allowed relaxation in quality and quantity in export of medium grade ore/blended ore w.e.f. Dec.,93 for a one year period. During this period 1.5 lakh tonnes of ore containing 38% to 46% mn & phos more than 0.15% is permissible for export. Govt. also has allowed direct export facility to Manganese Ore India Ltd., a public sector Company.

b) Low grade manganese ore/blended ore containing less then 38% manganese - 3 lakh tonnes

c) Manganese ore fines below 12 mm in size containing less than 44% manganese - 1 lakh tonnes

Exports during last 2 years are given below :

Year	Qty. (in lakh tonnes)	Value (Rs. in crores)
1993-94	2.49	32.84
1994-95 (April-Aug., 94)	2.29	28.72

3. CHROMITE ORE

3.1 ***Reserves***

As per the latest inventory, the total recoverable reserves of chromite are estimated at 88 million tonnes. Orissa is the largest chromite ore producing state in the country accounting for 96% of the total production of chromite ore, followed by Karnataka which produced only 4% of the total production. Small quantities are also produced in Andhra Pradesh and Manipur.

3.2 ***Production***

Production of chromite during 1993-94 and estimated during 94-95 are given below :

Year	Qty. (in lakh tonnes)	Value (in crores)
1993-94	10.55	241.33
1994-95	10.22	233.62

3.3 ***Exports***

Keeping in view the limited reserves of chromite ore in the country, only certain grades of ore are allowed for export. Emphasis has been laid on export of beneficiated chromite concentrates. From the year 1993-94, a three year Export Policy has been decided upon by Govt. so as to enable the exporters to establish their presence in the international market. The maximum ceilings of chrome ore are as under :

(a) Low Silica friable/fine chromite ore with CR 203 not exceeding 52% and silica exceeding 4% : 3 lakh tonnes

(b) Chromite lumps containing CR 203 not exceeding 30% (restricted to mines in South India) : 0.40 lakh tonnes

(c) In addition, no ceiling has been fixed for the export of beneficiated chromite concentrates with feed grade less than 30%

Exports during last 2 years are given below :

Year	Qty. (in lakh tonnes)	Value (Rs. in crores)
1993-94	2.41	55.38
1994-95 (April-Aug.'94)	0.87	19.86

4. COKING COAL

4.1 *Reserves*

Indian Coking Coals have a high ash content mainly because of the sedimentary nature of their origin. The mineable reserves of coking coal in our country have been placed by the Central Mine Planning and Design Institute at about 17,000 million tonnes. The gross reserves have been put at 23,872 million tonnes.

4.2 *Consumption*

During 1993-94, the consumption of coking coal in SAIL steel plants (including IISCO), TISCO and VSP was as under :

(Million Tonnes)

	SAIL	TISCO	VSP
Indigenous sources	9.36	1.785	0.847
Imports	4.44	0.420	1.792
Total	13.80	2.205	2.639

The estimated consumption during 1994-95 by these plants is as under :

(Million Tonnes)

	SAIL	TISCO	VSP
Indigenous sources	9.20	1.789	0.951
Imports	5.10	0.535	2.440
Total	14.30	2.324	3.391

5. NON-COKING COAL

During the year 1993-94, SAIL steel plants (including IISCO) consumed 3.91 million tonnes of non-coking coal produced from domestic sources. The likely consumption in 1994-95 is 4.10 million tonnes.

During 1993-94, TISCO consumed 1.309 million tonnes of non-coking coal. Expected consumption during 1994-95 is 1.360 million tonnes. During 1993-94, VSP consumed 0.875 million tonnes of non-coking coal. Expected consumption during 1994-95 is 0.986 million tonnes.

6. REFRACTORIES

6.1 *General*

Refractories are the primary materials used in the internal lining of industrial furnaces. Refractories are classified, from the chemical composition angle into 3 classes - Acid Refractories, Basic Refractories and Neutral Refractories. Refractories are also used for lining of all the furnaces including coke oven battery, blast furnaces, steel production furnaces, reheating furnaces, electric arc furnaces etc.

With the technological changes in the steel industry, the major thrust has been on the materials requirement, planning & inventory control alongwith techno-economic study in each area of operation/process where refractories are being used. The gradual phasing out of open hearth furnaces, adaptation of continuous casting route and modernisation of secondary steel making processes, has lessened the demand for conventional refractories in the steel industry, and has resulted in higher demand for high performance refractories with enhanced campaign life.

6.2 *Demand*

The aggregate requirement of refractories is declining even with the increased production of steel alongwith gradual increase in the demand of sophisticated high performance refractories like Magnesia Carbon Bricks in converters, VAD and VOD ladles, use of low cement castables in Blast Furnace Trough and Anhydrous mudgun mass in Blast Furnace Tapholes, use of slide gate plates and accessories in continuous casting operation, Dense and Superdense coke oven silica refractories for Tall Coke Oven batteries etc. During the last five years there has been a gradual decrease in consumption of refractories It is expected to reach 30 Kg/tonne of steel by end of 1994-95 and 20 Kg/tonne by 2004-05

6.3 *Production*

The domestic production of various categories of refractories in the last three years is as under:

(M.T.)

	1991-92	1992-93	1993-94
Fire Clay	234347.00	198430.00	182470.00
High Alumina	138710.00	141750.00	148500.00
Silica Bricks & Shapes	19051.00	26925.00	22316.00
Basic Burnt Bricks & shapes	92345.00	87961.00	71982.00
Basic unburnt Bricks & shapes	71869.00	69761.00	49342.00
Basic Ramming Mass/Castables	47360.00	41322.00	22554.00
Dead Burnt Magnesia	126826.00	105467.00	22042.00
Electrocast (AZS)	1400.00	1539.00	1628.00
Slidegate Refractories	4747.00	5546.00	5145.21
Low Cement Castables	9071.00	7145.00	17938.00
Zircon/Zircon Mullite	2099.00	1670.00	1470.00
Ceramic Fibers	1336.00	1620.00	2325.00

Source : Indian Refractory Makers Association (IRMA)

industry considers that a target of Rs.50 crores for 1994-95 is likely to be achieved. Industry expects to achieve Rs.100 crores worth of export by the end of the century.

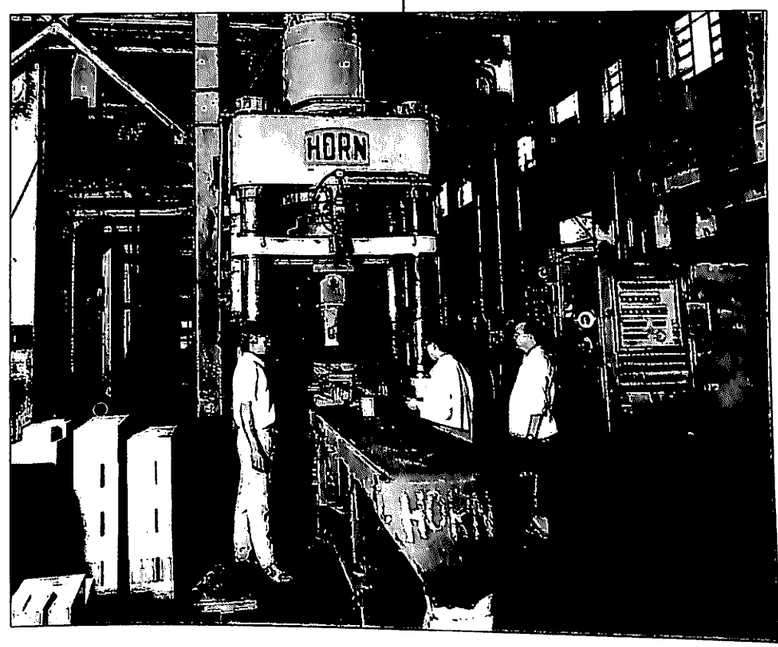
6.4 *REQUIREMENT OF RAW MATERIALS*

Manufacture of most of the super quality refractories needs the purest variety of refractory raw materials, most of which are not available indigenously. The refractory manufacturers have to depend on the import of such raw materials. The cost of production of such products is also comparatively higher compared to the International norms.

Major raw materials like Sea Water Magnesia, Fused Magnesia, Sintered Alumina, Sintered Mullite, purest variety of graphite, High Alumina Cement for ultra low cement castable, fumed silica etc. are mostly imported. Efforts are being made to establish joint ventures for production of some of these items in our country.

6.5 *EXPORTS*

The Refractory Industry in India has achieved export of refractories worth Rs.5.8 crores in 1990-91, Rs.10 crores in 1991 92, Rs.21 crores in 1992-93 and Rs.40 crores in 1993-94. The refractory



DISTRIBUTION & *Availability*

The table below gives the availability of iron and steel in the domestic market during 1993-94 and estimated availability during 1994-95:

(In '000 tonnes)

Item	Finished Steel		Pig Iron	
	1993-94	1994-95 (Estimated)	1993-94	1994-95 (Estimated)
1. Production				
(a) Main Producers	8768	10180	1977	1960
(b) Secondary Producers	6358	7660	272	400
2. Import	1005	1000	21	50
3. Total(1+2)	16131	18840	2270	2410
4. Export	998	1352	620	620
5. Inter Plant Transfers	96	121	-	-
6. Net Availability (3-4-5)	15037	17367	1650	1790

2.1 As part of the liberalisation measures, Government, on 16th January, 1992, abolished the price and distribution regulation of the Joint Plant Committee (JPC) which had been in existence since 1964. The requirements of Defence, Railways, Small Scale Industries sector, exporters of engineering goods and the North Eastern Region continue to be met on priority, at prices that may be announced by the producers from time to time. The Development Commissioner for Iron and Steel oversees compliance of this arrangement, with the assistance of the JPC.

2.2 The Development Commissioner for Iron and Steel continues to make allocations of pig iron to the designated consumers and the main producers supply the material on the basis of such allocations. In the case of steel items, allocations by the Development Commissioner for Iron and Steel are made to the State Small Scale Industries Corporations. Small Scale Units which were drawing their materials directly from the main producers continue to do so. The Development Commissioner also issues Release Orders for supplies to exporters of engineering goods, and makes annual supply plans for the North Eastern Region. The requirements of Defence and Railways are met by the main producers directly.

2.3 Considering the special problems in meeting the requirements of consumers in the North-Eastern Region, special efforts continue to be made to ensure that adequate and timely supplies are made to the region.

2.4 The levy on account of the Steel Development Fund (SDF) which was ranging from Rs 350/- to Rs 500/- per tonne on different products of integrated steel plants was discontinued w.e.f. 21/22.4.1994. However, the levies on account of Engineering Goods Export Assistance Fund (EGEAF) and the JPC cess continue to be added by the Main Producers (excluding IISCO) to their ex-works prices and remitted to the JPC. The EGEAF levy is Rs. 113.00 per tonne on pig iron and Rs. 300.00 per tonne on steel items.

2.5 After the withdrawal of the Freight Equalisation Scheme, the main producers i.e. SAIL, VSP and TISCO are charging either the actual freight upto stockyard or freight element as existed prior to deregulation (now Rs. 1410/- per tonne in case of steel and Rs. 880/- per tonne in case of pig iron), which ever is lower. By this, the freight disadvantage to the states/areas located nearer the steel plants of the main producers has been removed. At the same time the advantage under the Freight Equalisation Scheme to the distant states/areas has been protected. The extra cost on this account is borne by the main producers.

2.6 Open market prices of certain important categories of iron and steel continue to be monitored in the Ministry through Development Commissioner for Iron and Steel. The open market prices of steel products have shown an increasing trend during the first 6 months of the current financial year. Prices of most of the products have increased by 2 to 8%. The increase in prices is due to increase in excise duty in the Budget of 1994-95, increase in railway freight, increase in the cost of inputs, etc.

2.7 The main producers have been selling their products through a network of Departmental Stockyards, Consignment Agencies, Extension Counters and Conversion Agents. Secondary producers are selling their products through their own sales network.

3.1 The general policy and procedures for export and import of iron and steel, ferro alloys and ferrous scrap are at present decided by the Commerce Ministry in consultation with this Ministry.

3.2 With the liberalisation of India's trade policy and commencement of the export-import policy for 5 years (from 1.4.92 to 31.3.97), the policy for import and export of iron and steel materials has also undergone sweeping changes. Import of all items of iron and steel is now freely allowed.

3.3 The advance licensing scheme for import of duty free raw materials, components, intermediates and consumables etc. for purpose of export promotion continues. The advance licensing scheme has been made more flexible particularly with the introduction of value based advance licences.

3.4 The import of saleable steel in 1993-94 was about 1.15 million tonnes which was at par with an average level of import during the preceding three years. The import of steel, pig iron and scrap during the last three years and value thereof is as under:-

	(Qty. in '000 tonnes)				Value in Rs. Crores	
	1991-92		1992-93		1993-94	
Category	Qty.	Value	Qty.	Value	Qty.	Value
Saleable Steel	1043.7	1383.5	1115.7	1639.97	1153.1	1603.30
Pig Iron	152.4	57.84	73.0	36.16	20.9	9.58
SteelScrap	1268.0	479.22	2573.2	1090.14	754.1	380.35

3.5 Export of all items of iron and steel is freely allowed. Exports of chrome ore, manganese ore and iron ore(partly) are made through designated canalising agencies.

3.6 As a result of various policy measures taken by Govt. like liberalisation of import-export policy, introduction of flexibility in the advance licensing scheme and convertibility of rupee, the export of iron and steel has shown a quantum jump. As against the export of 9.10 lakh tonnes valued at Rs. 708 crores during 1992-93, the export in 1993-94 increased to 22.2 lakh tonnes valued at Rs.1678 crores showing an increase of 144% in quantity and 137% in value. However, during 1994-95, export of iron and steel has so far been less than the

export during the corresponding period in 1993-94. This is due to various factors such as increase in domestic demand, reduced import by major countries like China.

Besides steel, India has been one of the major exporters of iron ore in the world, ranking fourth after Brazil, Australia and CIS; and exporting around 30 to 33 million tonnes annually, earning foreign exchange worth about Rs. 1500 crores. Exports of ferrous minerals such as Manganese Ore, Chromite Ore and Ferro Alloys also come within the purview of the Steel Ministry. Total exports of the steel sector during the last two years are indicated below:

	ITEM	QUANTITY IN LAKH TONNES 1992-93	1993-94	VALUE Rs. IN CRORES 1992-93	1993-94
1.	Iron Ore	280.23	315.37	1494.23	1622.45
2.	Iron & Steel products	9.1	22.2	708.00	1678.00
3.	Bulk Ferro Alloys	1.5	1.51	256.00	240.00
4.	Manganese Ore	2.23	2.49	33.94	32.84
5.	Chrome Ore	2.85	2.41	61.20	55.38
	TOTAL	295.91	343.98	2553.37	3628.67

4.1 The office of Development Commissioner for Iron and Steel (DCI&S) through its Regional Offices continued to perform its advisory, developmental and regulatory functions during the year

4.2 With the deregulation of distribution and pricing of iron and steel, the major functions of the Development Commissioner for Iron and Steel are as follows :-

(a) Collection, processing and dissemination of basic information relating to the iron and steel industry and to act as the data bank of the Ministry of Steel;

(b) Monitoring of regional price and supply trends and suggesting to the Ministry remedial measures for correcting the imbalances if any;

(c) Monitoring of import and export of iron and steel materials;

(d) Advice on matters relating to import and export policies of iron and steel;

(e) Management of distribution of iron and steel materials to the newly designated priority sectors such as Defence, Railways, State Small Industries Corporations, Engineering Goods Exporters and the North-Eastern States;

(f) Allocation of materials to the State Small Scale Industries Corporations;

(g) Allocations of materials to remote areas like North Eastern States;

(h) Assistance to Engineering Goods Export units through priority allocations and monitoring thereof;

(i) Operation of the Engineering Goods Export Assistance Fund and the Steel Development Fund;

(j) Rendering assistance to the EAF Units and the secondary sector, by way of capacity assessment, assistance in procurement of indigenous/imported raw materials and import substitution measures aiming at the overall development of the sector;

(k) Interface between the Government and different consumer groups to facilitate consumer-producer interaction;

(l) Co-ordination for movement of raw materials to steel plants;

(m) Vigilance functions to prevent misuse of steel obtained from regulated sources

PUBLIC *Sector*

The Public Sector has been assigned a very important role in the economic development of the country. It was designed to attain the commanding heights of the Indian economy and this has been adequately realised in the iron and steel sector. Over the years, the public sector has increased its areas of activity and today encompasses virtually all segments of the Iron and steel industry in the country.

Under the New Industrial Policy announced by Government in July, 1991, the steel industry has been removed from the purview of compulsory licensing and the private sector is now free to set up steel plants, subject to certain locational restrictions. As a measure of further liberalisation, Government has abolished the price and distribution regulations subject to certain safeguards to certain priority sectors. The mining industry has also been recently opened to the private sector. Nevertheless, the public sector steel plants and other raw material producing units owned by the govt. will continue to play a significant role in the development of the iron & steel industry in the country.

Steel Authority of India Limited

The Indian Iron and Steel Company Limited

IISCO-Ujjain Pipe and Foundry Co. Limited

Maharastra Elektrosmelt Limited

Visvesvaraya Iron and Steel Limited

Rashtriya Ispat Nigam Limited (Visakhapatnam Steel Plant)

Kudremukh Iron Ore Company Limited

Manganese Ore (India) Limited

Bharat Refractories Limited

National Mineral Development Corporation Limited

Metal Scrap Trade Corporation Ltd.

Ferro Scrap Nigam Limited

Metallurgical & Engineering Consultants (India) Limited

Sponge Iron India Limited

Neelachal Ispat Nigam Limited

Vijayanagar Steel Limited

Hindustan Steelworks Construction Limited

Bird Group Companies

1. General

Steel Authority of India Ltd. (SAIL) is a company registered under the Companies Act 1956, and is an enterprise of the Government of India. It operates and manages five integrated steel plants at Bhilai (Madhya Pradesh), Bokaro (Bihar), Durgapur(West Bengal), Rourkela(Orissa) and Burnpur (West Bengal), a plant of the Indian Iron and Steel Co. Ltd., which is a wholly owned subsidiary of SAIL. The SAIL has also four special and Alloy Steels and Ferro-alloys units at Durgapur (West Bengal), Salem (Tamilnadu), Chandrapur (Maharashtra) and Bhadravati (Karnataka). The plants at Chandrapur and Bhadravati belong to the Maharashtra Elektrosmelt Limited and Visvesvaraya Iron and Steel Limited respectively which are also subsidiaries of SAIL. Besides SAIL has seven central units viz. the Research and Development Centre for Iron and Steel (RDCIS), the Centre for Engineering and Technology (CET), the Management Training Institute (MTI) located at Ranchi, Central Coal Supply Organisation located at Dhanbad, Raw Materials Division, Growth Division and Environment Management Division located at Calcutta.

The IISCO-Ujjain Pipe and Foundry Co. Ltd., a subsidiary of IISCO, Produces cast iron & spun pipes at its works at Ujjain (Madhya Pradesh). The marketing of products of SAIL plants is done through the Central Market Organisation (CMO), Calcutta which has a country-wide distribution network.

SAIL (Excluding Subsidiaries)

2. Finance

2.1 Turnover and Profit in 1993-94

The company recorded the highest ever turnover of Rs. 11670.89 crores during the year registering an increase of about 15% over the previous year. The net profit for the year was Rs. 545.33 crores showing an improvement of 29% over Rs.423.40 crores earned in the previous year after providing interest and depreciation of Rs. 1274.77 crores. The company has declared a dividend of 4% on the paid up equity share capital for the year ended 31st March, 1994 subject to deduction of tax, if applicable.

2.2 The authorised capital of SAIL is Rs. 5000 crores. The paid up capital of the company was Rs. 3985.89 crores as on 31st March, 1994, which is held to the extent of 89.48% by the Govt. of India and the balance 10.52% by the financial institutions/ banks/individuals.

2.3 The company received fresh loans of Rs.736.12 crores from Steel Development Funds. During the year the company repaid loans to the Government and to Steel Development funds to the tune of Rs.27 55 crores and Rs.293 36 crores respectively. The outstanding loans at the end of the year 1993-94 stood at Rs 324 14 crores from Govt of India and Rs 4211 53 crores from the Steel Development Fund as against Rs 351 73 crores and Rs 3714.77 crores respectively as on 31st March, 1993.

2 4 Under the Public Deposit Scheme of the company the net deposits (i e net of repayments and renewals) as on 31st March, 1994 stood at Rs 1127 77 crores compared to Rs 952 77 crores at the close of the previous year. The number of depositors as on 31st March, 1994 were 90,527 as against 82,600 as on 31st March, 1993.

Capital Expenditure

2.5 The overall expenditure on various capital schemes (on cash basis) during the year was Rs. 1905 crores. A sum of Rs. 117 crores was spent on continuing schemes; Rs. 1191 crores on modernisation and other new schemes; Rs. 573 crores on addition, modification and replacements schemes and Rs. 24 crores on township, research and development feasibility studies. The capital expenditure was financed from internal resources, drawals from Steel Development Fund and other borrowings.

3. Production Performance 1993-94

3.1 The four integrated steel plants of SAIL at Bhilai, Durgapur, Rourkela and Bokaro finished the year 1993-94 with best ever production of 10.17 million tonnes of hot metal, 9.51 million tonnes crude steel and 8.31 million tonnes of saleable steel recording a growth of 2.6 percent, 0.4 per cent and 4.7 per cent respectively over previous years. The crude steel capacity utilisation went up from 89.2 per cent to 89.6 per cent and saleable steel capacity utilisation improved by 4.4 per cent to 98.7 per cent during the year.

3.2 The details of production plan and achievement during 1993-94 are as follows :-

(Unit M.T.)

Item	Target	Actual	%fulfilment
Hot Metal	10.45	10.17	97.3
Crude Steel	9.94	9.50	95.6
Saleable Steel	8.20	8.31	101.4

3.3 The Company continued to give special thrust on market oriented product-mix. Production of value added items and critical sections was increased significantly to meet specific requirement of the customers. The Company continued with its efforts towards product development and developed many new products.

3.4 There was continued thrust during the year on improvements in techno economic indices. Coke rate declined to 664 Kg. per tonne of hot metal from 680 Kg in the previous year. Overall blast furnace productivity went up by about 3 per cent during the year.

4. Energy Conservation

The continued emphasis on Energy Conservation measures helped further in reducing energy consumption per tonne of crude steel for the seventh successive year and has reached a level of 8.8 G. cal/tcs lower than the norms and showing improvement of 1.1% over the previous year for the four integrated steel plants. This was reduction of 1 per cent over previous year.

5. Equipment Performance

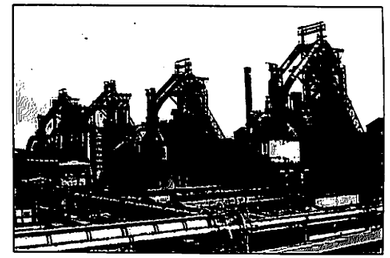
Improved Maintenance System of the plant and equipment has been the thrust area for the year. A Steering Committee on systematic maintenance is looking into the training needs of Maintenance for Executives and workmen. Condition Based Maintenance activities are gaining momentum across SAIL. Horizontal transfer of maintenance know-how and good practices have been given added thrust. The action for identifying and disposal of idle assets has been taken up during the year.

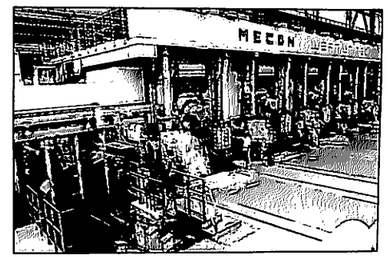
6. Import Substitution

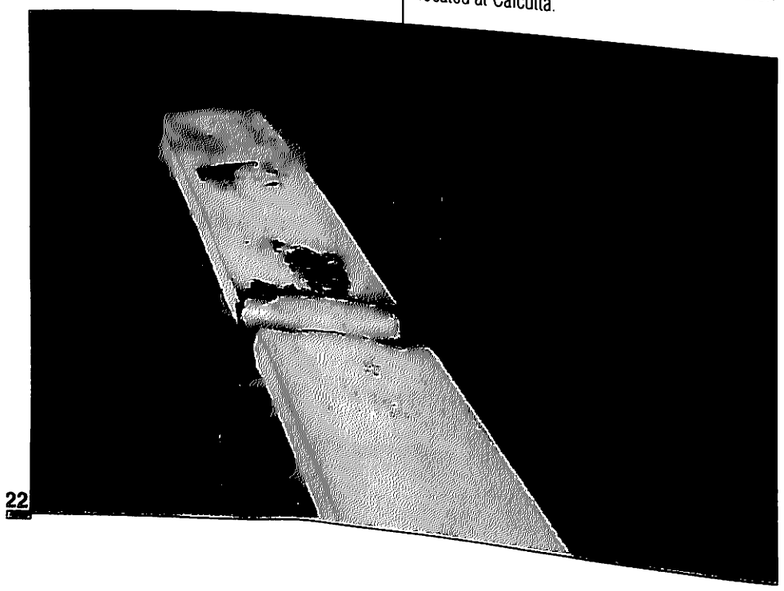
During the year 1993-94 SAIL Plants have ordered items worth Rs.2568 crores on indigenous firms for Import Substitution and taken up imported items valued at Rs.16.74 crores for development in SAIL steel plants.

7. Development of Small Scale/ Ancillary Industries

The Company continued to give encouragement to the development of small scale and ancillary industries. During the year, value of stores and spare items purchased from these units was of the order of Rs. 165 crores compared to Rs.107 crores during the previous year registering an increase of 54%. This was mainly due to resource constraints







and also due to stringent measures initiated to have better inventory management.

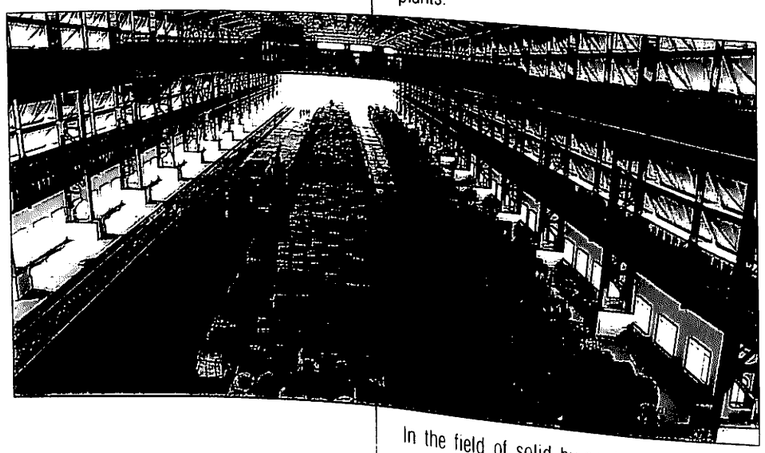
8. Captive Power Generation

During the year Captive Power generation averaged 419 MW. Loss of production of saleable steel due to power supply has come down to 65,842 tonnes during the year from 232,470 tonnes during the previous year.

9. Environment Management

With a view to protecting the environment and maintain ecology, Environment Management continues to form a thrust area for Company's operations. The Action Plan comprising of 115 schemes to bring all emissions and discharges within norms was more than 60 per cent complete.

Sustained efforts were made to further develop the environmental plantations at plants, mines and in the township. About 3.1 lakh trees were planted over an area of 119 hectares at mines. Further 4.25 lakhs saplings of different plants suited to local conditions were planted in the townships and steel plants.



In the field of solid by-products management efforts were being made to establish market for BOF Slag and fly-ash. SAIL has signed a Memorandum of Understanding with Associated Cement Companies for utilisation of crushed BOF Slag in Cement Industry

10. Sales and Marketing Performance/Domestic Sales

Greater thrust was given to building up a sustained, long term relationship with major customers. The marketing set up was structurally re-organised to facilitate speedier response to the competitive market scenario.

The demand for steel showed some signs of improvement with the industrial recovery. The Company marketed a record 7.3 million tonnes of Mild steel in the domestic market during the year, a growth of 8 per cent over last year. The increase in sales was achieved primarily by increasing the market share, in spite of increased competition.

During the year, around 117 thousand tonnes of special steel products from Alloy Steels Plant and Salem Steel Plant were sold in the domestic market, an increase of 6 per cent over 1992-93.

11. Exports

To make its presence felt consistently in the international market, continued thrust was given on developing exports. SAIL exported 631 thousand tonnes of Mild Steel valued at Rs.515 crores representing an impressive growth of over 130 per cent in terms of both quantity and value. Also, pig iron valued at about Rs.7.46 crores was exported.

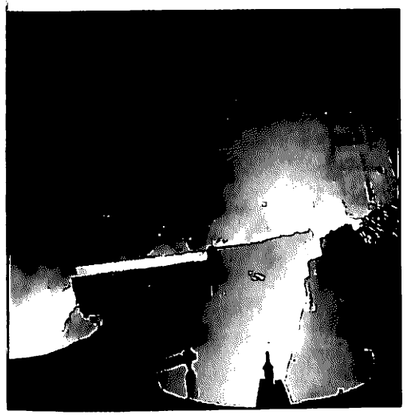
In addition 6562 tonnes of stainless steel and alloy steel products valued at about Rs.38 crores were exported during the year.

During the year new markets in Vietnam, Indonesia, Korea, Nepal, Taiwan, Thailand were tapped and new products introduced in the international market.

With notable increase in exports the Company earned the distinction of a 'Star Trading House'.

12. Production Performance 1994-95 (April-November)

For the four integrated steel plants at Bhilai, Durgapur, Rourkela and Bokaro, SAIL has planned to produce 10.900, 10.238 and 8.400 MT of Hot Metal, Crude Steel and Saleable Steel respectively during 1994-95. The production of Hot Metal, Crude Steel and Saleable Steel during April-November 1994 has been 7.063, 6.347 and 5.531 MT respectively.



The details of production plan and achievement during April to November, 1994 was as follows :-

(Unit M.T.)

Item	Annual Target	Target Apr.-Nov.	Actual Apr.-Nov.	%fulfilment
Hot Metal	10.900	7.083	7.063	100
Crude Steel	10.238	6.671	6.347	95
Saleable Steel	8.400	5.422	5.531	102

13. Half yearly Financial Results 1994-95

During the current six months of the financial year 1994-95 the Company has recorded a sales turnover and other income of Rs.6619 crores, an increase of 20% over the six months of the previous year.

The net profit at Rs.353.14 crores during the first six months of the current year against Rs.62.47 crores in the corresponding period of previous year, shows a more than five fold quantum increase. The Gross Profit at Rs.611.48 crores against Rs.463.21 crores in the corresponding period of last year has increased by 32 per cent inspite of escalation in input prices.

14. Capital Schemes

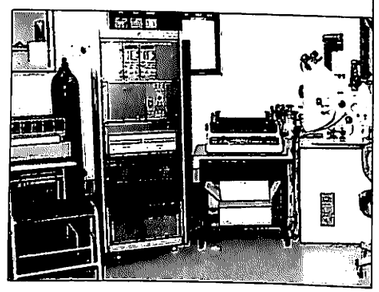
At present there are three steel plants where major modernisation works are in progress viz. Durgapur Steel Plant, Rourkela Steel Plant and Bokaro Steel Plant. The present position of the modernisation works in these plants is given below:

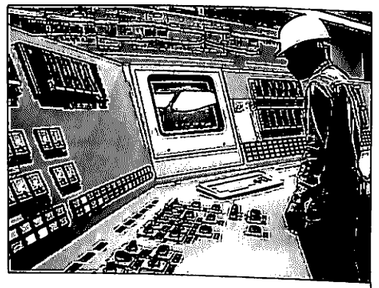
14.1 Durgapur Steel Plant

The Modernisation of Durgapur Steel Plant is being implemented through 16 turnkey (6 Global and 10 Indigenous) packages. Some of the packages have already been commissioned and others are in advanced stage of implementation. One newly constructed Blast Furnace, two BOF converters, a new Continuous Casting Shop, a new Coke Oven Battery, a new Oxygen Plant and a few other units are in regular operation. The total modernisation is expected to be completed by June, 1995. The total modernisation plan of Durgapur is likely to cost Rs.4495 crores.

14.2 Rourkela Steel Plant

Rourkela Steel Plant Modernisation work is being implemented in two phases viz. Phase-I and Phase-II through nine and twenty packages respectively. Five of twenty packages in Phase-II are Global Packages. Major production facilities under Phase-I have been commissioned by March, 1994. Five of twenty Phase-II packages have been completed and the rest are in various stages of implementation. The total modernisation is expected to be over by August, 1996. The total modernisation plan of Rourkela is likely to cost Rs.3954 crores.





14.3 Bokaro Steel Plant

The Revised Cost Estimate of Bokaro Steel Plant Modernisation has been sanctioned in August, 1994 at an estimated cost of Rs.1792.90 crores. The preliminary works are completed. The modernisation shall be carried out through 4 global and 25 indigenous packages. The orders for the global packages have been placed and the contracts have been signed. The ordering for the indigenous packages is in progress. The modernisation is expected to be completed in July, 1997.

15. Research & Development Activities

Research and Development is crucial to improve the value of products to the customers. Research and Development Centre for Iron & Steel (RDCIS) has undertaken Plant Performance Improvement Projects to:

- decrease rejections, input costs and specific consumption of energy and materials;
- increase yield, productivity, profitability and value addition;
- improve quality of the products;

In addition, the investigation and consultancy assignment projects are pursued to solve problems of emergent nature within the company. The Basic and Scientific Research is pursued to foster creativity and originality and expand the knowledge base.

16. Raw Materials Division

The Production of 18.725 MT of iron ore from SAIL Mines was all time best performance registering a growth of 2.5% over the previous year with improved performance of the captive mines almost full requirements of iron ore of SAIL plants was met this heavily reducing dependence on purchase of iron ore from outside. The iron ore purchases during 1993-94 were only 0.03 MT reduction of 0.92 MT over the previous year.

17. In-House Engineering & Services

Centre for Engineering and Technology (CET) continued to provide Design & Engineering support to plants/units for modernisation, technological upgradation, additions/modifi-cations/ replacements and debottlenecking schemes. This has resulted in a considerable reduction in Project Cost through effective approach in design, implementation strategy and increased indigenisation.

18. Indigenisation Efforts

The Company's Growth Division is actively participating in Import substitution and exports of spares and consumables. The Kulti works under Growth Division have made supplies to steel plants in 1993-94 which were of the order of Rs.85 crores.

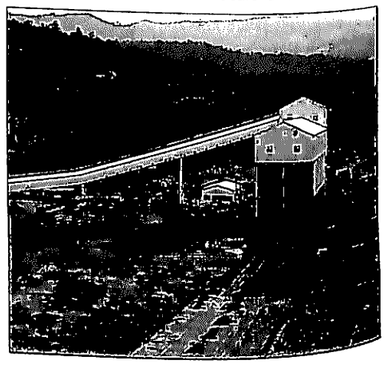
The Growth Division supplied 5 per cent of product value to outside customers other than SAIL units. Exports are already extended to Nepal, Australia and Philippines and these are to grow further to West Asia, USA and Europe during the coming years.

19. Inter-Plant Standardisation (IPSS)

To streamline operations, maintenance, and other activities, the IPSS Secretariat has been actively involved in formulation of standards for the steel plants. New Standards have been set up in the areas like operation and materials management.

20. Development of Small Scale/ Ancilliary Industries

The Company continued to give encouragement to the development of Small Scale and Ancilliary



Industries during the year. Value of stores & spares items purchased from these units was of the order of Rs.165 crores compared to Rs.107 crores in 1992-93 registering an increase of 54 per cent.

21. Human Resource Management

SAIL laid great emphasis on human resource development. During the year, efforts were focussed towards facilitating the organisation to meet the challenges of the new business realities in the changing economic scenario.

Thrust also continued on optimum utilisation of the human resources to achieve higher productivity and to establish a work culture where the focus is on the customer service.

21.1 Manpower Utilisation

The manpower strength as on 31st March, 1994 was 1,87,900 comprising of 19,746 executives and 1,68,154 non-executives as against the position on 31st March, 1993 which was 1,89,636 comprising 19,681 executives and 1,69,955 non-executives.

The works manpower productivity increased to 88 Tonnes crude steel per man year as compared to 86 tonnes crude steel per man year achieved during the previous year.

21.2 Training

The thrust to make training more result and skill oriented continued. During the year 98,196 employees were trained, out of this 429 were trained abroad under on-going agreements with British Steel, U.K., Voest Alpine, Austria, BHPE-Kinhill, Australia, etc. To ensure accrual of maximum benefits to SAIL from overseas training, networks have been formed of executives already trained abroad under various agreements.

21.3 Employees Welfare

Various welfare measures for the benefits of the employees, like free medical services, (including extending medi-claim schemes to retired employee and their spouses), housing, education for children, facilities of cooperative societies as well as providing avenues for socio-cultural activities, were undertaken. On this account the Company spent an amount of over Rs.325 crores during the year.

21.4 Safety

The thrust towards Safety & Occupational Health continued during the year. 13th World Congress for Safety and Health was held for the first time in Asia. SAIL was co-sponsor, where Chairman, SAIL delivered the key-note address.

21.5 Industrial Relations

The industrial relations during the year remained peaceful inspite of National Bundhs and State wide strike calls at different times during the year. Through effective use of bipartite forums, a healthy and cooperative atmosphere, conducive for production and growth, was maintained.

21.6 Official Language Policy

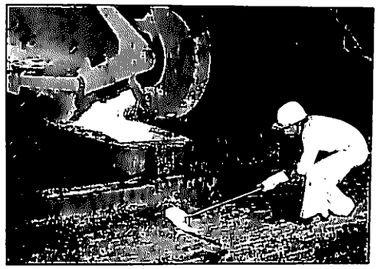
The Company continued to vigorously pursue its efforts in implementing the Official Language Policy of the Government. The Company achieved distinctions of bagging prizes at national level for its achievement in the field of Rajbhasha implementation as well. The Ministry of Steel awarded its Rajbhasha Trophy to SAIL. SAIL consecutively for the third year bagged the first position amongst all the Public Sector Undertakings in Akhil Bharatiya Rajbhasha Sammelan.

21.7 Peripheral Development

SAIL has been playing an active role in undertaking various welfare measures like providing drinking water facilities, health care programmes, educational facilities, recreational activities, etc. During the year an amount of Rs. 2.81 crores was spent on this account.

21.8 Awards

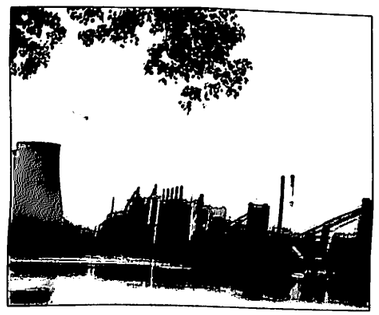
SAIL employees bagged three out of the total seventeen prestigious Prime Minister's Sharam Awards given this year.



THE INDIAN IRON AND STEEL COMPANY LIMITED

1. General

The Indian Iron and Steel Company Limited (IISCO), owns and operates an integrated steel plant at Burnpur, captive iron ore mines at Gua and Manoharpur, captive collieries at Chasnalla, Jitpur and Ramnagore, a coal washery at Chasnalla and a large foundry complex at Kulti. The management of IISCO was taken over by the Government of India on the 14th July, 1972. Shares held by the private parties were acquired by the Central Government on 17th July, 1976, the shares held by the public financial institutions etc. were also purchased by Central Government and subsequently all these shares were transferred to SAIL. IISCO became a wholly owned subsidiary of SAIL on 30th March, 1979. As a part of the physical restructuring of IISCO the management of Kulti works and also the collieries and ore mines of the Company were taken over by SAIL and January, 1990 in terms of the Power of Attorney executed by IISCO.



2. Production Performance 1993-94

The Company produced 795.8 thousand tonnes of Hot Metal, 405.7 thousand tonnes of Pig Iron, 321.9 thousand tonnes of Crude Steel and 333.4 thousand tonnes of Saleable Steel during 1993-94 which were 92%, 98%, 83.8% and 83.4% of respective Annual Performance Plan targets. Production of 37.4 thousand tonnes of Sleeper Bar was the highest ever. Despatches of 429.9 thousand tonnes of pig iron, 277.5 thousand tonnes of BF coke to Bokaro Steel Plant and 33.5 thousand tonnes of sleeper bar to DSP were the highest ever.

3. Production Performance 1994-95 (April-November)

The production of Hot Metal, Crude Steel and Saleable Steel during April-November 1994 has been 0.506, 0.214 and 0.206 MT respectively.

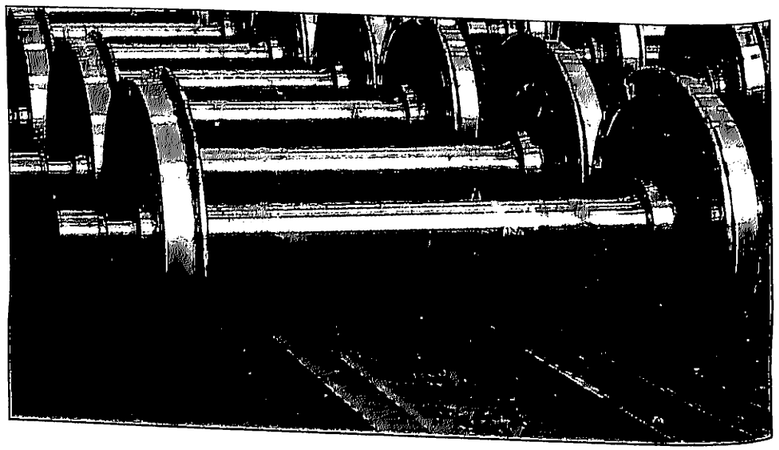
The details of production plan and achievement during April to November, 1994 was as follows :

(Unit M.T.)

Item	Annual Target	Target Apr.-Nov.	Actual Apr.-Nov.	% fulfilment
Hot Metal	0.800	0.499	0.506	101
Crude Steel	0.324	0.203	0.214	105
Saleable Steel	0.287	0.189	0.206	109

4. Capital Schemes

The Company incurred expenditure of Rs. 51.97 crores (on cash basis) on various Capital Schemes during the year as against Rs. 25.36 crores during the previous year. In addition, an expenditure of Rs. 1.1 crores was also incurred on enabling works under Modernisation proposal for Burnpur Works.



5. Financial Performance

The turnover of the Company in 1993-94 at Rs. 844.48 crores was higher by 3.7 per cent over the previous year. The net loss for the year was Rs. 76.19 crores as compared to Rs. 58.96 crores during 1992-93.

The authorised share capital of the company including preference shares is Rs. 550 crores. The paid-up share capital at the year end was Rs. 387.67 crores. SAIL provided Rs. 16.74 crores for capital schemes and Rs.500 crores for working capital. SAIL waived interest of Rs. 73.11 crores on loans.

6. Sales & Marketing

Despite unfavourable market conditions, the company, with greater customer contacts and better customer services, sold 324.7 thousand tonnes of Steel and 383.1 thousand tonnes of Pig Iron thereby registering increases of 13.8 per cent in the case of Pig Iron. Sales of 18.3 thousand tonnes of cast iron spun pipes and 34.8 thousand tonnes of casting were higher then previous year.

7. Kulti Works

Project for Augmentation of facilities for enhanced production of Heavy Ingot Moulds at G.C. Shop was completed. Work on project for Augmentation of facilities for increased production of 60 Slag Cups at SMS Burnpur is progressing.

8. Human Resource & Management

Industrial Relations situation remained generally normal and peaceful during the year. Emphasis continued to be laid on improvement of the quality of training, multi-skill training, modernisation training, technical literacy etc. 1596 executives and 7445 non-executives were trained in various fields during the year. 43 executives were trained abroad.

Scheduled Caste and Scheduled Tribe employees constituted 15.8 per cent and 20 per cent respectively of the total number of employees. Intake of SC and ST candidates was 29.82 per cent and 9.5 per cent respectively of the total recruitment during the year.

The thrust on safety continued during the year through seminars, drama competitions, training programmes and display of posters etc. at conspicuous places.

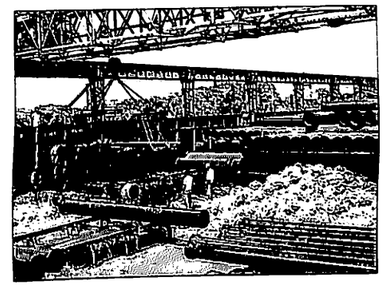
The Company continued to pursue its efforts in implementing the Official Language Policy of the Government. Employees were encouraged to carry out official work in Hindi and liberal incentives were given. Various competitions, Official Language Week Celebrations and Workshops were organised.

■

IISCO-UJJAIN PIPE AND FOUNDRY COMPANY LIMITED

1. General

IISCO-Ujjain Pipe & Foundry Company Limited (IISCO-Ujjain) is a wholly owned subsidiary of the Indian Iron & Steel Company Limited, which in turn is a subsidiary of Steel Authority of India Limited. IISCO-Ujjain manufactures Cast Iron Spun Pipes in the range of 80 mm to 350 mm dia sizes in its works at Ujjain.



2. Production Performance

Production of Cast Iron Spun Pipes continued to remain suspended throughout the year.

3. Financial Performance

During the year, the turnover of the Company was Rs. 591.15 lakhs as against Rs. 1837.92 lakhs in the previous year. The net loss for the year was Rs. 353.20 lakhs as compared to previous year's net loss of Rs. 545.15 lakhs. The Company having become a sick industrial company within the meaning of Section 3(1)(o) of the Sick Industrial Companies (Special Provisions) Act, 1985 Reference under Section 15(1) was made to the Board for Industrial and Financial Reconstruction on 25th March, 1994 for determination of the measures which shall be adopted with respect to the Company

4. Sales Marketing

The recession in the Cast Iron Spun Pipes demand in the country continued and the order booking during the year was 2188 tonnes as against 18141 tonnes during the previous year. Sales despatches of 2760 tonnes were made from the available stock.

5. Industrial Relations

The Industrial Relations situation in the Company remained congenial and peaceful during the year.

6. Use of Hindi

The Company continued to pursue its efforts in implementing the Official Language Policy of the Government. Six employees have passed Hindi Noting/Drafting Diploma Course conducted by SAIL. Regular meetings of Hindi Implementation Committee were held where various suggestions were considered for effective implementation of Rajbhasa.

■

MAHARASHTRA ELEKTROSMELT LIMITED

1. Background

Maharashtra Elektrosmelt Limited is a subsidiary of SAIL, situated in Chandrapur, Maharashtra and is a major producer of Ferro Manganese and Silico Manganese. It is also diversifying into other ferro alloys.

2. Financial Performance

The Company achieved the turnover of Rs 98 97 crores during the year 1993-94 The Company during the year recorded a net profit of Rs. 2.39 crores after providing for interest and depreciation of Rs.4.14 crores and Rs.2.34 crores respectively. The authorised capital of the company is Rs. 10 crores and the subscribed and paid-up capital is Rs.5 crores. SAIL holds approximately 96 percent of the paid up capital.

3. Production Performance

The production of all grades of Ferro Alloys during the year was 57840 tonnes as per the following break up:

High Carbon Ferro Manganese	47918 tonnes
Silico Manganese	8081 tonnes
Medium Carbon Ferro Manganese	1841 tonnes
	57840 tonnes

4. Research & Development

Dephosphorisation of molten High Carbon Ferro Manganese using various reagents on laboratory scale is being carried out with the active support of SAIL/RDCIS. Production of Low Carbon Ferro Manganese through Converter route is being attempted.

Possibility of casting Ferro Manganese and Silico Manganese in a specific tailormade machine is also being explored.

■

VISVESVARAYA IRON AND STEEL LIMITED

1. General

Visvesvaraya Iron and Steel Company Limited situated at Bhadravati, Karnataka is a subsidiary of Steel Authority of India Limited. It is a major producer of special and alloy steels, Mild Steel and Ferro Alloys.

2. Financial Performance

The authorised capital of the company as on 31st March 1994 was Rs. 100 crores of which subscribed and paid-up capital, was Rs. 81.92 crores. Out of the paid up capital, 60 per cent is held by SAIL and the balance 40 per cent by the Government of Karnataka.

The Company has achieved turnover of Rs. 202.37 crores. Despite all round improvement made during the year, the Company ended with a loss of Rs. 18.21 crores after providing for depreciation and interest. The improvements in Techno-economics factors were completely offset by a steep hike in power tariff and increase in other input costs.

3. Production Performance - 1993-94

During the year, 60711 tonne of saleable steel inclusive of 54714 tonnes of Alloy and Special Steel and 5977 tonnes of Mild Steel were produced. Though there has been a growth of 19.84% in alloy and special steel, there was a decline in mild steel by 78.2% due to non-availability of billets. Production of ferro silicon also declined by about 18.92% due to shutting down of one furnace for modernisation from August. 1993. All time records were registered in liquid steel production and CCM production

4. Production Performance - 1994-95

The production of Liquid Steel and Saleable Steel during April-November 1994 has been 66750 and 46560 tonnes respectively.

The details of production plan and achievement during April to November. 1994 was as follows

(Unit '000T)

Item	Annual Target	Target Apr.-Nov.	Actual Apr.-Nov.	%fulfilment
Liquid Steel	125 2	74 59	66 75	89
Saleable Steel	96 7	56 75	46 56	82

5. Capital Schemes

The Company incurred an expenditure of Rs 58 51 crores on various capital schemes including installation of 530 M3 Blast Furnace during the year. The modernisation of 2 numbers of 12 MVA Ferro Silicon Furnaces was also taken up and one of them is likely to be commissioned by end of July, 1994. Raw Material Handling Yard in respect of factory premises for the blast furnace at an estimated cost of Rs. 3.96 crores has also been taken up.

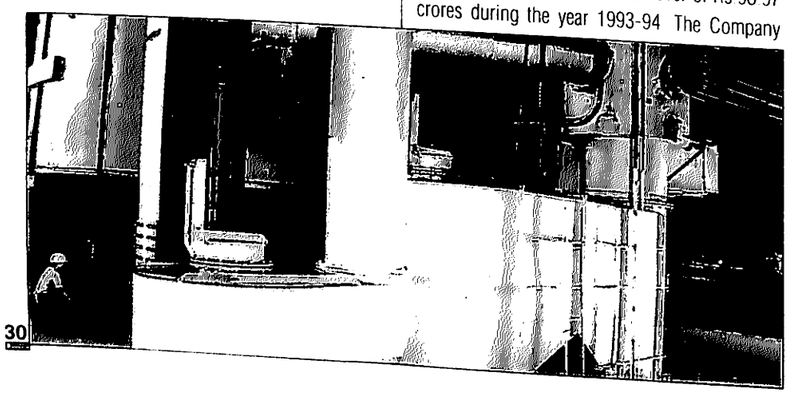
6. Sales and Marketing

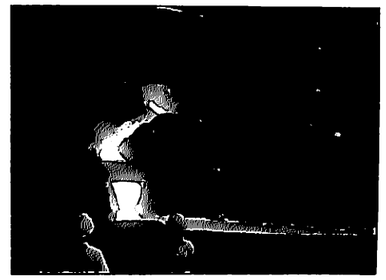
Recessionary trends in the economy continued during the year. Special and alloy steel industry which caters to the engineering and automobile sectors, was relatively more adversely affected. Fiscal measures adopted by the Government deepened and led to severe liquidity crunch. Despite this trend, the Company registered a sales turnover of Rs. 202.37 crores. There is a growth in the value of all major alloy and special steel products. However, there has been a decline in the sales of mild steel and ferro silicon due to non-availability of IPT billets and closing down of one ferro silicon furnace for modernisation purpose. Market being tough and very competitive. continuous efforts are being made to enter into new areas, improve quality and yield, reduce cost of production and improve internal systems and procedures.

For achieving better customer satisfaction and also enhancing export potential VISL has decided to go in for certification to ISO-9002 standards for alloy and special steel products through forged route the target date being September. 1994

7. Human Resources Management Review

Total manpower strength as on 31st March. 1994 was 6326 comprising 477 executives and 5849 non-executives. Percentages of SC and ST to total employment was 12 93%. For enhancing efficiency and skill of workforce the Company continued to give stress on imparting training to both executives and non-executives. Industrial relations continued to be cordial. Expenditure incurred on training abroad during the year was Rs. 43 63 lakhs. Experts from Austria had also visited the Company to impart technical training.





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2. Financial Performance

The Company achieved the turnover of Rs.98.97 crores during the year 1993-94. The Company during the year recorded a net profit of Rs. 2.39 crores after providing for interest and depreciation of Rs.4.14 crores and Rs.2.34 crores respectively. The authorised capital of the company is Rs. 10 crores and the subscribed and paid-up capital is Rs.5 crores. SAIL holds approximately 96 percent of the paid up capital.

3. Production Performance

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Possibility of casting Ferro Manganese and Silico Manganese in a specific tailormade machine is also being explored.

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The Company has achieved turnover of Rs. 202.37 crores. Despite all round improvement made during the year, the Company ended with a loss of Rs. 18.21 crores after providing for depreciation and interest. The improvements in Techno-economics factors were completely offset by a steep hike in power tariff and increase in other input costs.

3. Production Performance - 1993-94

During the year, 60711 tonne of saleable steel inclusive of 54714 tonnes of Alloy and Special Steel and 5977 tonnes of Mild Steel were produced. Though there has been a growth of 19.84% in alloy and special steel, there was a decline in mild steel by 78.2% due to non-availability of billets. Production of ferro silicon also declined by about 18.92% due to shutting down of one furnace for modernisation from August, 1993. All time records were registered in liquid steel production and CCM production.

4. Production Performance - 1994-95

The production of Liquid Steel and Saleable Steel during April-November 1994 has been 66750 and 46560 tonnes respectively.

The details of production plan and achievement during April to November, 1994 was as follows :

(Unit '000T.)

Item	Annual Target	Target Apr.-Nov.	Actual Apr.-Nov.	%fulfilment
Liquid Steel	125.2	74.59	66.75	89
Saleable Steel	96.7	56.75	46.56	82

5. Capital Schemes

The Company incurred an expenditure of Rs. 58.51 crores on various capital schemes including installation of 530 M3 Blast Furnace during the year. The modernisation of 2 numbers of 12 MVA Ferro Silicon Furnaces was also taken up and one of them is likely to be commissioned by end of July, 1994. Raw Material Handling Yard in respect of factory premises for the blast furnace at an estimated cost of Rs. 3.96 crores has also been taken up.

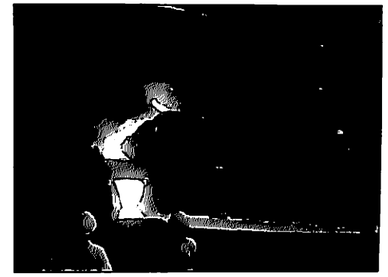
6. Sales and Marketing

Recessionary trends in the economy continued during the year. Special and alloy steel industry which caters to the engineering and automobile sectors, was relatively more adversely affected. Fiscal measures adopted by the Government deepened and led to severe liquidity crunch. Despite this trend, the Company registered a sales turnover of Rs. 202.37 crores. There is a growth in the value of all major alloy and special steel products. However, there has been a decline in the sales of mild steel and ferro silicon due to non-availability of IPT billets and closing down of one ferro silicon furnace for modernisation purpose. Market being tough and very competitive, continuous efforts are being made to enter into new areas, improve quality and yield, reduce cost of production and improve internal systems and procedures.

For achieving better customer satisfaction and also enhancing export potential VISL has decided to go in for certification to ISO-9002 standards for alloy and special steel products through forged route the target date being September, 1994.

7. Human Resources Management Review

Total manpower strength as on 31st March, 1994 was 6326 comprising 477 executives and 5849 non-executives. Percentages of SC and ST to total employment was 12.93%. For enhancing efficiency and skill of workforce the Company continued to give stress on imparting training to both executives and non-executives. Industrial relations continued to be cordial. Expenditure incurred on training abroad during the year was Rs. 43.63 lakhs. Experts from Austria had also visited the Company to impart technical training.



1. Background

Rashtriya Ispat Nigam Limited, a Public Sector Undertaking under the administrative control of Ministry of Steel commissioned the first shore-based integrated Steel Plant at Visakhapatnam in the State of Andhra Pradesh in August, 1992. Visakhapatnam Steel Plant (VSP) is the most sophisticated Steel Plant in the country through the Blast Furnace route and its various techno-economic parameters are distinctly superior to those of the existing Integrated Steel Plants in the country. VSP' s manpower is the lowest in India and the labour productivity of 230 tonnes of Crude Steel per man-year at the optimum level of production would, therefore, be much higher than the maximum achieved in the other Steel Plants in the country.

The rated capacities of the Plant are as follows :

		(In million tonnes)
Hot Metal	—	3.4
Crude Steel	—	3.0
Saleable Steel	—	2.656
Pig-iron	—	0.556

2. Project Cost

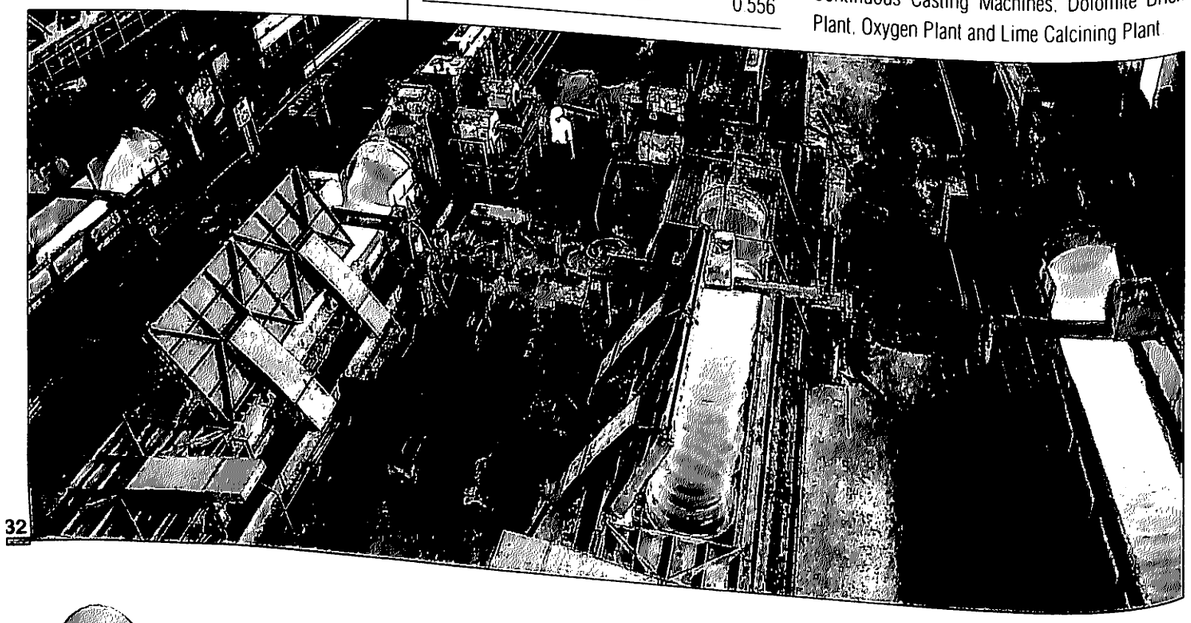
The Project Cost of the Steel Plant is estimated at Rs. 8529.13 crores (based on second quarter 1992 prices) excluding the cost of captive mines which is estimated at Rs. 59.20 crores. The expenditure incurred on the project including mines upto the end of March, 1994 is Rs. 7907.30 crores.

3. Major Production Facilities

As per the metallurgical process, the plant facilities can be broadly divided into 3 basic clusters of units comprising Iron Making, Steel Making and Rolling Mills.

i) Major iron making facilities are - raw material handling, blending and storage, Base Mix yard, Coke-Ovens and By-Product Plant, Sinter Plant, Blast Furnaces, Pig Casting machines, Slag granulation and handling facilities, and Power Plant and Blower Station.

ii) Major production facilities for steel production are Basic Oxygen Furnaces (Converters), Continuous Casting Machines, Dolomite Brick Plant, Oxygen Plant and Lime Calcining Plant



iii) Major production facilities for finishing/rolling of steel are Light and Medium Merchant Mill (LMMM), Wire Rod Mill (WRM) and Medium Merchant & Structural Mill (MMSM).

4. Production

Production since inception at VSP has registered sustained and continuous growth as indicated below :

Item	1991-92 Actual	1992-93 Actual	1992-93 % Growth over previous year	1993-94 Actual	1993-94 % Growth over previous year	1993-94 % Capacity utilisation
Hot Metal	1246	1981	59%	2369	20%	70%
Liquid Steel	587	1052	79%	1355	29%	45%
Saleable Steel	517	879	70%	1184	35%	45%
Pig-iron	639	914	43%	986	8%	—

1993-94 was the first full year of operation as a 3.0 million tonne plant. During this year VSP attained 70% capacity utilisation in hot metal inspite of the fact that the integration of the operation of a large Blast Furnace normally results in a drop in productivity of hot metal. However, at VSP, the second 3200 Cu.M. Blast Furnace operation could be integrated without any problems and overall productivity level of 1.03 t/Cu.M/day has been achieved in the very second year of operation in 1993-94. In the case of Steel Melt Shop units, the capacity utilisation has been 45% only in 1993-94 due to the following inherent deficiencies faced during operation

i) Problems of technology absorption and technological discipline arose because of 100% continuous casting being adopted for the first time in India

ii) Non-availability of experienced persons for operation and maintenance of continuous casting machines

iii) Requirement of certain balancing facilities and upgradation of automation levels of Casters which surfaced during its operation

A number of short-term & mid-term measures have been taken up to improve the production levels in Converters and Continuous Casting Machine Shop. Besides, an International reputed consultancy agency has been engaged for assistance in engineering and technical support in improving the operational and technical skills of VSP personnel in the area of Steel Melt Shop/Continuous Casting Machines.

The production performance during 1994-95 has been as follows :

(In '000 tonnes)

	Annual target	April - November, 1994 Target	Actual	% Fulfilment	% Growth over April - November, 1993
1. Hot Metal	3000	1944	1868	96	27
2. Crude Steel	2000	1230	1202	98	47
3. Saleable Steel	1755	1076	966	90	33
4. Pig-iron	945	670	631	94	-

5. Techno-Economic Performance

The Management continued to make efforts towards achieving cost reduction measures through improved techno-economic and operating performances. During the year 1993-94, VSP surpassed the techno-economic norms envisaged in the Detailed Project Repot (DPR) in some areas. The significant achievements were reduction of 18% in specific energy consumption and lowering of BF Coke rate by 20 Kgs to 561 Kg/tonne of hot metal. The labour productivity during the year also

improved from 109.9 t/manyear of the last year to 117.4 t/manyear.

During April-November, 1994 of the current year 1994-95, the Plant has achieved further improvement in the technical parameters, as detailed below :

Description	DPR Norm	1992-93	1993-94	1994-95 (April-November '94)
BF Coke Rate (Dry) Kg/THM	627	581	561	540
BF Productivity T/Cum/Day	1.52	0.85	1.03	1.23
Specific Energy Consumption G.Cals/TLS.	7.8	10.10	8.32	7.98
Labour productivity (TCS/manyear)	231	109.9	117.4	147.1

6. Financial Performance

6.1 *Financial Performance during 1993-94*

The year 1993-94 ended up with an operating profit (gross margin) of Rs. 114 crores. This has been made possible mainly by reducing the cost of production by improving productivity yields and lowering the specific consumption of raw materials, energy and services.

The net loss for the year worked out to Rs. 572.66 crores after providing for heavy capital related charges viz. Rs. 346.44 crores towards interest and financial charges and Rs. 339.84 crores towards depreciation and prior period adjustments of Rs. 11.31 crores.

6.2 *1994-95 (Targets and Performance)*

During the period from April-November, 1994 the company has earned a gross margin of Rs. 231.19 crores. After accounting for interest (Rs. 251.35 crores) and depreciation (Rs. 270.47 crores) the net loss worked out to Rs. 289.96 crores as against the loss of Rs. 532.04 crores during the corresponding period of the last year, thereby showing an improvement of 45%.

The gross sales for the year 1994-95 are budgetted at Rs. 2462 crores as against the actuals of Rs. 1753 crores in 1993-94 indicating a growth of 40%.

6.3 Performance figures for the last 2 years are given below :

	1993-94 (Actuals)	1994-95 (Budget)
Gross sales	1753	2462
Gross Margin	114	444
Interest	346	389
Cash Profit/Loss (-)	232	55
Depreciation	341	407
Net profit/loss	(-) 573	(-) 352

7. Marketing

The Marketing Head Quarters of VSP is located at Visakhapatnam. While the total exports and sale of byproducts in the domestic market are coordinated from the Head Quarters itself, sale of Iron & Steel products in the domestic market is being carried out from Head Quarters as well as through the network of Visakhapatnam Steel Plant' s branches and stockyards spread all over the country.

7.1 *Domestic Sales*

The delivery of Iron and Steel materials to customers is either done through the stockyards or directly dispatched from the Head Quarters to the customers' premises, by rail or road.

VSP has a vast net work of 23 branch offices in different locations of India for sale of Iron and Steel Products. There are 8 branches/stockyards in the Northern Region, 5 in the Western Region, 4 in the Southern Region, 4 in the Eastern Region and 2 in the Andhra Region. The Branch Offices headed by Branch Managers book the orders on a long term contract basis or sell the products on a free sale basis. If any customer wants door delivery, the Branch arranges to deliver the goods at the door step of the customer for which extra delivery charges are collected.

There were total sales of Rs. 1751 crores in 1993 94 which is 48% higher than 1992-93. Sales of steel have recorded a growth of 68% in the domestic market and 54% in the export market. By-products have also recorded a growth of 42%.

(Rs. in crores)

April - November, 1994 (Actuals)	Actual for the corresponding period last year
1396	1093
231	49
251	271
(-) 20	(-) 222
270	310
(-) 290	(-) 532

For the period April-November, 1994 VSP recorded an overall sales turnover of Rs. 1396 crores registering a growth of 28% over the levels of the corresponding period in 1993-94. With the difficult export market condition prevailing, VSP stepped up its sales in the domestic market to Rs. 1016 crores thereby achieving a growth of 49% over the levels of the corresponding period in the previous year.

7.2 *Exports*

An assessment of demand of VSP' s products and marketability in the domestic market is being made and reviewed on a continuous basis. Thereafter the surplus is available for export. As a matter of policy, taking advantage of the shore-based location, efforts are being made to maintain a continuous presence in the export market. This also helps in keeping the quality of the product to international standards. For exports, 14 buyer agents from amongst big trading houses/companies in international trade have been appointed. Most of the material is sold through such buyer agents and the balance through spot sale. VSP already has a significant presence in the export market in countries like China, Japan, Australia, Dubai, Sri Lanka, Singapore, Malaysia, Mayanmar, Indonesia, Vietnam, Bangladesh, Taiwan and U.S.A.

A total of 1 million tonnes of iron and steel products have been exported in 1993-94 compared to 280,000 tonnes in 1992-93. The foreign exchange earnings in 1993-94 were Rs. 589 crores compared to Rs. 212 crores in 1992-93, registering almost a threefold increase. 60% of the exports in steel were to China and the rest mainly to Thailand, Indonesia, Sri Lanka and USA.

VSP' s exports of iron and steel products during April-November, '94 have earned a foreign exchange of Rs. 293 crores.

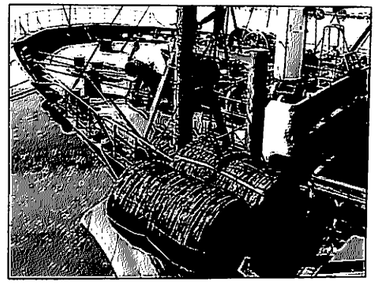
7.3 *Marketing initiatives in 1994-95*

(i) With a view to increasing the net sales realisation, sales in the Southern market have been further stepped up.

(ii) In addition to VSP' s own stockyards and consignment agencies, stockists have been apointed all over the country with a view to expand the marketing network and reach the customers in remote areas.

(iii) Total requirements of a project are being met as a single package. More Sections to meet the specific requirements of the projects are introduced whenever necessary.

(iv) To overcome a sluggish international market, export market base has been broadened establishing sustained sales in new markets such as Korea, Germany, USA, Japan, etc.



8. Safety

VSP has taken up a number of safety promotional activities to bring safety awareness in the employees and promote a conducive atmosphere for safe working in the plant. A very good record on the safety front has been maintained by VSP during the year 1993 with zero fatal accidents to the regular employees. The reportable and non-reportable accidents in 1993 could also be reduced by 42% and 33% from the levels of 1992. The total accidents showed an overall reduction of 43% in 1993 from the levels of 1992.

However, there were four fatal accidents to VSP employees and six to contractual workers during

January-December, 1994. VSP have analysed the reasons for all these accidents and initiated corrective action.

A number of remedial steps have also been taken by VSP to check the recurrence of accidents.

9. Environment Management and Pollution Control

VSP has taken up extensive pollution control measures with sophisticated equipment and technology at a cost of about Rs. 460 crores which is about 8% of the cost of the Plant & Equipment. The Plant is well within the pollution control norms. It is also considered as the most environment friendly steel plant in the country.

10. Industrial Relations

For furthering cordial industrial relations, a high level bipartite forum called Corporate Business Information Forum has been constituted wherein the top management team interacts periodically with the principal office bearers of the recognised Union and shares information on production, sales and financial performance of the company. Similarly, at the grass root level, a bipartite forum called Shop Floor Cooperation Committees have been formed in six main production units to meet periodically for discussing and resolving the shop related issues. Such proactive measures have brought the Management and Employees closer on organisational issues.

Unifortunately, in October, 1993 a clash between VSP workers and the CISF personnel culminated in a lightening strike for 7 days from 16th October to 22nd October, 1993. Almost all non-executives of VSP at Visakhapatnam participated in the said strike. Peace was restored through discussions between VSP management and the registered Unions of VSP including the recognised Union of the Company. The VSP Management has since taken special initiatives to avoid recurrence of such events in the future including issue of guidelines to CISF Personnel, special training programme for the workers and preparation of a code of conduct to enable vital installations to continue running at such times.

11. Manpower

Group-wise details of manpower in Visakhapatnam Steel Plant upto September, 1994 are given below:

Group	No. of Total employees	No. of SC employees
A	2238	266
B	2443	380
C	9332	1510
D	3387	577
Total	17400	2733

12. Implementation of Official Language Policy

The directives of the Government of India and targets fixed as regards the implementation of Hindi in Visakhapatnam Steel Plant are being fulfilled successfully.

During the year 1993-94, 186 employees have been trained in Hindi Prabodh/Praveen/Pragya, 58 employees in Hindi Type-writing and 6 employees in Hindi Stenography. In addition, 3 Hindi Workshops were conducted covering 27 executives and 52 non-executives. Further, a National level Seminar was organised on 10.3.1994 and Hindi books worth Rs. 10,000/- were added to the Library.

Hindi week was organised in VSP from 14.9.93 to 21.9.93 and Hindi day observed on 22.9.93.

Compliance with the stipulations of the Official Language Act has been ensured in all respects in 1993-94.

VSP Rajbhasha Shield was given to the Works Department for effective use of Hindi in official work during this period.

During the current year VSP organised Hindi Week from 14th September, 1994. On this ocasion various competitions in Hindi were also organised and prizes were distributed to the employees.

13. Ancillary/SSIs Development

% of SC employees	No. of ST employees	% of ST employees
11.89	64	2.86
15.55	39	1.60
16.18	506	5.42
17.04	274	8.09
15.71	863	4.96

There has been a substantial growth in the placement of orders on ancillaries and local SSIs by VSP. Details of value of orders placed on ancillaries and total industries are as follows :

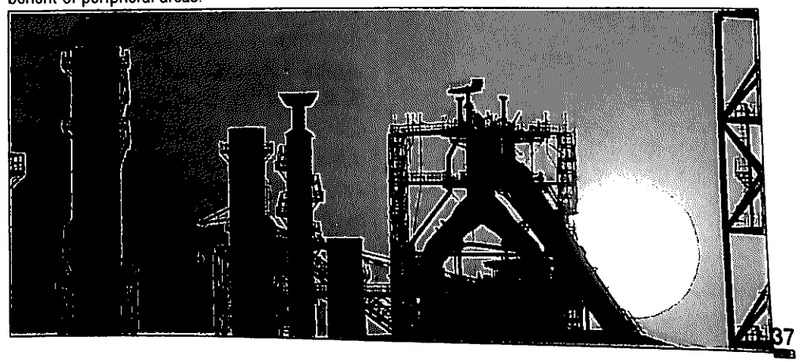
		1992-93	1993-94	Plan for the year 1994-95
i)	Ancillaries Local SSIs	543	1065	1400
ii)	Other Local Industries	547	720	800
		1117	1785	2200
iii)	All India SSIs	2250	3015	3043
iv)	% of orders placed by VSP on Ancillary & Local SSI' s to All India SSIs	49.06	59.2	72.3

So far 8 upstream ancillaries and 3 downstream units have been commissioned. 4 upstream ancillaries and 10 downstream units are at various stages of construction. The total capital investment in these units is Rs. 37 crores and the likely generation of employment will be for about 500 persons. VSP has extended purchase preference of the order of 15% and 25% to local industries and ancillaries respectively. This is based on a specific commitment by them for upgrading their technologies and resources for improved and consistent quality. Besides this, price preference to the ancillaries while competing with outstation parties on a reducing scale of 10% to 5% for the first three years has also been extended. Similar price preferences to the local industries at 5% is also being extended for two years.

Apart from ancillaries and downstream industries, VSP has adopted 102 SSI Units for placement of emergency orders and also for entering into rate contracts in due course.

14. Peripheral Development

VSP has undertaken various social welfare and peripheral development activities for maintaining a harnomious and congenial atmosphere in the surrounding area. As part of its peripheral development activities, VSP has constructed community centres in the rehabilitation colonies and participated in the literacy, family welfare and vaccination programmes in and around the steel plant. Further, special programmes for water supply through borewells, immunisation, provision of sewing machines and rickshaws to the needy are some of the other initiatives taken by VSP for the benefit of peripheral areas.



1. General

1.1 The Kudremukh Iron Ore Co. Ltd. (KIOCL), a wholly owned Govt. of India undertaking and the country' s largest 100% EOU, was established in April, 1976 to meet the long term requirements of Iran. An Iron Ore concentratre plant of 7.5 million tonnes capacity was set up at Kudremukh. This project was to be financed in full by Iran. However, as Iran stopped further loan disbursements after paying US$ 255 million, the project was completed as per schedule with the funds provided by Govt. of India.

1.2 While the project was commissioned on schedule, consequent upon the political developments in Iran, they did not lift any quantity of concentrate. As a diversification measure, the Govt. approved the construction of a 3 million tonnes per year capacity pellet plant in Mangalore in May 1985. The plant went into commercial production in 1987 and is now exporting both blast furnace and DR grade pellets to many countries including Japan, Hungary, Turkey, Australia, Indonesia, China, Taiwan etc. and also to domestic Sponge Iron units such as M/s Vikram Ispat.

2. Production

2.1 A target of 6.2 million tonnes and 2.3 million tonnes has been set for production of iron ore concentrate and iron ore pellets respectively during the year 1994-95. As against a target of 4.025 million tonnes of Iron Ore concentrate fixed for the period April to November 1994, the actual production was 3.48 million tonnes which represents 86% target fulfillment. The production of pellets during the period April to November 1994 was targeted at 1.47 million tonnes and the actual production during this period was 1.355 million tonnes reflecting 93% target fulfillment.

3. Exports

3.1 During the year 1993-94, total shipments were 6.538 million tonnes comprising 4.201 million tonnes of Concentrate and 2.337 million tonnes of Pellets. This is the highest quantity shipped in any year so far. For the year 1994-95, a target of 3.8 million tonnes of Concentrate and 2.2 million tonnes of Pellets has been fixed. As against a target of 2.55 million tonnes of Concentrate and 1.398 million tonnes of Pellets fixed for the period April, 1994 to November, 1994, actual shipments were 1.994 million tonnes of concentrate and 1.377 million tonnes of Pellets representing 78% and 98% of the relevant targets respectively.

3.2 Total sales for the year 1993-94 were Rs. 416.69 crores, the highest achieved for any year so far. It is for the first time that the Company has crossed the Rs. 400 crore mark and surpassed the previous highest figure of Rs. 392.81 crores. Estimated sales for the year 1994-95 is Rs. 387.66 crores. As against a target of Rs. 253.62 crores fixed for the period April ' 94 to November ' 94, actual sales were Rs. 216.80 crores representing 85% of the target.

3.3 The export earnings during the last 5 years from 1989-90 and upto November, 1994 are detailed below :

(Rs. in lakhs)

Year	Concentrate	Pellets	Total
1	2	3	4
1989-90	7685	9755	17440
1990-91	11257	11641	22898
1991-92	18882	20399	39281
1992-93	18551	12839	31390
1993-94	21022	20647	41669
1994-95 (upto Nov ' 94)	9407	12273	21680

4. Financial Performance

An overview of the financial performance of KIOCL during the year 1994-95 upto November, 1994 together with the actuals for the previous three years, is indicated below :

(Rs. in lakhs)

Particulars	1994-95 (upto Nov. ' 94)	1993-94	1992-93	1991-92
1	2	3	4	5
Total value of sales	21680	41669	31390	39281
Gross Margin	4322	11161	10366	14623
Total profit on account of operations of the year	2217	9487	10015	14027
Inventories (excluding finished stock)	9715	9622	9595	9415

5. Reasons for Lower Performance: 1994-95

The physical and financial performance during the current year has been comparatively lower against the budgeted targets. In respect of physical parameters, the reason for the shortfall is mainly on account of unprecedented severe rainfall during the monsoon period resulting in bad mine road conditions with consequent breakdown of machinery. Frequent power trippings/cuts also had its effects on production. In respect of the Pellet Plant, scheduled annual maintenance for about one and half months led to shutdown of the plant resulting in lower production. As far as the financial performance is concerned, the lowering of profits as against the targets is a direct off-shoot of the fall in production and also mainly due to reduction of 9.5% in the international price for concentrate for supplies during 1994-95 - a factor over which the Company has very little control. It is to be emphasised that though the results upto November 1994 are not to the targeted level, the Company is confident of reaching the major parameters during the rest of the year due to sustained and continuous push towards better production.

6. Workers' Participation in Management

The Works Committees in the Plants of the Company are functioning effectively and joint plant and shop councils have contributed to the improved industrial relations as well as workers' participation.

7. Safety Measures

A safety department is functioning effectively. Pit Safety Committees with Workers' representatives meet regularly to discuss various safety measures. Safety rules have been compiled for each work area, covering all safety aspects. All employees have been provided with these booklets.

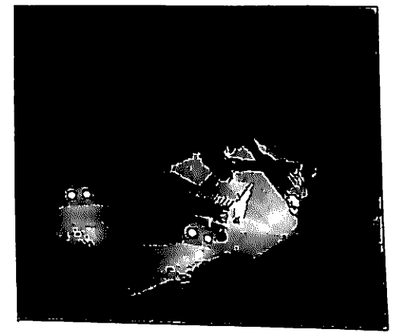
8. Manpower position

As on 30th November, 1994, the total number of employees in KIOCL were as follows :

Group	Total No. of Employees including SC/ST as on 30th November, 1994	SC in position	ST in position
1	2	3	4
' A'	452	36	12
' B'	211	11	2
' C'	1527	195	25
' D'	241	83	31
Total	2431	325	70

9. Progressive use of Official Language

The Company follows the directives issued by the Govt. of India regarding progressive use of Hindi for official purposes. Hindi teaching programmes for the employees are a part of the training programme of the Company. Cash awards and increments are given to those who perform well in these programmes. The Company' s House magazine is published in English, Hindi and Kannada languages.



CHAPTER V

1. Background

Established in 1962, Manganese Ore (India) Limited (MOIL) is the largest producer of Manganese ore in India. At the time of inception, 49% shares were held by the Central Province Manganese Ore Co. Ltd. (CPMO) and the remaining 51% in equal proportion by Government of India and State Governments of Madhya Pradesh and Maharashtra. Subsequently, in 1977 the shares held by CPMO in MOIL were acquired by Government of India and MOIL became a wholly owned Government Company with effect from October, 1977. As on 31.3.1994, the Govt. of India held 82.11% shares in MOIL with State Govts. of Maharashtra and Madhya Pradesh, having 9.02% and 8.87% respectively.

2. Production

MOIL produces and sells different grades of Manganese Ore. These are :

(a) High Grade Ores for production of Ferro Manganese; (b) Blast furnace grade ore required for production of Hot Metal; and (c) Dioxide ore which goes into the production of Dry Battery Cells.

MOIL has set up a plant, based on indigenous technology to manufacture Electrolytic Manganese Dioxide. This product is also used for the manufacture of dry battery cells.

3. Finance

The authorised capital of the company is Rs. 30.00 crores and the paid-up capital was Rs. 15.325 crores as on 30th September 1994.

4. Performance

4.1 Operating and Financial Results :

The physical and financial performance of the company during 1993-94 and projections for 1994-95 are given below

	1993-94 (Actuals)	1994-95 (Projections)
Production (lakh tonnes)	5.69	6.25
Turnover (Rs. crores)	58.38	82.75
Profit before Tax (Rs. crores)	11.52	15.32

Net profit 3.82 & 3.85 crores of MOIL for 1993-94 & 1994-95 respectively

4.2 *Productivity*

The productivity (output per manshift in tonnes) during 1993-94 was 0.275.

4.3 *Conservation of Energy*

consistent with the National Policy to conserve energy and also to contain the cost of production, the comapany has embarked upon an economy drive in this sphere. Various steps including energy audit have been taken to conserve energy and minimise power consumption.

4.4 *Repayment of Government Loans*

The Company repaid to Government of India Rs. 62.32 lakhs towards plan loans and Rs. 116.97 lakhs as interest (including Rs. 55.22 lakhs towards arrears) as per approved repayment schedules for 1993-94. In 1994-95 the company proposes to repay plan loans to the tune of Rs. 56.82 lakhs and also pay a sum of Rs. 53.93 lakhs as interest, as per the approved plan.

5. Progress of Capital Schemes/ Implementation of Projects :

- The work of Phase II deepening of Holmes Shaft upto 60 mtrs. at Balaghat Mine has since been completed.

- The work relating to sinking of Underground Incline at Gumgaon Mine has been completed and the incline has been commissioned

- The work relating to sinking of vertical shaft at Beldongri Mine has been completed and the cross cutting at 193 mtrs. level has been taken up to reach the ore body

6. Research & Development

6.1 Some of the important areas where R & D studies have been taken up by the company include

i)Benefication of Medium and low grade ores as well as medium grade dioxide ores to battery grade

ii)Use of Cable Bolting and Steel Roof Supports in underground mines

iii)Improvement in mining methods, including capability studies

iv)Diamond drilling to locate new manganese bearing areas and to establish the existence of further reserves in the existing areas.

v) Optimisation of process parameters for Electrolytic Manganese Dioxide Plant.

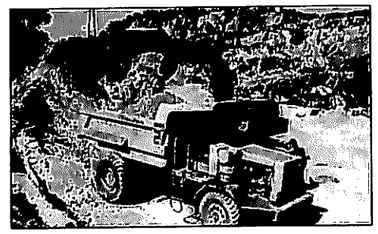
6.2 The company is undertaking exploration by diamond drilling, trenching, pitting, underground drivage etc. for locating new manganese ore bearing areas and proving manganese ore deposits in and around its leasehold areas. Premining support by cable bolting and use of steel supports in place of timber are being carried out in underground working as regular support systems. Efforts are also being made to develop processes to set up manganese based industries. In this direction, the company has already set up a plant to manufacture Electrolytic Manganese Dioxide, used as depolariser in dry battery industries.

6.3 The company is also trying to develop benefication processes to upgrade medium and low grade manganese ores to high grade.

6.4 The R & D efforts of the company in improving mining methods has helped reduction in use of timber and power consumption per unit of output, improved strata control in underground workings and consequent improvement in safety standards in mining. These efforts have also helped in the adaptation and assimilation of High Intensity Magnetic Separation process in the Upgradation of medium grade Dioxide ores to battery grade.

7. Safety Measures

With the continuous depletion of near-surface ore deposits, mining is progressively being extended to deeper horizons and extraction is increasingly done through underground workings. Deeper underground workings require extra attention to be paid to various aspects such as support system, ventilation and efficient filling of the voids arising out of extraction of ore. Continuous emphasis is laid on training of employees, and mine workings are regularly inspected by members of Pit Safety



Committees, Workmen Inspectors, Safety Officers and Chief (Safety). Safety Weeks are observed and exhibitions are held to inculcate safety habits to ensure safe working. Safety Committee meetings are regularly held during which any unsafe acts committed/observed are discussed to avoid recurrence.

8. Workers Participation in Management

The company has set up a mechanism for the association of workers representatives right from the grass root level to the Apex Council which functions at the Corporate Level, with workers and management representatives, under the Chairmanship of Chairman-cum-Managing Director to review and find solutions to major problems. There is a continuing effort to strengthen this arrangement. In addition, Works/Canteen/ Grievance Committees are functioning satisfactorily at each unit. The members of these Committees are from different sections of the employees.

9. Environmental Protection

The company has taken steps with regard to protection of the environment. Environmental studies covering different aspects such as impact of manganese on ecology, air and water pollution have been undertaken. Large scale plantation of trees at the company' s mines has been programmed to be undertaken as an integral part of the 8th Plan

10. Progressive Use/Awards for Implementation of Hindi

10.1 In order to ensure progressive use of Hindi and implementation of the official language Act effective steps have been taken by the Hindi Cell functioning at the Corporate Office of the company.

10.2 To encourage the use of Hindi at all levels, various competitions are organised during ' Hindi Week' and the winners are suitably rewarded. Facilities for learning Hindi have been made available to employees who are not proficient in the language. The Company was given ' Indira Gandhi Rajbhasha Puraskar 2nd Prize for 1991-92' . The Prize has been awarded for good performance in implementation and use of Hindi.

11. Other Awards

The Company was selected for the prestigious annual award ' ET Harvard Award 1993" instituted by the Economic Times and the Harvard Business School Association of India (HBSAI) from among 233 Public Sector Companies. The Company has also been awarded Misrilall Jain Environment Award for 1993-94 instituted by Federation of Indian Mineral Industries for outstanding contribution to the national goal of sustainable development through environmental conservation and rational utilization of natural resources.

12. Social Commitment

MOIL had adopted a tribal village Gondi-close to Ukwa Mine in Madhya Pradesh. The Comapny has introduced a wide range of development activities such as repairs of roads, construction of houses for homeless tribals, construction of school building to impart education to tribal children etc. as part of their ongoing efforts to promote social welfare

13. Personnel

The composition of the work force of the company as on September 1994 was as under

Group	SC	ST	Others	Total
A	20	4	198	222
B	13	11	157	181
C	344	461	1555	2360
D	1285	1975	3441	6701
Total	1662	2451	5351	9464

Out of the total number of 9464 employees 1565 are women

1 Brief History

1.1 Bharat Refractories Limited, a Govt. of India Undertaking was incorporated on 22nd July, 1974 and at present it has the following three units :

i)Bhandaridah Refractories Plant at Bhandaridah;

ii) Ranchi Road Refractories Plant at Ramgarh &

iii) Bhilai Refractories Plant at Bhilai

1.2 India Firebricks & Insulation Co. Ltd. (IFICO) situated at Ramgarh was transferred as a Subsidiary of Bharat Refractories Ltd. w.e.f. 1st May, 1978. The Company and its subsidiary are engaged in the manufacture and supply of various kinds of refractories not only to the integrated steel plants but also to the mini and midi steel plants.

2 Capital Structure

The authorised share capital of the Company is Rs. 5,000.00 lakhs against which the paid-up capital as on 31st March, 1994 was Rs. 4853.18 lakhs. Share money pending allotment as on that date was Rs. 170.00 lakhs. The total outstanding loan together with interest accrued thereon as on 31.3.1994 amounts to Rs. 13,275.96 lakhs as against Rs. 11,494.37 lakhs as on 31.3.1994.

3. Production Performance

The Production performance of the different units of the Company as well as subsidiary company - IFICO Ltd. during 1993-94 and 1994-95 (upto October ' 94) was as follows :

Name of the unit		(Qty. in tonnes) 1993-94 (Actual)		1994-95 Target		(Value Rs. in lakhs) (upto October, 1994) Actual	
		Qty	Value	Qty	Value	Qty	Value
Bhandaridah Ref. Plant	(BhRP)	25516	2123.46	15109	1324.74	11508	1125.35
Ranchi Road Ref. Plant	(RRRP)	5336	1628.80	5047	1559.49	2403	676.67
Bhilai Ref. Plant	(BRP)	25832	3047.20	24500	2744.49	13758	1795.09
Total of BRL		56684	6826.46	44656	5628.72	27669	3597.11
India Firebricks & Insulation Co Ltd	(IFICO)	24058	2011.10	18175	2060.78	11537	943.78
Grand Total		80742	8837.56	62831	7689.50	39206	4540.89

4. Financial Performance

During the year 1993-94, although the Company BRL incurred a net loss of Rs. 302.31 lakhs, but owing to gain of Rs. 365.09 lakhs on account of prior period transactions, the Company earned a net profit of Rs. 62.78 lakhs. During the year 1994-95 (upto October ' 94), the Company recorded a net loss of Rs. 936.64 lakhs.

5. Foreign Collaboration

5.1 The Bharat Refractories Ltd. has been able to adapt successfully the technical know-how acquired from Kawasaki Refractories Co. Japan for various items of high perforamance refractories. Except for Spinel and Magnesia Spinal bricks, the technology of which could not be adapted due to constraints of firing facilities, commercial production of all other items, namely, Magnesia-Carbon bricks, Slide Gate Refractories, Gunning Repair Materials and Cast Mixes for Steel Ladles have already stabilised. Consequently, the Company has emerged to be one of the major suppliers of Mag-Carbon Bricks to SAIL Steel Plants. The Company has also successfully started commercial production of Coke Oven Silica Bricks, for which know-how was acquired from Shinagawa Refractories Co. Ltd., Japan and first batch of production was despatched to Bhilai Steel Plant in March ' 94. The production is being improved for better yields and discussions with the collaborators are due to take place shortly.

5.2 Due to a resource crunch, the Company could not make much headway in setting up facilities for production of Refractories for Continuous Casting of Steel.

6 Research & Development

6.1 The Company, including its subsidiary, have laboratories at each of its units equipped with facilities for testing, quality control and technological improvements.

6.2 The Company had undertaken development of Tundish Coating Mass, 95% & 85% Tap hole Mass, Launder mass, Low Carbon Mag-Carbon Bricks, Mag Chrome Bricks using Korean Magnesite, Silica Masses, Direct Bonded MCH bricks, Tap Hole & Runner Masses. The expenditure on R & D during the year was Rs. 24.30 lakhs.

7 Industrial Relations

The industrial Relations Climate in the Company and subsidiary is generally cordial and harmonious.

8 Safety Measures

Effective measures have been taken to ensure adequate safety in all the plants.

9 Manpower

The manpower on the roll of the Company as on 31st March, 1994 was 2968 comprising 362 and 403 employees belonging to Scheduled Caste & Scheduled Tribe Communities respectively. Besides, 57 employees belonging to exservicemen, 18 physically handicapped and 120 women employees were on the rolls of the Company as on 31st March, 1994.

In the subsidiary Company, IFICO Ltd., 974 employees were on the rolls as on 31st March, 1994. This comprised 45 employees from SC and 128 employees from ST Community. The ex-servicemen and women in employment as on 31.3.1994 were 17 and 45 respectively.

10 Contract Labour

Contract labourers are engaged occasionally on non-perrnnial jobs only. They are being paid statutory wages. In addition, they are provided other benefits like Provident Fund, Medical facilities, leave etc.

11 Implementation of Official Language Policy

The Company has been vigorously pursuing implementation of the Official Language Policy of the Government. To improve the use of Hindi, a number of workshops, competitions, meetings and training programmes were conducted from time to time.

12 Reference to BIFR

As a result of continuous losses of BRL and its subsidiary company IFICO, a reference had to be made to Board of Industrial & Financial Reconstruction (BIFR) during 1992 for revival of the company under the provisions of the Sick Industrial Companies Act, 1985. After considering the information submitted by the companies, BIFR had appointed Industrial Development Bank of India (IDBI) as an operating agency for working out

the revival plan of BRL & IFICO. IDBI has since finalised its draft revival plan for BRL & IFICO and has concluded that BRL & IFICO have the potential of becoming viable units. The draft revival plan has also been approved by BIFR in its meeting held on 8th Sept. ' 94. The final recommendations of BIFR are awaited.

CHAPTER V

NATIONAL MINERAL DEVELOPMENT CORPORATION LTD. (NMDC)

1. General

Incorporated on November 15, 1958 the National Mineral Development Corporation Limited is an undertaking of the Government of India engaged in the business of developing and exploiting mineral resources of the country (other than coal, oil, natural gas and atomic minerals). Presently its activities are concentrated on mining of iron ore and diamonds. NMDC operates the largest mechanised iron ore mines in the country at Bailadila (Madhya Pradesh) and Donimalai (Karnataka). The Diamond Mine is situated at Panna (Madhya Pradesh).

2. Iron Ore

2.1 *Production*

In 1993-94, NMDC produced 12.8 million tonnes of iron ore. During the period April 1994 to October, 1994, 5.9 million tonnes of iron ore has been produced.

2.2 *Exports*

Export of iron ore produced by NMDC is canalised through the Mineral and Metals Trading Corporation (MMTC). Bulk of the iron ore is exported to Japan, South Korea and China. In 1993-94, NMDC exported 6.5 million tonnes of iron ore valued at Rs. 395.88 crores approximately. Exports of iron ore between April 1994 and October, 1994 were 3.91 million tonnes for a value of Rs. 218.73 crores (approx.).

2.3 *Domestic Sale*

In 1993-94, NMDC' s sales of iron ore to domestic units were around 4.95 million tonnes. Between April 1994 and October 1994 sale of iron ore to domestic consumers was 2.7 million tonnes.

3. Diamonds

In 1993-94, 18517 carats of diamonds were produced. Between April 1994 and October 1994 the production was 10344 carats.

4. Finance

The authorised share capital of the company is Rs. 150 crores. The paid up equity share capital as on 31.3.1994 was Rs. 132.16 crores. Government of India loans outstanding as on 31.3.94 were Rs. 15.58 crores and as on 31.10.94, it was Rs. 13.96 crores.

5. Operating Results

In 1993-94, The company recorded a profit of Rs. 96.74 crores (before tax). The company declared a dividend of 20% totaling Rs. 26.43 crores. Rs. 45 crores were transferred to general reserves. The profit till October, 31, 1994 is Rs. 32.52 crores. (provisional).

6. Manpower Position

As on October 31, 1994 the manpower position in different units of the company was as follows :

Group	Total No. of Regular Employees on 31.10.94	No. of SC Employees out of col. 2	No. of ST employees out of Col. 2	No. of women employees out of Col. 2
(1)	(2)	(3)	(4)	(5)
A	756	48	5	18
B	1161	90	31	54
C	3086	480	628	130
D	1807	467	417	211
Total	6810	1085	1081	413

7. Workers Participation in Management

The Scheme of workers' participation in management is working satisfactorily at all the three levels viz. Shop, Plant (Project) and Apex (Corporate) level. The meetings of the Joint Councils take place regularly and follow up action is taken.

8. Progressive use of Official Language

NMDC received the Indira Gandhi Rajabhasa Award for implementation of Hindi for the year 1992-93 on 7.11.94 from the President of India.

9. Memorandum of Understanding

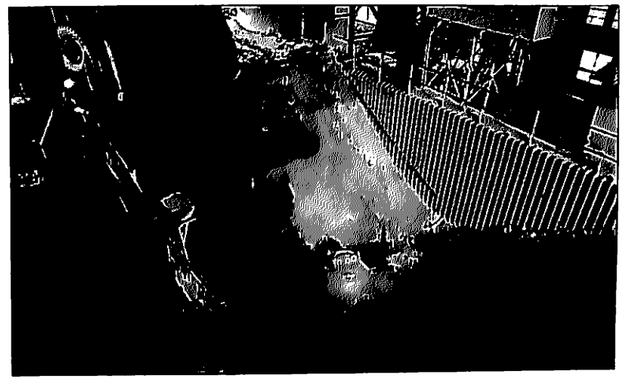
In 1994-95 also NMDC entered into a Memorandum of Understanding with Government of India, under which it has committed to produce 112 lakh tonnes of iron ore, 17800 carats of diamonds and to earn a net profit (before tax) of Rs. 37.61 crores. NMDC' s performance ratings against MoU targets for the years consecutively since 1991-92 have been excellent. NMDC achieved the Joint Top Position in 1993-94 by scoring a perfect 1.00 under the MoU rating system.

10. Mandovi Pellets Limited

Mandovi Pellets Limited (MPL), Goa is a joint venture company floated by Government of India through National Mineral Development Corporation Ltd. and M/s Chowgule & Co. Pvt. Ltd. (CCPL), a Private Sector Company. The company has its pellet plant at Goa with an annual capacity of 1.8 million tonnes.

During the year 1993-94, the Company produced 7.44 lakh tonnes of pellets and despatched 7.37 lakh tonnes of pellets including a quantity of 34,771 tonnes exported to China with a view to establish its brand name in the international market. The Company earned a total income of Rs. 7,287.32 lakhs which includes miscellaneous receipts of Rs. 26.60 lakhs. After adjusting the operating expenditure of Rs. 6,588.99 lakhs, interest of Rs. 533.00 lakhs and depreciation of Rs. 383.00 lakhs, the company incurred a loss of Rs. 26.99 lakhs during the year 1993-94 as against Rs. 494.34 lakhs in the previous year after providing for prior period adjustments. The accumulated losses thus carried to the Balance Sheet stood at Rs. 6,091.14 lakhs as on 31st March, 1994 as against Rs. 6,064.16 lakhs as on 31st March, 1993.

11. J & K Mineral Development Corporation Limited



J & K Mineral Development Corporation Limited (J & KMDC) a subsidiary company of NMDC, was incorporated on 19.5.1989 for development of various minerals in the state of Jammu & Kashmir. NMDC holds 74% of equity of J&KMDC, the remaining 26% is owned by J&K Minerals Limited, a state Government Public Sector Undertaking. The equity subscribed till 31.3.94 by NMDC is Rs. 396 lakhs and by J&KML is Rs. 78 lakhs. Upto September, 94 approximately Rs. 4.95 crores have been spent on the project. The entire expenditure at present is being met by NMDC. This is appropriated as NMDC' s share of equity in the Company. The Dead Burnt Magnesite (DBM) plant of 30,000 tonnes per annum capacity is the first Project being undertaken by J&KMDC. The project was sanctioned at a cost of Rs. 60.02 crores by the Government of India during November 1992 and was scheduled to be completed in 30 months.

The economics of the Project was affected due to reduction in customs duty on DBM in the 1993-94 Union Budget and reduction in international prices of DBM to unrealistic levels. This has necessitated a review of the techno-economic viability of the project which is being undertaken by the Company

1. Introduction

Metal Scrap Trade Corporation Ltd.(MSTC) was incorporated under the Companies Act, 1956 on 9th September, 1964 and was the canalising agency for import of carbon steel melting scrap and also sponge iron/hot briquetted iron and rerollable scrap till February, 1992. It was also the canalising agency for old ships for breaking, import of which was decanalised and put under OGL w.e.f. August, 1991. The Corporation's status is now the same as that of any other importer. The company also undertakes disposal of ferrous and miscellaneous scrap arisings from integrated steel plants under SAIL and disposal of scrap surplus stores etc. from other public sector undertakings and Govt. Departments.

During this year, the company issued bonus shares in the ratio of 1:1, thus raising the paid-up capital to Rs. 2.20 crores.

2. Activities

The Company has two operational divisions, i.e. Foreign Trade and Domestic Trade.

2.1 *Foreign Trade*

This Division till February, 1992 largely undertook canalised import of carbon steel melting scrap for the secondary steel sector. After decanalisation, this Division arranges import of scrap as per the needs of actual users.

2.2 *Domestic Trade*

This Division is responsible for disposal of ferrous and miscellaneous scrap from SAIL steel plants as well as disposal of scrap and surplus stores from other public sector undertakings and Departments.

The Corporation also has a Management Services Division which provides the operational divisions regular feed back on market research and is entrusted with the task of Corporate Planning.

3. Objectives

3.1 *Short-term Objectives-*

(a) To undertake import of scrap/substitutes including ships for breaking at competitive prices and to distribute them efficiently and equitably to the users, directly or through joint ventures.

(b) To plan and organise marketing of scrap and secondary arisings, unserviceable stores etc of all Government departments and organisations both in the public sector and private sector.

(c) To work in unison with the subsidiary Company.

Ferro Scrap Nigam Ltd. (FSNL) for marketing the surplus scrap arisings of the integrated steel plants in the public sector.

(d) To undertake the above activities so as to ensure a fair return on capital.

(e) To ensure customer satisfaction by providing prompt and efficient service to customers, principals and other business associates.

(f) To sell through stockyards to serve the needs of relatively small consumers.

3.2 *Long-term Objectives -*

(a) To maximise indigenous availability of scrap and substitutes like Direct Reduced Iron etc. in order to reduce dependence on imported scrap.

(b) To set up scrap yards in different parts of the country for procurement, processing and distribution of scrap, thereby offering improved services to customers.

(c) To establish MSTC as a domestic marketing organisation for other iron and steel related items.

4. Foreign Trade

4.1 *Market Scenario -*

1993-94 was a turbulent year for MSTC's foreign trade activities. International prices of shredded scrap shot up to above US$ 180 per tonne in the third quarter 1993-94 because of the high demand from other consuming countries and restricted availability. At the same time, domestic prices of steel had fallen, making it unviable for the electric arc furnace industry to import scrap at higher prices and convert scrap into steel. The demand for steel had fallen due to acute depression in the industry. Because of these developments, a large number of mini steel plants suspended operations.

It may also be added that duty for import of scrap was 12.5 % for most of the year and was reduced to 10% in the budget for 1994-95. But the excise duty was fixed at 15% ad valorem instead of a fixed rate of Rs. 1000 per tonne even for electric arc furnaces.

As a result of these factors, total imports in the country reduced from over 2.5 million tonnes in 1992-93 to below 1 million tonnes in 1993-94. Despite this fall, MSTC retained its premier position as the biggest importer of shredded scrap in India.

4.2 *Constraints for 1994-95 :*

In the first 3/4 months of 1994-95, expectations in the market were found to be favourable with international market prices coming down from the earlier level of US$ 180 to around US$ 160 and with duty reduction from 12.5% initially to 10%, and subsequently to 5%. As a result, the furnace sector, starved of scrap because of the deep recession for over a year, went in for import of scrap in a big way. The result is that almost 5,00,000 tonnes were booked for shipment during the first quarter out of which MSTCs share was 150,000 tonnes.

However, from July/August 1994 onwards, the international market price started picking up and reached as high a level as US $ 185/190 per tonne. As a result, further bookings in the last few months have been minimal; in fact there have been only stray bookings in the recent past. Shipments against orders booked earlier have also been delayed because of the plague related conditions and their impact on the international movement to and from India. However, MSTCs total shipments have been around 190,000 tonnes upto November 1994, while total imports have been 700,000 tonnes in the country. MSTC has thus more or less retained its share at current levels.

Taking into account the current steel prices, international prices of scrap prevailing today are not attractive for viable operations by the furnace sector. As a result of these developments, it is unlikely that any significant further bookings will be made unless the international market moves down materially. It is anticipated that imports as a whole during the year may not exceed significantly beyond one million tonnes imported in 1993-94.

METAL SCRAP TRADE CORPORATION LTD. (MSTC)

5. Domestic Trade

As against sales of Rs.210 crores in 1992-93, MSTC achieved a sales volume of Rs. 240.77 crores in 1993-94, an increase of 14.7%. It may be mentioned that sales in the first half of the year were limited due to acute depression but from December 1993 onwards, sales improved substantially due to pick up in the economy. Target for the year 1994-95 has been fixed at Rs. 250 crores and achievement upto September 1994 was Rs. 108 crores against Rs. 71 crores in the corresponding period last year.

6. Organisational Structure

The company is currently managed by a Chairman-Cum-Managing Director. There are 5 part-time Directors on the Board of MSTC appointed by the Ministry. CMD is assisted by two Chief General Managers, four General Managers and a Company Secretary who are incharge of departments like Foreign Trade and Management Services, Domestic Trade, Finance and Accounts, Personnel and Company Law matters.

The company's registered and corporate office is located at Calcutta and it has four Regional Offices at Calcutta, Delhi, Bangalore and Bombay which are headed by Regional Managers. Besides, the company has opened branch offices at Madras, Vizag, and Bhopal and Offices at Rourkela and Bhubaneswar.

All the Heads of Departments and Regional Managers are assisted by professionals in various disciplines.

7.Future Planning And Activities

The Company formulated a corporate plan which has been approved by the Govt. While the company will continue to give primary emphasis on its trading activities in view of its longstanding experience and expertise in trade of scrap, the company has plans to diversify into related areas of activity such as joint venture in shipbreaking, manufacture of castings, exports, financial services and information services.

MSTC has identified various projects for its diversification plans and it is expected that during 1995-96, one of the projects i.e. ships for breaking/ manufacture of Corner Castings for marine containers, entry into exports, etc. (identified for diversification of MSTC's activities in the course of the corporate plan exercise) will start operations

8. MOU with Government

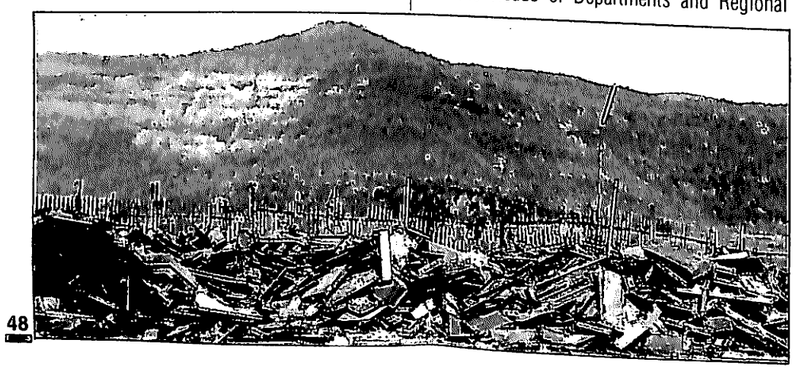
During the year 1993-94 the company has been awarded a composite MOU score of 1.16 which is equivalent to a near "excellent" rating.

9. Physical and Financial Performance

The physical and financial performance for the year 1994-95 (provisional) upto September, 1994 is given below:-

	1992-93	1993-94	1994-95 (upto Sept 1994 Provisional)
I. Physical Performance			
(a) Foreign Trade Carbon Steel Melting Scrap ('000 MT)	682	308	157
(b) Domestic Trade	210	240 77	108

Despatches of Ferrous Scrap arisings from Steel Plants and Sale of ferrous scrap. Misc items from other PSUs/Govt Deptt including auction Sales for Steel Plants (Store items) Rs in crores)



	1992-93	1993-94	1994-95 (upto Sept. 1994 Provisional)
II. Financial Performance (Rs. in crores)			
(a) Turnover	289.43	144.30	104.31
(b) Operating Profit (before interest, depreciation and other provisions)	10.97	10.49	3.54
(c) Interest and Depreciation	1.59	2.13	0.28
(d) Profit before Tax	7.61	8.16	3.26

During the year 1993-94 the company declared a dividend of 30% on the paid-up capital.

10. Employment Statistics

The employment statistics of the company including SC/ST as on 1st September, 1994 are given below:

10.1 General

	Executive	Non-Executive	Total
(i) Head Office: Calcutta	58	97	155
(ii) Regional Office:			
(a) Calcutta (ER)	10	20	30
(b) New Delhi (NR)	14	11	25
(c) Bombay (WR)	9	14	23
(d) Bangalore (SR)	7	8	15
(iii) Branch Office:			
(a) Madras	5	3	8
(b) Vizag	5	2	7
(c) Bhopal	1	-	1
(d) Rourkela	1	1	2
(e) Ahemdabad/Bhavnagar	1	-	1
	111	156	267

10.2 Scheduled Castes/Tribes, Ex-servicemen and physically handicapped persons:

Group	Total	SC	ST	Physically Handicapped	Ex-Servicemen
A	111	11	1	Nil	1
B	25	05	1	1	-
C	108	22	5	2	3
D	23	8	1	1	-
	267	46	8	4	4

10.3 Male/Female	Executives	Non-executives	Total
Male	101	132	233
Female	10	24	34
	111	156	267

FERRO SCRAP NIGAM LIMITED (FSNL)

1. Introduction

Ferro Scrap Nigam Limited (FSNL) is a joint sector company under the Ministry of Steel with a paid up capital of Rs. 200 lakhs in which the Metal Scrap Trade Corporation (MSTC) holds 60% of the equity shares and the remaining 40% are held by M/s. Harsco Inc. of USA. The Company is thus a subsidiary of MSTC.

2. Activities and Objectives

The Company undertakes the recovery and processing of scrap from slag and refuse dumps in the six steel plants at Rourkela, Burnpur, Bhilai, Bokaro, Visakhapatnam and Durgapur.

The scrap recovered is returned to the steel plants for recycling/ disposal and the company is paid processing charges on the quantity recovered at varying rates depending on the category of scrap. Scrap is generated both in the Iron and Steel Sections and also the Rolling Mills.

3. Organisational Structure

The Chief Executive Officer of the Company is the Managing Director who functions under the guidance of a part-time Chairman and Board of Directors. The Managing Director is assisted by three General Managers and five Deputy General Managers who are incharge of activities at the main steel plants and Personnel functions at Corporate Office.

The Corporate Office is situated at Bhilai and the Corporation has six field units in the steel plants at Bhilai, Burnpur, Rourkela, Bokaro, Visakhapatnam and Durgapur.

4. Physical and Financial Performance

4.1 Physical Performance

The production performance of FSNL for the last two years and the projected performance for the year 1994-95 is given below :-

ITEM	1992-93	1993-94	1994-95 (Prov)
1. Recovery of Scrap (Lakh Metric Tonnes)	10.42	11.54	11.70
2. Market Value of Production (Rs. in Crores)	474.00	500.00	515.00

4.2 Financial Performance (Unit - Rs. in lakhs)

ITEM	1992-93	1993-94	1994-95 (Prov.)
1. Total Turnover i.e. service charges realised including misc. income etc.	5212.00	6140.00	5664.00#
2. Gross Margin before interest & depreciation	2184.38	1233.00*	1845.00
3. Interest and depreciation	687.71	679.00	842.00
4. Profit before tax	1497.00	554.00*	1003.00

Reduced turnover due to reduction in service charge rates

* After adjustment of prior period expenses of Rs. 863 lakhs (net)

5. Sales Realisation

Sales realisation per metric tonne for the last two years and estimated sales realisation per metric tonne for the years 1994-95 and 1995-96 are indicated below:

1992-93	1993-94	1994-95 (Proj)	1995-96 (Proj)
Rs. 480.00	Rs. 478.00	Rs. 464.00	Rs. 497.00

6. Employment

The Employment statistics of the company, including SC/ST as on 31.3.94, are given below :

6.1 *General*

	EXECUTIVES	NON-EXECUTIVES	TOTAL
ROURKELA UNIT	23	207	230
BHILAI UNIT	22	313	335
BURNPUR UNIT	14	154	168
BOKARO UNIT	16	211	227
VIZAG UNIT	17	216	233
DURGAPUR UNIT	15	116	131
CORPORATE OFFICE	36	41	77
TOTAL	143	1258	1401

6.2 *Scheduled Castes/Tribes, Ex-Servicemen and Physically Handicapped Persons:*

GROUP	NO. OF EMPLOYEES	SC	ST	EX-SERVICEMEN	PHYSICALLY HANDICAPPED
A	140	11	4	3	-
B	276	6	-	-	-
C	981	189	144	59	2
D	4	4	-	-	-
	1401	210	148	62	2

7. Future Programmes

The integrated steel plants of SAIL are gradually changing their operations from conventional open hearth route to the BOF-concast route. This will result in decrease in scrap arisings without affecting the demand for high quality scrap.

In order to meet the increased requirements of the SAIL plants, FSNL is considering various options for import of "state of art technology" with the help of their foreign collaborator so that recovery of scrap arisings at steel plants can be maximised and the quality of scrap recovered enhanced.

FSNL has also drawn up the following plans for the future:-

(a) To segregate and process slag and other technological wastes for alternative uses as soil reconditioner, rail road ballast, concrete aggregates, furnace burden as substitute for limestone at blast furnaces, etc.

(b) To set up centralised workshop for revamping of heavy earth moving equipments/machineries.

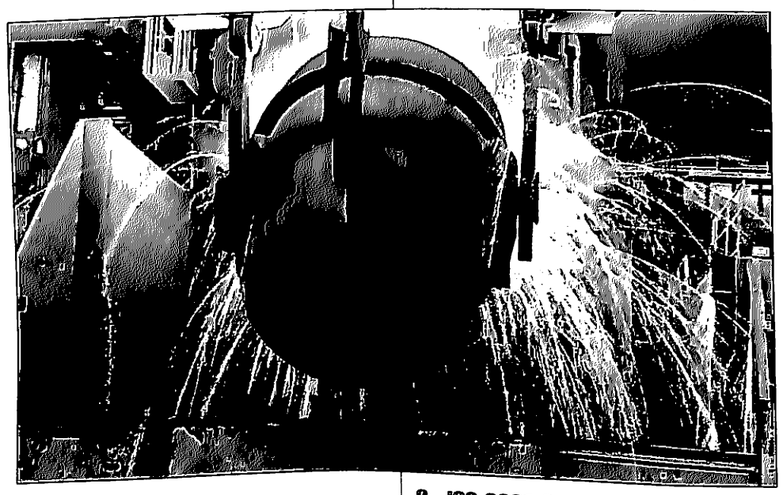
(c) To set up centralised workshop for coil winding and repair of heavy duty lifting magnet.

(d) To set up hydraulic baling press for processing sheet trimmings, turnings and borings.

METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LTD. (MECON)

1. Background

Metallurgical & Engineering Consultants (India) Limited (MECON), was set up with the objective of rendering consultancy, detailed engineering and technical services to Iron and Steel Industry. It has diversified into other areas including non-ferrous metals, power plants, chemicals, general engineering, environmental engineering, ocean engineering and defence. It has also undertaken assignments for design of equipment and systems including supply, installation and commissioning of Coke Oven, Coke Dry Cooling unit, Blast Furnaces, Coal based DR Plants, convertor Gas Cleaning Units, Continuous Casting Plants, Rolling Mills, Processing Lines, Refractories and Chemical plants besides rendering Project Management services. MECON has increased the Computer usage for design and engineering, for process control as well as software development for engineering packages, project monitoring and cost control and management information systems.



2. ISO-9001 Certification

MECON has been the first engineering consultancy organisation in the country to have received the prestigious ISO-9001 Certification for Design and Engineering, Consultancy, Contracting and Supply Inspection, Project Management Services in industrial sectors like Iron & Steel, Non-ferrous Power, Chemical, Mining, Refractories, Ocean Engineering, Environmental Engineering as also for engineering projects being executed. The ISO-9001 Certification is now valid for all offices of the Company till December, 1996. The Company has also ventured into providing consultancy and assistance in Quality Management in ISO-9001 Certification for Indian engineering industries, with special emphasis on its vendor/sub-contractor base. Responses received so far are very encouraging.

3. Globalisation

MECON has continued to place prime importance on its globalisation activities. Based on the market prospects, it was decided to shift MECON Alkmaar Office to Dusseldorf, Germany. The Dusseldorf Office is functional from July, 1993. From there MECON is continuing to render Design & Engineering Services for Rolling Mill equipment MECON Middle East Office in Dubai has also yielded positive results. MECON has secured a major assignment for detail engineering, consultancy and site supervision services for a 150,000 t/yr Cold Rolling Mill Complex in Indonesia. The detailed engineering work is under progress as per schedule. MECON has also received an order from Asian Development Bank for preparation of "Steel Sector Study/Private Sector" in India. The assignment has been completed in the Scheduled time. MECON has rendered assistance to Davy International, USA in preparation of a project report for Kalinga Steel Plant

4. Financial Aspects

The authorised capital of the Company is Rs 4.00 crores. The issued, subscribed and fully paid up equity share capital is Rs 2.02 crores

4.2 The turnover of the Company during 1993-94 was Rs 138.66 crores against Rs 114.00 crores during 1992-93. The net profit of the company was Rs. 7.05 crores as against Rs. 8.29 crores during 1992-93. The company paid 40% dividend on its paid up capital amounting to Rs. 0.81 crores. The estimated turnover of the company for the year 1994-95 is Rs. 152 crores and the net profit is estimated to be Rs. 9.00 crores.

5. Technological Development

MECON has developed an improved design of no-recovery coke ovens based on know-how obtained from Central Fuel Research Institute, Dhanbad. These ovens are meeting all the pollution norms and catering to needs of small and medium pig iron plants. MECON has developed indigenous design of 6Hi mill to improve strip flatness, incorporating hydraulic onload shifting of intermediate rolls, positive and negative work roll bending, roll coolant control and cylindrical barrel rolls.

6. Present Major Assignments

6.1 Consultancy, Detailed Engineering & Project Monitoring Services.

i) M/s. ESSAR Gujrat have placed an order on MECON for consultancy and detailed engineering including inspection and supervision of erection for 2 x 550 cu m. blast furnace at Hazira.

ii) Detailed engineering and consultancy services for setting up a steel plant for MIDEAST INTEGRATED STEEL PROJECT at DAITARI.

iii) Modernisation work of Bokaro Steel Limited.

iv) Consultancy and Project Management Services of Durgapur Steel Plant Modernisation.

v) 7m tall Coke Oven Battery No. 10 Complex at Bhilai Steel Plant

vi) Detailed engineering and consultancy services for expansion of Smelter and Refinery Complex for Hindustan Copper Limited at Khetri from existing 31,000 to 100,000 tpy

vii) Detailed engineering, procurement assistance and consultancy services including site supervision for 3,000 t/yr Copper Extrusion Plant and 9,000 t/yr Copper Wire Rod Plant to be set up in Sultanate of OMAN.

viii) DRDO has commissioned MECON for rendering consultancy and engineering services for new acoustic test facilities at Cochin.

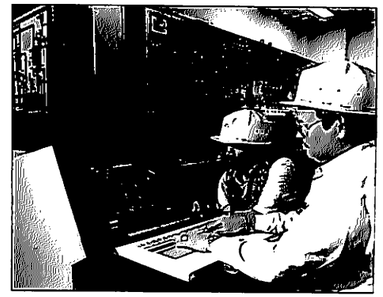
6.2 Equipment & System Design

i) Bokaro Steel Plant has placed an order for design, engineering, supply, erection and commissioning of 3 nos. of 300 t/hr walking beam reheating furnace on turnkey basis.

ii) Assignments have been received for modernisation of rolling mill and process line equipment from Tin Plate Company of India Ltd., Nippon Denro Ispat Ltd. and Ispat Profile India Limited.

iii) Continuous Casting Project-II of Rourkela Steel Plant Modernisation has been entered to MECON.

iv) M/s. Hindustan Zinc Limited have awarded MECON the contract for preparation of basic engineering document for 200 t/yr chromium plant at Debari.



7. Research & Development

Highlights of R & D achievements are as follows:

i) An agreement has been signed with M/s. Adsensors (I) Private Limited, Madras on February 3, 1994 for transfer of technology related to Piezoresistive Pressure Transducer (MPPT) element based on Indian Galena, which has been developed by MECON.

ii) Solid modelling related work for a project of R & D Establishment (Engineering) has been taken up by MECON on behalf of M/s Oscar Equipments Private Limited.

iii) A prototype model has been fabricated for a low cost optical device that can be used for accurate setting of roller guides in rolling mills. The device was successfully field tested at Visakhapatnam Steel Plant and is being offered commercially. At the present time, all such devices are being imported

iv) A newly developed software for control and issue of drawings has been successfully implemented on a company wide basis. This is an important step for standardising MECON work procedures in this area.

8. Industrial Relations and Worker's Participation

The Company is maintaining cordial industrial relations, Joint Consultative forums continue to function satisfactorily in which major issues relating to employees are periodically discussed in the areas of welfare, education, health, house allotment and grievance handling etc.

9. Cost Reduction Measures

The cost incurred on consultancy contracts are getting compiled periodically with a view to ascertain variance over the estimates and fees to be received from clients.

10. Social Welfare

10.1 MECON undertook a number of schemes to benefit the Community at large. About 1200 Adults were covered under Literacy Programme through 24 Adults Education Centres. About 4,000 patients were treated in the adopted villages by Doctors of Ispat Hospital. Other measures for health care included homeopathic dispensaries, provision of drinking water facilities, immunisation and health awareness programmes in neighbouring areas.

10.2 For development of the environment in and around the company's residential colony, sewers and drains were provided and about 15,000 saplings were planted in and around the Township.

11. Manpower Position

The total number of employees in the Company as on 30th September, 1994 is 3750, out of which 320 belong to Scheduled Castes and 385 to Scheduled Tribes.

12. Future Plans

While sustaining its growth in steel, non-ferrous and Defence sectors, the Company is working towards fulfilling its plan to direct its efforts in creating additional revenues from market segments belonging to priority sectors like Power, Telecommunication, Software, Petrochemicals, Nuclear Fuels, Environmental and Ocean Engineering etc.

13. Measures for Improvement

i)Signing of MOU with Ministry of Steel for third successive year towards bringing in objectiveness in target setting and continuing with enhanced autonomy of operations.

ii)Independent study by third party to evaluate customers/prospective customers satisfaction with MECON's services

iii) Globalisation through presence in international markets in Europe, Middle-East and Africa.

iv) MOU with R & D Institutions, manufacturing organisations, project execution agencies and Foreign consultants.

14. Progressive use of Official Language

MECON continues to work hard for further progressive use of Hindi by training programmes, seminars and workshops for implementation of Hindi in their offices

1. Introduction

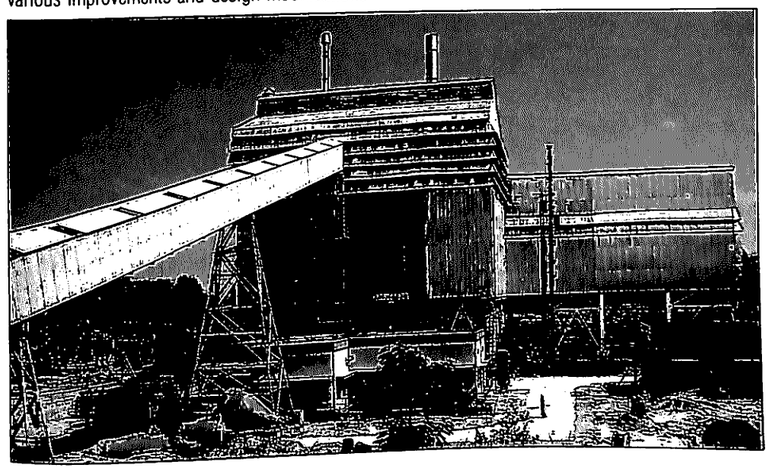
1.1 The Demonstration Sponge Iron Plant of the Company of a capacity of 30,000 tpa was set up with UNDP/UNIDO assistance to establish the techno-economic feasibility of producing sponge iron (a part substitute for ferrous scrap used by steel-melting electric arc furnaces) from lump iron ore and 100% non-coking coal. The unit, designed to use coal from Singareni Collieries Company Limited (SCCL) and iron ores from various regions in Andhra Pradesh and neighbouring states of Madhya Pradesh and Karnataka, went into regular operation in November, 1980. The plant is designed in such a manner that it can be operated both on production basis and for R&D work. It is based on the basic SL/RN Technology developed by Lurgi of West Germany but several improvements have been incorporated to make the technology work under Indian operating conditions and with local raw materials.

1.2 Taking note of the successful operation of the Demonstration Plant, doubling of the plant capacity from 30,000 tpa to 60,000 tpa was sanctioned by Government of India in 1982 by setting up of a second unit. This unit, which was designed and built by the Company' s engineers incorporating various improvements and design modifications carried out to the Demonstration Plant for adapting the technology to Indian conditions, went into regular production from October, 1985.

1.3 The Company has also successfully designed and built a plant for briquetting of sponge iron fines (below 5 mm size) which were earlier not usable by electric arc furnaces and were being discarded. The Briquetting Plant was commissioned during October, 1987 and is operating to capacity. The sponge iron briquettes have received wide acceptance in the market; several users prefer briquettes to lump sponge iron.

1.4 A new project was commissioned with effect from 1.3.1993 for effectively utilising the sensible heat in the kiln off-gases for generation of electric power. By doing so the operations of the plant would improve not only by way of thermal efficiency but also facilitate reduction in dependence on external power, thus effecting savings in costs.

1.5 A Submerged Arc Furnace Project of 45,000 tpa capacity has been set up by SIIL for smelting pre-reduced sponge iron into high quality low phos pig iron. This would reduce the power consumption in smelting to 800-1050 kwh per tonne of hot-metal as compared to 2700 kwh per tonne in the case of pig iron production by conventional electrical smelting directly from iron



ore. This technology route would open a new concept of producing high quality pig iron.

2. Finance

The authorised share capital of the Company stood at Rs. 30.00 crores on 31.3.1994; paid-up capital was Rs. 28.08 crores. Shares amounting to Rs. 27.25 crores are held by the Government of India, the balance of Rs. 0.83 crore being shares of the Government of Andhra Pradesh.

3. Production

3.1 The production and financial performance of the Company during the last two years, together with figures as per Revised Estimates for 1994-95, is furnished below :

	1992-93	1993-94	1994-95 (As per RE)
Production			
- Sponge iron (tonnes)	49,110	48,550	50,000*
- Power Generation (Lakh kwh)	—	42	170
- Pig iron (tonnes)	—	—	15,000
Capacity utilisation (%) (Sponge Iron)	80	81	83
Sales (tonnes)			
- Sponge iron	51,091	43,898	33,884
- Pig iron	—	—	15,000
Sales Turnover (Rs. in lakhs)	2130	1924	2540
Generation of internal Resources (Rs. in Lakhs)	490	- 6	- 1
Net Profit (Rs. in Lakhs)	291	- 245	- 381

* includes material transfer to Pig Iron Plant

3.2 As against the target of 29,700 tonnes upto October, 1994, production of 28,160 tonnes was achieved representing 95% achievement of target. The quality of coal supplied by Singareni Collieries continues to be poor, contributing to both higher consumption of coal as well as lower capacity utilisation. However the annual production target of 50,000 tonnes is expected to be achieved as per present indications.

4. Sales and Profitability

4.1 Against a target of 28,500 tonnes fixed upto October, 1994, actual despatches were 28,442 tonnes representing 99% achievement against target. It is now estimated as per the present indications that SIIL would achieve the target of 50,000 tonnes fixed for the year inspite of depressed market conditions.

4.2 Operations upto the end of October, 1994 have resulted in an estimated net loss of Rs. 308 lakhs as against the budgeted figure of Rs. 222 lakhs. The loss is mainly attributable to lower levels of sales realisation due to availability of cheap imported scrap and demand recession in the secondary steel industry and severe competition among sponge iron manufacturers.

5. Cost Reduction

Through the application of improved techniques, constant efforts are being made to reduce the consumption of the principal input raw materials viz. iron ore, coal and limestone, thereby reducing the cost of production. Uses are also being found for waste products like iron ore fines, char and dull coal so that additional revenues can be generated from the sale of waste products. The estimated realisation for the current year will be around Rs 200 lakhs on this account

6. Efforts Made Towards Indigenisation

6.1 The Engineering and Projects Division of the Company had successfully completed the engineering and erection work of the Expansion Unit in 1985. By adopting some improved designs and incorporating some modifications it was possible to reduce the foreign exchange component (inclusive of duty) to Rs. 0.85 crore as against the original estimate of Rs. 2.20 crores. Bersides developing indigenous capability for manufacture of major equipment required for commercial sponge iron plants, the Division has also developed indigenous sources of supply for spares and consumables required for day-to-day operation of the existing plant.

6.2 The Engineering and Projects Division has also developed basic engineering data/designs for setting up commercial sponge iron plants relevant to locally available ores and coals. As a result of this, five sponge iron units with SIIL' s assistance have been set up by private enterpreneurs. The division has also developed expertise for agglomerating sponge iron fines into high density briquettes which have received ready acceptance by users.

6.3 Two imported dosing systems have been replaced with indigenous system by suitably adopting the designs during the year 1993-94. This had enabled SIIL to reduce the cost of imported spares and dependance on foreign imports.

7. Manpower

The total number of employees of the Company as on 30.9.1994 is furnished below indicating separately persons belonging to Scheduled Castes, Scheduled Tribes, ex-Servicemen, Physically Handicapped (PHC) and Women.

Sl. No.	Groups	Total no. of Employees	SC	ST	Ex-Servicemen	PHC	Women
1.	Group A	112	13	—	—	—	—
2.	Group B	98	17	6	1	1	6
3.	Group C	241	40	22	3	3	15
4.	Group D	161	32	29	1	6	15
	Total	612	102	57	5	10	36

8. Employees Participation in Management

8.1 Pursuant to the directives of the Government of India, a scheme for Employees Participation in Management has been implemented in the Company. Under the Scheme, one Plant Level Committee and 2 Shop Level Committees have been constituted with representatives of the Management and the Employees and regular meetings are held to discuss various problems and find solutions internally.

8.2 The committees are functioning systematically and the contribution by way of suggestions made by the members have given reasonably good results resulting in improvement of overall performance of the plant.

9. Hindi Implementation

9.1 From April, 1994 to September, 1994 all the documents which are required to be released in bilingual form in accordance with Section 3(3) of the Official Languages Act, 1963 were released in bilingual form. Three meetings of the Official Language Implementation Committee were convened. One typist has passed the Hindi Typewriting Examination conducted by Hindi Teaching Centre.

9.2 ' Hindi Fortnight' was celebrated and prizes awarded to winners in various competitions. An amount of Rs. 100/- is being sanctioned every

month to stenos and typists for doing work in Hindi in addition to their own regular work.

10. Anti-Pollution Measures

The Plant has anti-pollution equipment for controlling air and water pollution to specified standards. The stack emissions and effluents are regularly analysed to ensure conformity to standards.

11. Wasteland Development

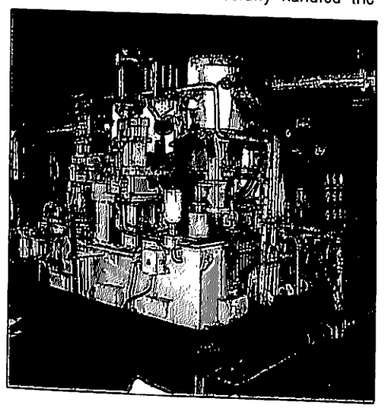
11.1 Consistent with the national policy of stepping up the rate of afforestation in the country to preserve the ecological balance, Sponge Iron India Limited has undertaken on a continuing programme basis, protecting of trees in the Company' s estate in a phased manner.

11.2 Every year not less than 1,000 new plants are being planted in the SIIL estate. In the Plant area all road sides are provided with trees. During the year 1994-95 (upto October, 1994), 750 saplings were planted. A programme has recently been drawn for planting an additional 10,000 trees in a phased manner.

12. Engineering and Consultancy

12.1 *Engineering*

Engineering and Projects Division of the Company was formed in 1981 for undertaking design and engineering work for commercial sponge iron plants. The division successfully handled the engineering works for the expansion unit of the company. Based on a design developed by this Division, the Briquetting Plant for briquetting sponge iron fines has successfully been commissioned. Designs for continuous charging system of sponge iron into the Arc Furnace at a very low cost were developed and the system was installed. Engineering and Projects Division has also completed the engineering work for 60,000 tpa sponge iron plant module.



12.2 *Consultancy Services*

The Company entered into engineering consultancy agreement with the following clients for setting up coal/lignite based sponge iron plants on SIIL technology.

a) Tamilnadu Sponge Ltd. - 1 x 30,000 tpa
b) HEG Ltd. - 2 x 30,000 tpa
c) Kumar' s Metallurgical Corporators Ltd. (KMCL) - 2 x 30,000 tpa
d) Bellary Steel & Alloys Ltd. (BSAL) - 2 x 30,000 tpa
e) Raipur Alloys & Steel Ltd. (RASL) - 1 x 30,000 tpa

All the above plants have been commissioned and are running successfully

12.3 *Capacity Utilisation level*

The second kiln of M/s. Bellary Steels and Alloys Limited has been commissioned and SIIL engineers are assisting in stabilising the operations.

In respect of M/s Kumar' s Metallurgical Corporation' s second kiln, balance erection work of kiln mountings have been completed and it is anticipated that the kiln would be lit up shortly.

In October, 1980, Government decided in principle to set up a Second steel plant in Orissa. A company called Neelachal Ispat Nigam Limited (NINL) was also formed in March 1982 with an authorised capital of Rs. 1,000 crores. On technoeconomic considerations, the site of the project which was originally proposed to be near Paradip Port, was changed to another in the Daitari region. However, the project could not be set up due to resource constraints.

The Government of Orissa had submitted a proposal for transferring the Central Govt.' s shareholding in the plant so as to enable it to estalish a steel plant as a joint venture. This has been approved and a memorandum of Understanding (MOU) was signed on 12.4.1994 transferring the Central Govt.' s shareholding in the plant to the Govt. of Orissa. With this, Neelachal Ispat Nigam Ltd. has ceased to be a Central Govt. PSU.

In April, 1970, government took a decision in principle to set up a steel plant in Karnataka, so as to utilise the vast deposits of iron ore available in the Bellary-Hospet area. In December, 1982 a separate company called Vijayanagar Steel Limited was incorporated for this purpose. However, the project could not be set up due to resource constraints.

The State Government of Karnataka had submitted a proposal for transferring the Cetral Govt.' s shareholding in Vijayanagar Steel Ltd. to enable it to set up a steel project as a joint venture, which has been aproved by the Government of India. Accordingly a Memorandum of Understanding (MOU) was signed on 23.2.1994 transferring the Central Govt.' s shareholding in the plant to the Govt. of Karnataka. With this, Vijayanagar Steel Ltd. has ceased to be a Central Govt. PSU.

HINDUSTAN STEELWORKS CONSTRUCTION LTD. (HSCL)

1. Background

1.1 Hindustan Steelworks Construction Limited (HSCL) was incorporated in June, 1964 with the primary objective of creating in the Public Sector, an organisation capable of undertaking complete construction of modern integrated steel plants from the stage of site investigation to the stage of commissioning of the plant. Pooling up the available expertise and knowhow in the various disciplines in the construction industry, the company today has within its ambit of activities a wide range of specialised works in the steel sector, power plants, dam construction, bridges, coal handling plants, underground communication and transport system, industrial and township complexes, etc., involving a high degree of planning, co-ordination and sophisticated construction techniques. Since inception the company has turned out over Rs. 3600 crores worth of works in Steel and other sectors in India. In this process the Company has achieved many important milestones, provided a strong buffer between Private Contractors and Steel Plants and proved its worth as a readily available agency to take up any urgent jobs in the Steel Plants. The Company is also associated with Modernisation works of Durgapur Steel Plant at Durgapur in consortia with Foreign bidders for Global Packages. The company is also executing Indigenous packages of Bolani Iron Ore Complex and Revamping works of the Sinter Plant at Durgapur.

2. Profile

2.1 some of the important activities/programmes that are covered in the VIIIth Plan outlay of the various steel plants such as modernisation & additional favilities of merchant Mills, augmentation of Captive Power Plants, upgradation of Blast Furnaces, rebuilding of Coke Oven Batteries, Raw Material Handling, New Sinter Plant, Pipe Plant etc. are projects where HSCL is expected to have a reasonable share. As a part of the Modernisation scheme of Bokaro Steel Plant, the company has already obtained jobs of Civil Works and is expecting the award of Structural Works for construction of Continuous Casting unit. The company is also expected to have the civil and structural works of re-heating furnaces at bokaro. In addition to the projects as indicated above and AMR/maintenance jobs in the Steel Sector, other prospective areas are Pollution Cohntrol and Environmental Engg. Projects in Bokaro Steel Plant, Housing projects at jamshedpur etc. Besides this, the company is also participating in the tenders for Coal Washery Projects in the Coal Sector. The Company is also planning diversification of its activities to Power Projects on Build/Own and Operate (BOO) basis in joint Venture with Engineering/Equipment suppliers in the coal Sector on Build, Operate and Transfer (BOT) basis in similar joint ventures and in the areas of Pipelines, Petro Chemicals, Highways, Airport, Port Developments, Real Estate Business, Ship breaking etc.

2.2 With the need for greater involvement of the Company' s activities in the Steel Sector and also in view of the prospect of a reasonable share of HSCL in the modernisation/revamping works of various steel plants and also with the expectation of works in Other Sectors like Roads including Express highways, airport works, Mining works, Power plants, Oil etc., it has become inescapable to phase out some of the obsolete equipment so that holding of the fleet of equipment of the company is strengthened with a more modern, sophisticated and dependable fleet.

3. Financial Results

3.1 The Authorised and paid-up capital of the company during the financial year 1993-94 remained at Rs 20 crores Total amount of loan from the Government outstanding as at the end of the year was Rs 241 77 crores (Plan Loan Rs 73 10 crores and Non-Plan Rs 168.67 crores) During the year, the company received a plan loan of Rs 6 00 crores and Non-Plan Loan of Rs 15 00 crores

3.2 The company also received Rs. 28.98 crores during the year from the Government by way of grant-in-aid for its voluntary retirement scheme. Against this, together with the amount brought forward from 1992-93, an amount of Rs. 29.10 crores was spent leaving a balance of Rs. 0.01 crores carried forward to the next financial year.

4. Performance of the Company

4.1 the performance of the company during the last 3 years is given below :

(Rs. in crores)

	1991-92	1992-93	1993-94
1. Turnover	292	304	336
2. Loss for the year	69	76	86
a) Loss Operations)	28	34	40
b) Loss of Indian Operations	41	42	46

The estimated turnover during 1994-95 is Rs. 387 crores.

4.2 The main constituent of the accumulated losses of HSCL is interest on plan and non-plan loans. The operating losses are on account of idle and excess manpower. Losses incurred by HSCL in its Libyan operations are also a major constituent in its total losses.

5. Contract Labour Position

HSCL has to engage outside agencies mostly in the civil engineering area. In the other areas, outside agencies are engaged to supplement the work being done by Departmental workers. The engagement of outside agencies has been necessitated for executing the various jobs on schedules fixed by clients.

6. Vigilance

The Vigilance Department of HSCL is headed by the Executive Director (Vigilance) who is also given the charge of Chief Vigilance Officer. at present there are 9 Vigilance Units functioning at different Zonal Offices. During the year vigorous and special efforts were made to finalise the CBI. Vigilance and Departmental cases and to improve upon the working of the system pertaining to Engineering, Finance and personnel Policies and to strengthen preventive measures by conducting routine and surprise checks in the vigilance prone areas.

7. Workers Participation in Managegent

The company has a joint council at the Unit level for major units at Bokaro Steel City and Bhilai and Shop councils at Shop level for participation in economy cost reduction, safety and quality improvement.

8. Personnel

The Man Power profile of the company as on 31.3.94 is as under :

Executives	1808
Non-Executives	3260
Workers	11658
Total Manpower	16726

9. Measures towards improvements

1. Timely execution and completion of works in hand.
2. To secure more orders from the steel and non-steel sectors.
3. Further reduction of excess manpower by a minimum of 5000.

10. Progressive use of Hindi

10.1 Efforts were made to encourage use of Hindi in the Official work of the Company, as required under the provisions of the Official Language Act and Rules and the progress made in this regard was regularly reviewed in the quarterly meetings held at the Corporate Office as well as the Offices of the major units. Not only all the letters, appeals and representations received in Hindi were replied in Hindi but also a good number of orginating correspondence meant for the offices of the Central/ State Government and Public Sector Undertakings located in 'A' region were sent in Hindi Almost all the general and adminsistrative orders, tender notices, press releases have been made out and published in diglot form. Besides organising Hindi Workshops to impart training in Hindi noting and drafting to the employees fo the company, "Hindi Day' and "Hindi Week" were also organised at the Corporate Office and also at the major units of the company. An appeal from the chairman-cum-Managing Director was also issued to the employees to encourage active participation in the progressive use to Hindi. Incentive Schemes like Cash award and personal pay have yielded good results motivating employees of the company to learn Hindi, Hindi Typing and Hindi Stenography. The Company has also been actively participating in the activities of the Calcutta Town Official Language Implementation Committee engaged in the furtherence of the use of Hindi in the region.

1. Introduction

Undertakings of the erstwhile Bird & Company Ltd. were taken over by the Government under the Bird & Company Ltd. (Acquisition & Transfer of Undertakings & other Properties) Act, 1980. The following 8 companies of the Bird & Co. Ltd. came under the administrative control of the Ministry of Steel :

a) Eastern Investment Ltd.
b) Orissa Minerals Development Co. Ltd.
c) Bisra Stone Lime Co. Ltd.
d) Karanpura Development Co. Ltd.
e) Scott & Saxby Ltd.
f) Kumardhubi Fireclay & Silica Works Ltd.
g) Burrakur Coal Co. Ltd.
h) Borrea Coal Co. Ltd.

Of the above, Eastern Investment Ltd. is an investment company formed by the amalgamation of other investment companies of Bird Group. The Burrakur Coal Co. Ltd. and Borrea Coal Co. Ltd. are non-operational.

2. Performance of the companies

2.1 *The Orissa Minerals Development Company Ltd. (OMDC)*

OMDC is one of the oldest iron ore producing companies, incorporated in the year 1918 with a subscribed capital of Rs. 60 lakhs. The company has mining leases over 32.57 sq. kms. in Barbil, Keonjhar Distt., of Orissa for Iron ore & Manganese Ore.

Consequent to assistance given by Govt. after take over, the performance of the company had shown improvement. During the year 1993-94 there was a sudden shrinkage of demand of the company' s main product viz. iron ore. The company took immediate action to increase the production of manganese ore and sized iron ore. The company is in the process of installing additional facilities for production of sized iron ore for which there is demand from steel plants and sponge iron makers.

Besides strengthening its own facilities, the company has also entered into a collaboration agreement with a private sector company to set up a 2 million tonnes capacity crushing and screening plant in the joint sector. The entire requirement of funds for this project is proposed to be raised by a new joint venture company outside the plan expenditure of the Govt. Company' s recent performance is given below :

	1992-93 (Actuals)	1993-94 (Actuals)
Production (' 000MT)	857	448
Turnover (Rs. in lacs)	1542	1565
Profit before depreciation and interest	226	76
Net Profit	88	(-) 153

The performance of the company is expected to improve in coming years.

2.2 *The Bisra Stone Lime Co. Ltd. (BSLC)*

The company was in corporated in 1910 and has a subscribed capital of Rs. 50 lakhs. It is one of the largest producers of Limestone and dolomite in India. The company has a mining lease over 2771.62 hectares in Birmitrapur in the Disttt. of Sundergarh, Orissa. Due to decline in the offtake of its products by its traditional cutomers, BSLC' s financial position has not been satisfactory. Steps have been taken to improve its performance. Some of these are :

a) Improving despatches to steel plants.
b) Rationalising Labout Force through voluntary retirement scheme.
c) Providing funds for equipment and machinery, and
d) Providing funds for impelementation of a special project for supply of dolomite to Visakhapatnam Steel Project (VSP).

As a result of the above measures, the performance of the company is showing signs of improvement Its recent performance is as follows :

	1992-93 (Actuals)	1993-94 (Actuals)
Production (' 000 Mt)	930	1020
Turnover (Rs. in lacs)	1572	1880
Margin before interest and depreciation	(-) 98	48
Net Profit/Loss	(-) 896	(-) 1147

For the first time in many years the company earned a positive gross margin before charging depreciation and interest during the year 1993-94. The company has completed the Patpahar Dolomite Project which has been set up at a cost of Rs. 13.58 crores for supply of 6 lac tonnes dolomite per annum on a long term basis to Vizag Steel Plant. It is expected that the performance of the company will improve further in coming years.

2.3 *The Karanpura Development Co. Ltd. (KDCL)*

The company was incorporated in July, 1920 and has a subscribed capital of Rs. 20.00 lakhs with 272 shareholders. It employs presently 192 persons as departmental workforce. In addition, about 300 workers are employed through contractors. The company produces limstone from its mines in Hazaribagh, Bihar.

The performance of the company during 1992-93 and 1993-94 is given below :

	1992-93 (Actuals)	1993-94 (Actuals)
Production (' 000 Mt)	89	95
Turnover (Rs. in lacs)	113	136
Margin before interest and depreciation	(-)14	(-) 11
Net Profit/Loss	(-) 22	(-) 21

2.4 *Scott & Saxby Ltd. (SSL)*

The company is a fully owned subsidiary of the Karanpura Development Co. Ltd.. It has a labour strength of 374 persons.. The main activity of the company relates to sinking of deep tubewells and mineral exploration work.

Due of actue labout trouble the company was forced to declare "Suspension of work" in its works and the then existing worksites with effect from 14th November, 1992. The company is continuing its efforts to reach a settlement with the Unions for reopening of the closed worksites. A statement showing the performace of the company for the year 1992-93 and 1993-94 is given below. The company achieved a cash break even before charging depreciation and interest durig 1993-94.

	1992-93 (Actuals)	1993-94 (Actuals)
Turnover (Rs. in lacs)	62	35
Profit before depreciation and interest	(-) 21	-
Net Profit	(-) 130	(-) 114

2.5 *Kumardhubi Fireclay & Silica Works Ltd.*

Kumardhubi Fireclay & Silica Works Ltd. was incorporated in 1915 and is one of the oldest refractory units in India. The company produced Refractory bricks, mortars and castables for supplies of its products to Integrated Steel Plants of SAIL, as well as to other non-steel industries like glass, cement etc. The Company is located at Kumardhubi, Dhanbad Distt. of Bihar.

The Company performed well upto end of 1992. The decline started thereafter. Because of its poor performance the Company was declared sick by the BIFR in 1989 and a revival package was being formulated thereafter. However, no satisfacory package could be formulated. Due to acute shortage of working capital, the operations of the company have come to a stand-still since August, 1993. BIFR in their meeting held on 13.9.94 has taken a final decision to close down the company.

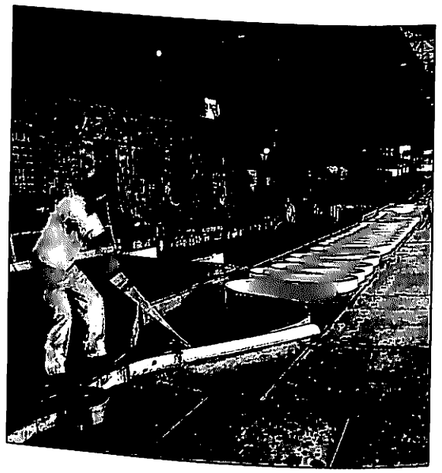
PRIVATE *Sector*

1.1 *Introduction*

The Tata Iron & Steel Company Limited, (TISCO), the only integrated-steel plant in the private sector, was founded over 80 years ago. This steel plant is located at Jamshedpur and has captive collieries at Sijua, Jamadoba and West Bokaro & iron ore mines at Noamundi and Joda in Bihar and Orissa.

The Company embarked on a 2 MT expansion programme which was completed in 1958. Subsequently, the first major modernisation programme was undertaken by the company when the outdated Duplex Process was replaced by a modern LD Shop alongwith Continuous Casting and other allied facilities. Immediately thereafter the company started work on Modernisation Programme Phase II. The principal facilities of this phase included the modern high speed Bar & Rod Mill of 300,000 tpa capacity, raw material Bedding & Blending Yard, 1.37 mtpa Sinter Plant, 2 X 30 MW Power Plant, etc.

The Tata Iron & Steel Company Limited (TISCO)



THE TATA IRON & STEEL COMPANY LIMITED (TISCO)

Tisco has now completed its Phase III Modernisation Programme in October, 1994 which increases its saleable steel capacity to 2.7 mtpa. The major facilities under this programme are

- 1 mtpa Hot Strip Mill;
- 2 Slab Casters; 1 mtpa New LD Shop; Half Coke Oven Battery;
- 500 tpd Oxygen Plant;
- Lime Calcining Plant;
- Captive Power Generation Plant (Total 97.5 MW);
- Expansion and modernisation of raw materials facilities, transportation system and infrastructure.

In addition to the above, TISCO has commissioned a modern 1 mtpa capacity Blast Furnace(G) in October, 92. The furnace is operating at its rated capacity. Hot Strip Mill was commissioned in March, 1993. The first Slab Caster was commissioned in Oct, 93 and the second in August, 1994. The new LD Shop was commissioned in October, 1994.

1.2 Production

Production in the first 8 months of the year was:

	Apr-Nov, 94	Apr-Nov,93
Hot Metal	1,825,782	1,689,765
Crude Steel	1,730,380	1,606,604
Works Saleable Steel	1,492,329	1,360,026
Semis%	44.5	57.31

The hot metal production during Apr-Nov 1994 was higher compared to the same period last year. The saleable steel production has also improved alongwith significant decline in semis percentage.

The productivity of the Blast Furnaces have continued to be outstanding. Coal injection facilities have been provided in Blast furnaces 'D', 'F' and 'G' and these are in successful operation.

1.3 Performance of Various Facilities

a) Modernisation Programme Phase I:

All major units under this phase viz. LD shop, Lime Calcining Plant, Tar Dolo Block Plant, Oxygen Plant and Bar Forging Units have exceeded their rated capacities.

b) Modernisation Programme Phase II:

The Bar & Rod Mill has produced products of excellent quality of all grades and sections as envisaged, at near rated capacity. The products of Bar & Rod Mill have been well accepted in the international market. The other facilities like Coke Oven Battery No. 7 with stamp charging facility, the new Coal Handling Plant, the Bedding & Blending Yard and Sinter Plant No. 2 are also operating at rated capacities. The improved quality of coke and sinter produced from the above units have helped in reducing the coke rate and improving productivity of the Blast Furnaces to a large extent.

c) The operation of the new units already commissioned under Modernisation Programme Phase III is under the process of stabilisation.

1.4 Energy Conservation

The Plant Specific Energy Rate for the first half of the year 94-95 was 9.461 G Cal/t of crude steel as against

II. TATA IRON & STEEL COMPANY LIMITED (TISCO)

9.530 G Cal/t for the same period in the previous year, i.e. a reduction of 0.72%.

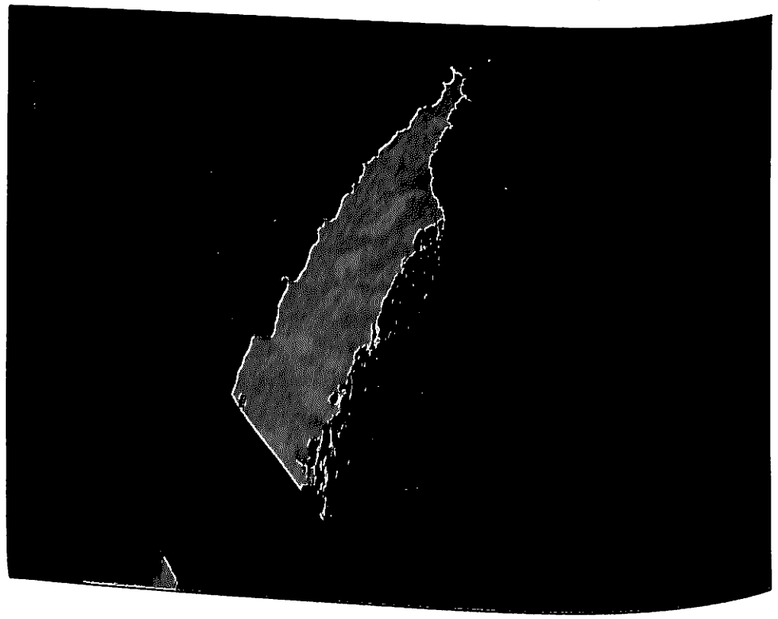
Inspite of higher Iron to Steel ratio, higher in-plant power generation and lower semis production, there was a reduction in the plant specific energy rate mainly due to the following:

a) Lower (combined coke & coal injection) fuel rate at Blast Furnaces.
b) Lowest ever petro-fuel consumption rate.
c) Lower power rate.
d) Higher L.D. Gas recovery.
e) Higher continuous casting production.
f) Lower specific energy consumption rates in eleven out of fourteen production units.

1.5 Safety

During the year 1993-94 there were 215 acidents in Tata Steel as against 144 in the year 1992-93. This increase is mainly due to the change in classification, widening the scope of reporting system to the statutory bodies. Agrico Plant at Tata Steel achieved 12 million Accident Free Man Hours at a stretch on 3rd December, 1993, Merchant Mill crossed 10 Million Accident Free man Hours on 16th July, 1993 and Coke Oven achieved 9 milion Accident Free Man Hours on 8th June, 1993. Besides this many other departments have also reported accident free million man hours during 1993-94.

Safety Awareness programmes have been intensified with specific focus on Road Safety and Plant Safety inspection. Job Safety Training for workers as well as Supervisors are being organised throughout the year to enhance their safety awareness. Standard operating procedures and job safety instructions are being prepared and employees are trained for safe execution of hazardous jobs. Safety training in the area of storage, transporting and handling of toxic gases has been given special emphasis.



2. SECONDARY STEEL SECTOR

Sector-wise profile of the secondary sector is as under:

2.1 Electric Arc Furnace Industry

At present 181 Electric Furnace units with a total capacity of 7.81 million tonnes have been commissioned.

Production of ingots/concast billets / blooms/slabs by EAF units, during the last three years and for April-October, 1994 is given below:

(In '000 tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (April toOct. 94)
Mild Steel	2116.1	1789.3	1221.9	-
Medium/High Carbon Steel	384.7	387.2	329.9	-
Alloy Steel	584.8	620.3	713.5	-
Stainless Steel	210.4	178.8	234.0	-
Total (Estimated Including Reported)	3296.0	2975.6	2499.3	1770.1

2.2 Steel Re-rolling Industry

There are about 1015 units commissioned with a total capacity of 20.96 million tonnes. Out of these, units with a capacity of 4.066 million tonnes are having captive steel making furnaces.

Production of re-rolling units during the last 3 years and for April-October, 1994 is as follows:

(In '000 tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (April to Oct. 94)
Bars/Rods (Incl. Squares)	3292.4	2908.9	2225.6	-
Wire Rods	973.2	886.4	967.0	-
Structurals	1106.9	1351.6	1563.3	-
Hoops	0.5	2.7	-	-
Special Sections	159.8	200.2	222.9	-
Slabs/Plates	71.5	28.6	7.9	-
Total (Estimated including Reported)	5604.3	5378.4	4986.7	1792.8

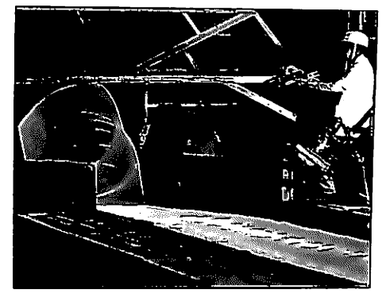
2.3 Steel Wire Drawing Industry

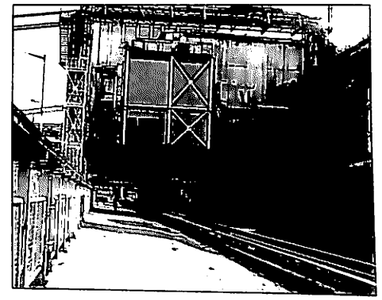
There are 76 units commissioned with a total capacity of 0.9 million tonnes.

Production of Steel wire drawing units during the last three years and for April-October, 1994 is as under:

(In '000 tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (April to Oct. 94)
Mild Steel	238.8	196.1	195.4	-
Medium/High Carbon Steel	148.2	184.4	226.9	-
Alloy Steel	16.6	15.8	12.9	-
Stainless Steel	2.2	5.6	1.9	-
Total (Estimated & Reported)	405.8	401.9	437.1	305.5





2.4 Cold Rolled Steel Sheets/Strips Manufacturing Industry:

62 units with a total capacity of 2.25 million tonnes have commissioned their plants.

The production of units for the last 3 years and for April-October, 1994 is as follows:

(In '000 tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (April to Oct. 94)
Mild Steel	682.7	771.8	847.6	-
Medium Carbon Steel	15.9	12.2	12.7	-
High Carbon Steel	6.6	6.5	7.5	-
Alloy Steels	1.8	4.0	4.2	-
Stainless Steel	7.1	7.9	7.2	-
Total (Estimated & Reported)	714.1	802.4	879.2	825.4

2.5 Hot Rolled Steel Sheets/Strips Units

In the secondary sector there are 26 commissioned units with a total capacity of 1.12 million tonnes.

The total production of hot rolled steel strip units during the last 3 years and for April-October, 1994 is as follows:

(In '000 tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (April to Oct. 94)
Hot Rolled Steel Sheets/Strips	74.6	71.7	68.9	46.3

2.6 GP/GC/Galvalume/Galfan PVC/Vinyle Coated Sheets/Strips units.

13 Units for manufacturing 0.8 million tonnes of GP/GC Sheets have been commissioned.

Production of GP/GC sheets during the last 3 years and for April-October, 1994 is as follows:

(In '000 tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (April to Oct. 94)
GP/GC Sheets/Strips	180.1	229.5	253.9	227.2

2.7 Tin Plate Industry

Besides Rourkela Steel Plant, 2 units in the private sector with a capacity of 0.15 million tonnes of Electrolytic Tinplate have been commissioned.

Production of electrolytic tinplate from the two units in the private sector during the last 3 years and April-October, 1994 is as follows:

(In '000 tonnes)

Category	1991-92	1992-93	1993-94	1994-95 (April to Oct. 94)
Oil Can size	20.1	32.1	27.4	-
Non Oil Can size	12.8	13.5	18.1	-
Total (Reported & Estimated)	32.9	45.6	45.5	25.0

3. SPONGE IRON

Manufacture of sponge iron was taken out of the purview of the licensing provision of the Industries (Development and Regulation) Act in 1985. While there were only two private units in production during 1988-89, the number of such units increased to 18 in 1993-94. The total installed capacity of sponge iron units is currently around 5.22 million tonnes per annum. Some more capacity is expected to become operational in the near future. The production of sponge iron from 1991-92 onwards is given below:

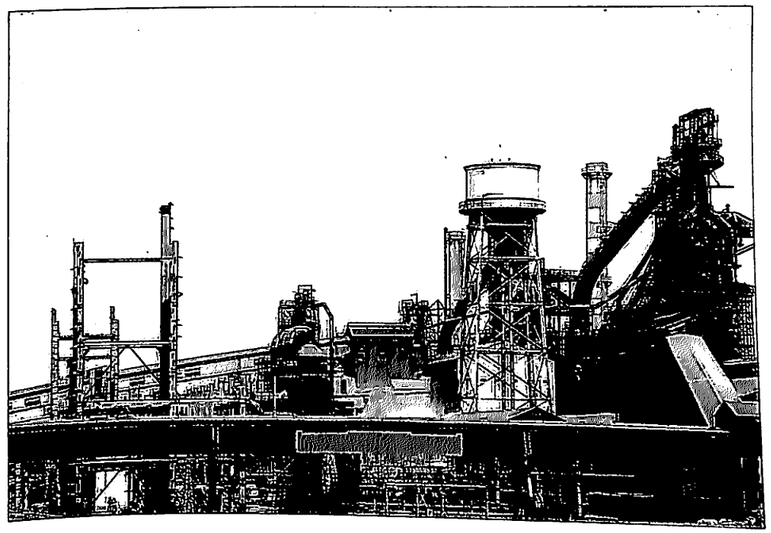
(In Lakh tonnes)

1991-92	1992-93	1993-94	1994-95 (Apr-Oct. 94)
1306.2	1441.3	2420.0(prov)	2103.3

4. PIG IRON

4.1 Pig Iron is one of the basic raw materials required by the foundry & casting industries for manufacture of various types of castings for the engineering sector. Presently, the main source of pig iron is the integrated steel plants which have to divert a part of their hot metal production for manufacture of pig iron. The domestic production of pig iron in the past has, however, not kept pace with its demand. As a result, there is a general shortage which in turn has adversely affected the growth of the engineering sector. Efforts are, therefore, being made to increase pig iron manufacturing facilities in the secondary sector.

4.2 During 1993-94, against an estimated demand of approximately 22 lakh tonnes, the domestic production of pig iron was about 22.49 lakh tonnes, of which 19.77 lakh tonnes was contributed by the main producers and 2.72 lakh tonnes from the secondary producers. During 1994-95, the actual production till Oct.,1994 has been 14.03 lakh tonnes.



4.3 As a result of various policy initiatives taken by the Government, considerable interest has been shown by the private sector in setting up pig iron units. The All India Financial Institutions have already sanctioned assistance to 15 pig iron units in the private sector with a proposed capacity of 22.34 lakh tonnes per annum. Of these, 2 units have decided not to implement their projects, leaving the net capacity at 19.04 lakh tonnes per annum for 13 units. Assistance to another unit for a capacity of 2.50 lakh tonnes is under consideration of the Apex financial institutions. So far, 9 units with a total capacity of 9.10 lac tpa have been commissioned in the secondary (private) sector as of Nov., 1994 and several more units with a projected capacity of 15.04 lac tpa are in various stages of impelementation. The above excludes the old unit of M/s Kalinga Iron Works and recently commissioned unit of M/s. Sponge Iron India Ltd.

4.4 A list of units commissioned, as of end November, 1994 is given below:

Sl.	Name of the Unit	Location	Capacity (lakh tonnes)
1.	Kalinga Iron Works	Barbil, Orissa	1.40
2.	Sesa Goa Ltd.	Bicholim, Goa	0.75
3.	Mid-West Iron & Steel Co. Ltd.	Srikakulam, Andhra Pradesh	0.75
4.	Usha Ispat Ltd.	Redi, Maharashtra	1.90
5.	Sathavahana Ispat Ltd.	Anantpur, A.P.	1.20
6.	Tata Metaliks Ltd.	Kharagpur,W.B.	0.90
7.	Kirloskar Ferrous Industries Ltd.	Raichur, Karnataka	1.20
8.	Sesa Industries Ltd.	Bicholim, Goa	0.75.
9.	Sponge Iron India Ltd.	Palonha, A.P.	0.45
10.	Lanco Ferro Ltd.	Chittoor, A.P.	0.90
11.	Uni Metal Ispat Ltd.	Bellary, Karnataka	0.75
		Total:	10.95

4.5 Coke is an essential raw material required for pig iron production. Govt. is therefore, keen that merchant coke oven units are also set up in the secondary sector. Under the new industrial policy announced in July, 1991, manfacture of coke has been delicensed unless certain by-products are sought to be recovered. Some interest has recently been shown by the private sector for setting up merchant coke making facilities.

5. FERRO ALLOYS

5.1 Ferro Alloys are essential for the production of alloys and special steels. Under the new industrial policy announced in July, 91 the ferro alloys industry has been delicensed. This will lead to dispersal of manufacturing facilities of ferro alloys across the country which will make availability easier for local consumers.

Production of ferro alloys during the last 2 years was as under:

1992-93 5.8 lakh tonnes

1993-94 5.9 lakh tonnes

5.2 Export

As a policy measure the export of value added items like ferro alloys is being encouraged instead of ores. This also helps to conserve the reserves of high grade ores for use by the domestic industry. While ferro alloy exports have shown a rising trend, it has not been possible for the industry to fully exploit the export potential in view of the high domestic rates of power, and the prevailing international ferro alloy prices. Inspite of these constraints, exports have shown a rising trend as may be seen from the details of exports. Export of ferro alloys during the last two years has been as follows

	Qty. (in tonnes)	Value (in crores)
1992-93	150.884	256.04
1993-94	150.835	237 39

(Source :IFAPA)

RESEARCH & *Development*

1. SCIENCE ADVISORY COMMITTEE

Ministry of Steel has a Science Advisory Committee (SAC) attached to it for examining all aspects of Science & Technology Development in the Iron & Steel manufacturing industry. This committee advises the Minister of Steel on the policies and programmes required for development of domestic capabilities in Scientific & Technological Research and other related matters to enable correct policy formulation. The Committee comprises of eminent Scientists & Technologists in the metallurgical & engineering fields particularly in ferrous metallurgy. The Committee was re-constituted during the year 1993-94 and in the meeting a proposal for development of RESINESS TECHNOLOGY of steel making with an approximate cost of Rs.9 crores in a period of 4 years was approved. This technology, if successful, will enable steel producers to produce hot metal directly from iron ore and non metallurgical coal.

Necessary orders for this proposal have been issued during 1994-95. The SAC has also in subsequent meetings during 1994-95 approved a project at a cost of Rs.60 lakhs to study energy conservation measures by mini steel plants having electric arc furnaces of 15/17 to 25/30 tonnes capacity. The committee had also discussed several other projects to be taken up for reasearch in the national interest. Funds for the above R&D project may be available from the Steel Development Fund (SDF).

2. IRON & STEEL MISSION

The Iron & Steel Mission, earlier known as the National Mission for Iron & Steel, did not take up any specific R&D project during the year because of non budgetary support for funds.

3. RESEARCH & DEVELOPMENT ACTIVITIES BY STEEL PRODUCERS

3.1 During the year, steel producers both in the public & private sector continued to pursue their research & development activities (mostly to deal with their plant specific problems) to assimilate and innovate newer technologies, to utilise Indian minerals & raw materials in a larger proportion and thereby reduce pollution, conserve energy and reduce cost of production.

3.2 ***Steel Authority of India Limited, Research & Development Centre for Iron & Steel (RDCIS) at Ranchi.***

3.2.1 Objective/thrust of R&D

The main thrust of R&D activities of RDCIS, Ranchi revolved around :

i) Promotion of originality, fostering creativity and expansion of knowledge base through the pursuit of carefully selected R&D programmes.

ii) Development of Human resources and facilities to achieve and sustain technological excellence

iii) Complement SAIL Plants' efforts to continuously enhance the following with respect to their products

A) Customer satisfaction B) Quality C) Productivity D) Profitability E) Marketability

iv) Assimilation and dissemination of technology to achieve energy conservation, cost reduction of the products in the steel industry.

v) Pursuance of R&D programmes which help Indian Steel Industry to become internationally competitive

3.2.2 Highlights of R&D activities

3.2.2.1 New technologies/processes

- Developed jointly with DSP, heat treatment and manufacturing process of locomotive wheels

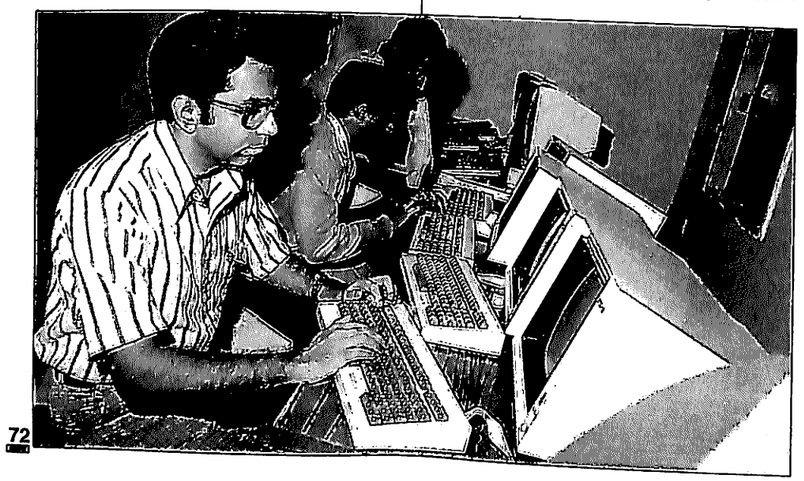
- Developed jointly with ASP, technology for high strength crane wheels with new chemistry and processing schedule.
- Developed and implemented jointly with BSL, technology for production of extra hard pitch suitable for aluminium/graphite electrode industry.
- Developed and implemented improved coke oven doors jointly with RSP and BSP, to reduce gas emissions.
- Developed technological parameters for the production of high quality special steel slabs/plates jointly with BSP.
- Developed in collaboration with ASP, RSP and SSP, hot rolling facilities of concast slab of stainless steel.

3.2.2.2 Productivity improvement

- Increase in productivity of sinter plant at DSP from 0.59 to 0.734 t/m²/hr.
- Increase in productivity of blast furnace No. 6 at BSP by 4.8% and decrease in coke rate by 1.92%.
- Introduction of oxygen enrichment system in blast furnace No. 3 at RSP and maintenance of constant Raceway Adiabatic Flame Temperature (RAFT) at various oxygen enrichment level with the help of computer.
- Introduction of an accurate slab length cutting system based on digital electronics which led to an improvement in the prime yield of plates at concast shop of BSP

3.2.2.3 Reduction in consumption of materials and improvement in yield and quality

- Increase of yield of crude benzole from 4.0 kg per tonne to 5.5 Kg per tonne of coal charge in the benzole recovery plant of IISCO.
- Increase in rolling rate from 129 to 137 tonnes/hr. through improved design, change in the bloom size and cutter mould at BSP.
- Reduced strip breakage at the CRM of BSL from 15.9% to 8.3% by optmising deoxidation practice
- Decreased the annual consumption of foot rolls of moulds in continuous casting by 66% through a new chemistry at BSP.
- Reduced roll consumption from 2.17 to 1.74 Kg/t and energy consumption from 0.738 to 0.578 G.cal/t by modified processing schedule and chemistry at IISCO.



3.2.2.4 Energy conservation

- Achieved coke rate reduction by 22.5 Kg/THM at BSL
- Achieved uniform ladle heating temperature of 1000°-1100°.C within 10 hrs. as compared to 500°-600°.C in 24 hrs. with old heating system
- Reduced the specific power consumption by 5% both in the 12 MVA and 6 MVA furnaces at VISL
- Decrease in skull generation from 1.7 to 1.2% and the energy consumption from 4700 G.cal. to 2350 G.cal/year at ladle heating stand in SMS 1, BSP
- Reduced specific energy consumption of the pusher type furnace at VISL from 0.76 G.cal/t to 0.67 G.cal/t through veneering insulation of wall and roof and in-situ casting of skid pipes.

3.2.2.5 Development of new products

- SAIL MA 450 Hi Grade steel at BSP
- IRS - M 41 (SAILCOR) structurals at ASP
- Prefabricated single block launder for EAF at ASP.
- High chrome ferritic steels for super and thermal power and nuclear power plants at BSL.

3.2.3 R&D Expenditure

Year	Expenditure on R&D (Rs. in crores)	R&D Expenditure as percentage of turnover
1991-92	39.00	0.42
1992-93	39.50	0.39
1993-94	39.20	0.33
1994-95 (estimated)	21.66	-

3.2.4 Project status

No. of projects planned in 1993-94	...	134
No. of projects due for completion in 1993-94	...	68
No. of projects completed in 1993-94	...	66
No. of projects planned in 1994-95	...	179

3.3 *Tata Iron & Steel Co. Ltd. (TISCO)*

3.3.1 Objective/thrust of R&D

The major thrust revolved around development of new products, improvement in process parameters, reduction in energy consumption and improvement of product quality.

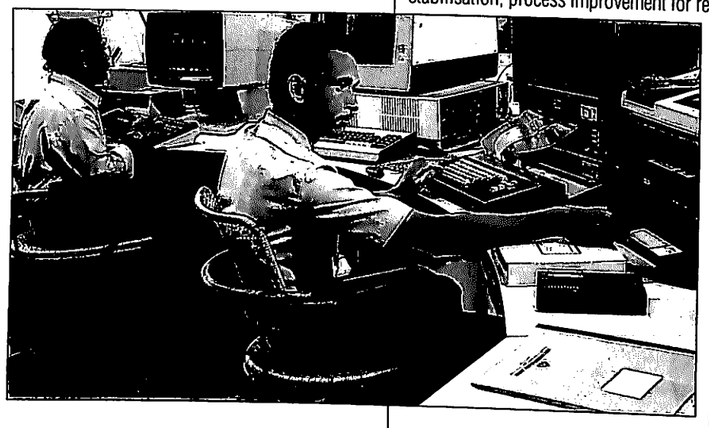
3.3.2 Highlights of R&D activities

The major highlights of R&D activities during 1993-94 are as under :

- Optimisation of sintering parameter of sinter plant resulted in increased availability of sinter.
- Increased Productivity of Blast furnace by 1.08% by increased use of sinters.
- Developed mathematical model of heat transfer in the mould in the billet caster and this resulted in increase in casting speed and production rate by 10% (Return on investment 800%).
- Developed coupled heat transfer and phase transformation model to increase productivity for high carbon steel wire rod from 75-85%. The work has resulted in the filing of a patent and has established cooling capacity needed for further 17% increase in productivity, Net realisation :Rs.1137 lakhs.
- Improvement in the quality of high quality steel wire rod.

3.3.3 Year	R&D Expenditure (Rs. in crores)	R&D expenditure as percentage of turnover
1991-92	8.08	0.30
1992-93	7.27	0.24
1993-94	10.50	0.30

3.3.4 Project Status	
Total No. of projects taken during 1994-95	77
Out of which new products	38
and carry over/continued projects	39



3.4 ***Rashtriya Ispat Nigam Ltd. (RINL) (Visakhapatnam Steel Plant)***

3.4.1 Objective/thrust of R&D

The major objective/thrust of R&D activities was directed towards trouble shooting in plant operation/ stabilisation, process improvement for reduction in cost, saving in energy and improvement of product quality, and new product development.

3.4.2 Highlights of R&D activities

The major projects of R&D under taken in 1993-94

- Investigation on the raw material namely coal, limestone, dolomite, dunite etc. to develop alternative sources.
- Increase in yield of Naphthalene in the tar distillation plant.
- Development of pitch for brick plant.
- Improvement of productivity of sinter plant.
- Development of charge calculation model for Blast Furnace.
- Development of suitable casting powder.
- Reduction of Nitrogen level in the steel.
- Development of forging quality steel.

Major projects in 1894-95

- Detailed study on continious casting machines abnormalities such as break out, nozzel chocking etc.
- Analysis of equipment failure.
- Stress relieving of ladle turret
- Introduction of shrouding.
- Development of gunning lining in the tundishes.

3.4.3 R&D Expenditure

Year	Expenditure on R&D (Rs. in crores)	R&D expenditure as percentage of turnover
1993-94	2.5	0.13%
1994-95 (estimated)	2.5	0.10%

3.5 ***Kudremukh Iron Ore Co. Ltd. (KIOCL)***

3.5.1 Objective/thrust of R&D

The major thrust of various R&D measures was improvement in various manufacturing processes.

3.5.2 Highlights of major projects in R&D

The major projects taken up during 1994-95 in the R&D area are as under:

i) Use of floatex Density separator and 'T' classifier for improved recovery and grade from spiral concentrate, (completion schedule, March, 1995)

ii) Recovery of iron from the tailings disposed off in the tailings dam (completion schedule, March. 1995)

iii) Study of dispersion of tailings in the tailings dam in consultation with CWPRS.

3.5.3 R&D Expenditure

Year	R&D Expenditure as % age of turnover
1992-93	0.08%
1993-94	1.36%
1994-95 (April-November, 1994)	0.30%

3.6 ***Manganese Ore India Limited (MOIL)***

3.6.1 Objective/thrust of R&D

The basic thrust of R&D studies at MOIL was on improvement of mining practices and development of processes for manufacture of manganese base compounds. The optimisation of process parameters of various plants of MOIL was also given due stress.

3.6.2 R&D Expenditure

Year	Expenditure on R&D (Rs. in lakhs)	R&D expenditure as percentage of turnover
1991-92	46.12	0.65%
1992-93	74.08	1.00%
1993-94	31.67	0.54%
1994-95 (upto 30.9.1994)	16.38	-

3.7 ***Bharat Refractories Limited (BRL)***

3.7.1 Objective/thrust of R&D

The major thrust of various R&D efforts was on development of new products and reduction of energy consumption in various processes.

3.7.2 Highlights of Major R&D achievements : 1993-94

- Development of super dense high alumina bricks for blast furnace.
- Development of tundish coating mass.
- Improvement in qulaity of Mudgun mass and Trough mix.
- Development of super dense high alumina BF bricks.
- Development of low cement castables.
- Improved quality of Mudgun mass and trough mix for BF.
- Development of tundish coating mass.

1994-95

- Development of direct bonded mag- chrome refractory.
- Development of Silica Ramming Mass and silica Gum patch for Electric Arc Furnace.
- Development of Allumina silica carbon bonded bricks for Torpedo Ladle.

3.7.3 R&D Expenditure

Year	Expenditure on R&D (Rs. in lakhs)	R&D Expenditure as %age turnover
1992-93	22.41	0.54%
1993-94	34.34	0.39%

3.8 ***National Mineral Development Corporation Limited (NMDC)***

3.8.1 Objective/thrust of R&D

The major thrust of R&D efforts centred around the following three heads:

a) Development studies

b) Investigation/construction projects

c) Production projects

3.8.2 Highlights of major projects undertaken for development

- Development work on blue dust which leads to production of "ferric Oxide". In March, 1994, 857 tonnes of ferric oxide were supplied to various ferrite manufacturers in India and abroad. From April'94 to October'94, 687 tonnes of different grades of ferric oxide were produced out of which 626.5 tonnes were supplied to ferrite Industries.

- Based on the development of technology for production of ultra Pure ferrite oxide from blue dust, tenders were issued for setting up a commercial plant of 6000 TPY capacity at Visakhapatnam.

- Feasibility studies in laboratory scale for production of pigment grade ferric oxide from blue dust through Hudrometallurgical route have been completed. Pilot plant scale studies has been initiated.

- Batch scale ore dressing studies are in progress for recovery of economic minerals such as Illmenite, Rutile, Garnet, Monazite, Zircon etc. from Bhimunipatham Beach sand samples.

- Report has been submitted on studies for preparation of pigment grade ferric oxide from yellow ochre iron ore samples of Bailadila-11C Deposit.

- Hydrometallurgical studies for production of absorbent from kimberlite tailing were completed.

3.8.3 R&D Expenditure

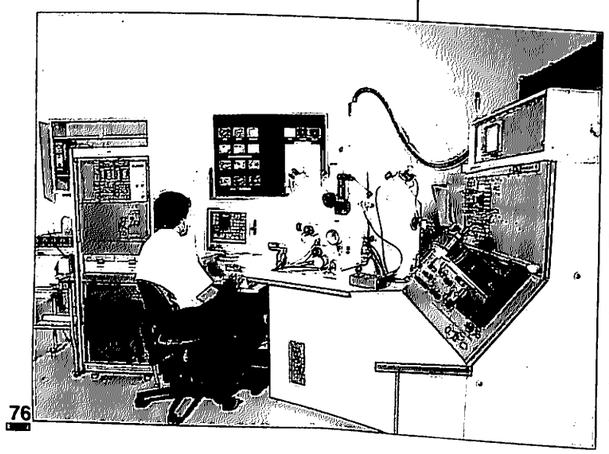
The R&D expenditure was as under:

Year	Expenditure on R&D Activities (Rs. in lakhs)	R&D expenditure as percentage of turnover
1992-93	387.16	1.5%
1993-94	407.91	1.49%
1994-95 (upto Oct.'94)	217.13*	-

3.8.4 The percentage of income of R&D to its revenue expenditure for the year 1993-94 is 55.53% and the corresponding figure for the current year upto October, 1994 is 52.14%.

3.9 ***Sponge Iron India Limited (SIIL)***

3.9.1 Objective/thrust of R&D



The basic objective and the major thrust of R&D was on optimisation of process parameters, reduction of cost and improvement of product quality

3.9.2 Highlights of R&D activities

Some of the important areas of the R&D carried out are as under.1993-94

- study on ash softening & fusion charactorstics of char to be used as a reductant and carboriser in sub merged Arc furnace.

- Design, manufacture and testing of bi-directional secondary air tube for rotary kiln.

- Laboratory smelling trials of sponge iron of different grades, size fractions with varying degree of metallisation for commercial level operations

1994-95 (upto Oct '94)

- Improved lubrication system for kiln drive.

- Use of alternative binder for briquetting sponge iron fines.

- Improved coal throwing system in the kiln for proper distribution

3.9.3 R&D Expenditure

Year	Expenditure R&D (Rs. in lakhs)	Expenditure as % age of turnover
1991-92	39.12	1.88%
1992-93	21.28	1.00%
1993-94	15.25	0.79%

3.10 ***Mini Steel Plants/Secondary Steel Sector.***

3.10.1 ***M/s. Mahindra Ugine Steel Co. Ltd. (MUSCO)***

3.10.1.1 Objectives/thrust of R&D

The major thrust was on Development of new grades, improvement in processes, yield and internal cleanliness of alloy steels.

3.10.1.2 Highlights of the R&D Activities

Some of the major highlights of R&D activities are as under:

Development and marketing of two new French and one German micro alloyd steel used for forging crank snaft for export to USA, increase of yield by 1.58% over the previous year, reduction in tap to power-on time in arc furnace, increase in heat size etc.

3.10.1.3 R&D Expenditure

Year	Expenditure of R&D (Rs. ihn lakhs)	R&D Expenditure as percentage of turnover
1993-94	31.87	0.20%

3.10.1.4 Project Status

No. of projects completed in 1993-94	3
No. of projects implemented in 1993-94	3

Other projects of longer duration are continuing.

3.10.2 ***Indian Seamless Steel & Alloys Ltd. (ISSAL)***

3.10.2.1 Objective/thrust of R&D

The basic objective of the company was on development of new grades of steel to cater to the needs of customers in forging, automobile and tube industry.

3.10.2.2 Highlights of R&D activities

One of the major highlights of R&D activities was reduction of cost of production of steel by approximately 7% in the current year compared to the figures of last year.

3.10.2.3 R&D Expenditure

Year	Expenditure of R&D (Rs. in lakhs)	R&D Expenditure as %age of turnover
1993-94	25	8.0%
1994-95 (April'94-Sept.'94)	45	1.5%

MANAGEMENT *Information System*

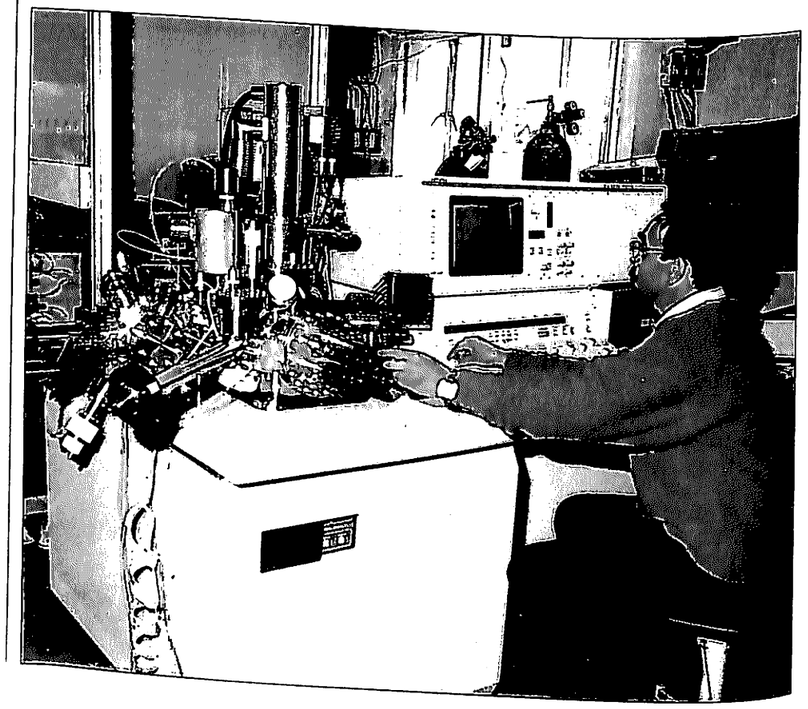
1. A Computer Based Integrated Management Information System(MIS) has been developed in the Ministry of Steel with the assistance of the National Informatics Centre(NIC) in the areas of Administration, Public Sector Undertakings, Personnel Management, Licensing and Accounts.

2. The Computer Centre in the Ministry of Steel, which has been established as a central facility is equipped with Two Super-AT (386 based) compatible with 8 MB main memory, 300 MB hard disk alongwith 16 dumb terminals, 10 no. of IBM PCs/PC-XTs/PC-ATs and NICNET connectivity through modem based leased lines to use Electronic Mail Package available on NICNET.

3. Terminals of the Super-AT in the networking environment have been given to senior officials of the Deptt. including certain key sections in the Ministry. These terminals facilitate interactive usage with the Management Information System developed for this ministry as well as routine functions such as Word Processing, data entry etc.

4. The E-MAIL facility of NICNET is being used for transferring and getting information between SAIL and Ministry of Steel, entry/updation of incumbancy position of this ministry to Deptt. of Personnel and Training (DOPT). Word processing facility for generating reports and letters is being extensively used on day to day basis and during Parliament sessions throughout the year.

5. Training programmes are periodically conducted by NIC for various levels of staff in the Department to get them acquainted with the usage of computers in areas like word processing, data entry operations, data processing techniques,etc.



ORGANISATIONAL *Structure*

1 The Ministry of Steel is under the independent charge of a Minister of State.

2 The Ministry of Steel is responsible for the planning and development of the iron and steel industry; development of essential inputs such as iron ore, lime stone, dolomite, manganese ore, chromite, ferro-alloys, sponge iron etc. and other related functions. The items of work allocated to the ministry are at Annexure-I. There are 16 public sector undertakings under the administrative control of the Ministry of Steel. The details are at Annexure-II.

3 The Ministry of Steel has a Secretary, 3 Joint Secretaries, 4 Directors, 2 Deputy Secretaries, 6 Under Secretaries and other lower level officers and staff. The Ministry has a common financial adviser of the status of Additional Secretary and a common Chief Controller of Accounts with the Ministry of Mines. The organisational chart of Ministry of Steel is at Annexure III. A technical wing consisting of an Industrial Adviser, 4 Development Officers and 3 Assistant Development Officers assist and advises the Ministry on technical matters. The size of the secretariat is very small with a total strength of only 257 personnel. The classification/category-wise details are at Annexure-IV.

4 The Ministry has an attached office, viz., Office of the Development Commissioner for Iron and Steel (DCI&S). The DCI&S, who is of the status of Joint Secretary is assisted by a Joint Development Commissioner, 3 Deputy Development Commissioners, 2 Development Officers and lower level functionaries at the head quarters. The office of DCI&S has, at present, 6 regional offices located at Bombay, Calcutta, Delhi, Hyderabad, Kanpur and Madras. The organisational chart of office of Development Commissioner for Iron & Steel is at Annexure V.

Annexure-I

ITEMS OF WORK ALLOCATED TO THE MINISTRY OF STEEL

1. Steel plants in the public and private sectors, the rerolling industry and ferro-alloys, including their future development;

2. Development of Iron Ore mines in the public sector;

3. Development of other ore mines and mineral processing for the steel plants;

4. Production, distribution, prices, imports and exports of iron and steel and ferro alloys;

5. Planning, development and control of the assistance to all iron and steel industries;

6. Production, supply, pricing and distribution of iron ore, manganese ore, lime stone , silimanite, kyanite and other minerals and alloys used in steel industry including magnesite and refractories but excluding mining leases or matters connected therewith;

7. The Steel Authority of India Limited and its subsidiaries;

8. Matters relating to the following undertakings namely :-

i) The Bolani Ores (India) Limited

ii) The Manganese Ore (India) Limited

iii) The Metal Scrap Trade Corporation and its subsidiary.

9. Other public sector enterprises or undertakings falling under the subject included in this list except such as are specially alloted to any other department and

10. All attached or sub-ordinate offices or other organisations concerned with any of the subjects specified in this list.

Annexure-II

List of Public Sector Undertakings under the Ministry of Steel

1. Steel Authority of India Limited, Ispat Bhavan, Lodi Road, New Delhi - 110 003.
2. Rashtriya Ispat Nigam Limited, Project Office 'A' Block, Visakhapatnam - 751 007.
3. Metallurgical & Engineering Consultants (India) Limited, MECON Building, Ranchi - 834002.
4. National Mineral Development Corporation Limited, Castle Hills, Masab Tank, Hyderabad - 500028.
5. Bharat Refractories Limited, Sector IV-3 Quater No. 56, Bokaro Steel City - 827001.
6. Kudremukh Iron Ore Co. Ltd., 1 Block Koramangala, Bangalore-560034.
7. Manganese Ore (India) Ltd., 3 Mount Road Extension, Nagpur-440001.
8. Hindustan Steel Works Construction, Ltd., No. 1 Shakespeare Sarani, (8th Floor), Calcutta-700001.
9. Sponge Iron India Limited, NMDC Complex, Khanij Bhavan, 10-3-3 11/A Castle Hills. Hyderabad-500 028.
10. Metal Scrap Trade Corporation, 225 F, Acharya Jagdish Bose Road, Calcutta - 700 020.
11. Ferro Scrap Nigam Limited, Building No. 54 Old Admn. Office Complex, Bhilai-490 001.
12. India Fire Bricks and Insulation Company Limited Rly. Station Ranchi Road, P.O. Marar-820 177. District Hazaribagh, Bihar.
13. Indian Iron and Steel Company Limited, Burnpur - 713 325.
14. IISCO Ujjain Pipe and Foundry Limited, Calcutta.
15. J & K Mineral Development Corporation, Srinagar.
16. Visvesaraya Iron and Steel Limited, Bhadravati.

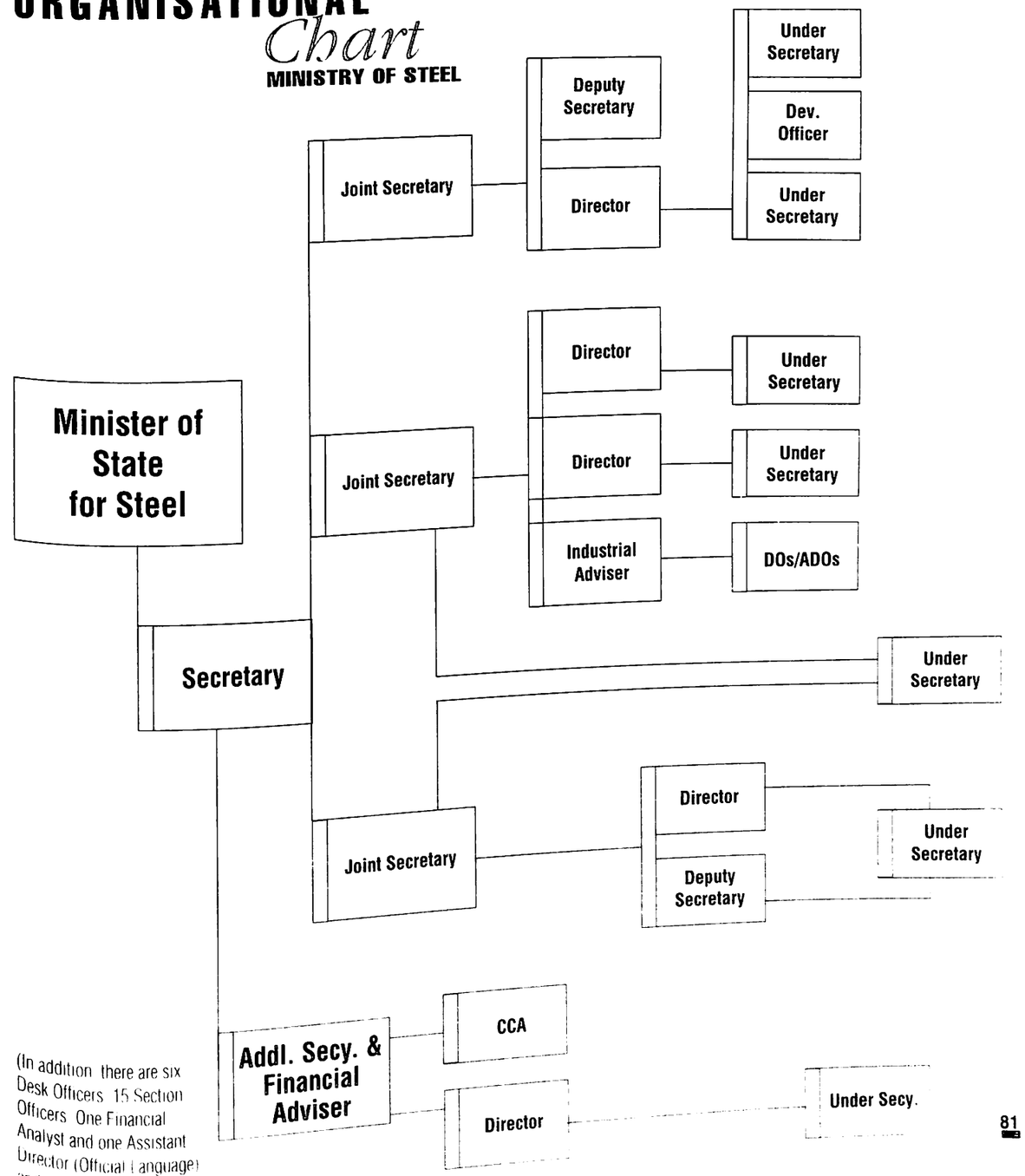
Annexure-IV

STATEMENT SHOWING THE NUMBER OF EMPLOYEES, NUMBER OF SC/ST/ PHYSICALLY HANDICAPPED/EX-SERVICE MEN AND WOMEN AS ON 31-12-1994 IN RESPECT OF THE MINISTRY OF STEEL(SECTT.)

Classification of Post	No. of employees in position	Men	Women	SC	ST	Physically Handicapped	Ex-service men
Group 'A'	26	22	4	2	1	-	-
Group 'B'	86	65	21	13	4	-	-
Group 'C'	75	49	26	23	6	-	-
Group 'D'	70	67	3	31	8	-	1
Total	257	203	54	69	19	-	1

ORGANISATIONAL *Chart*

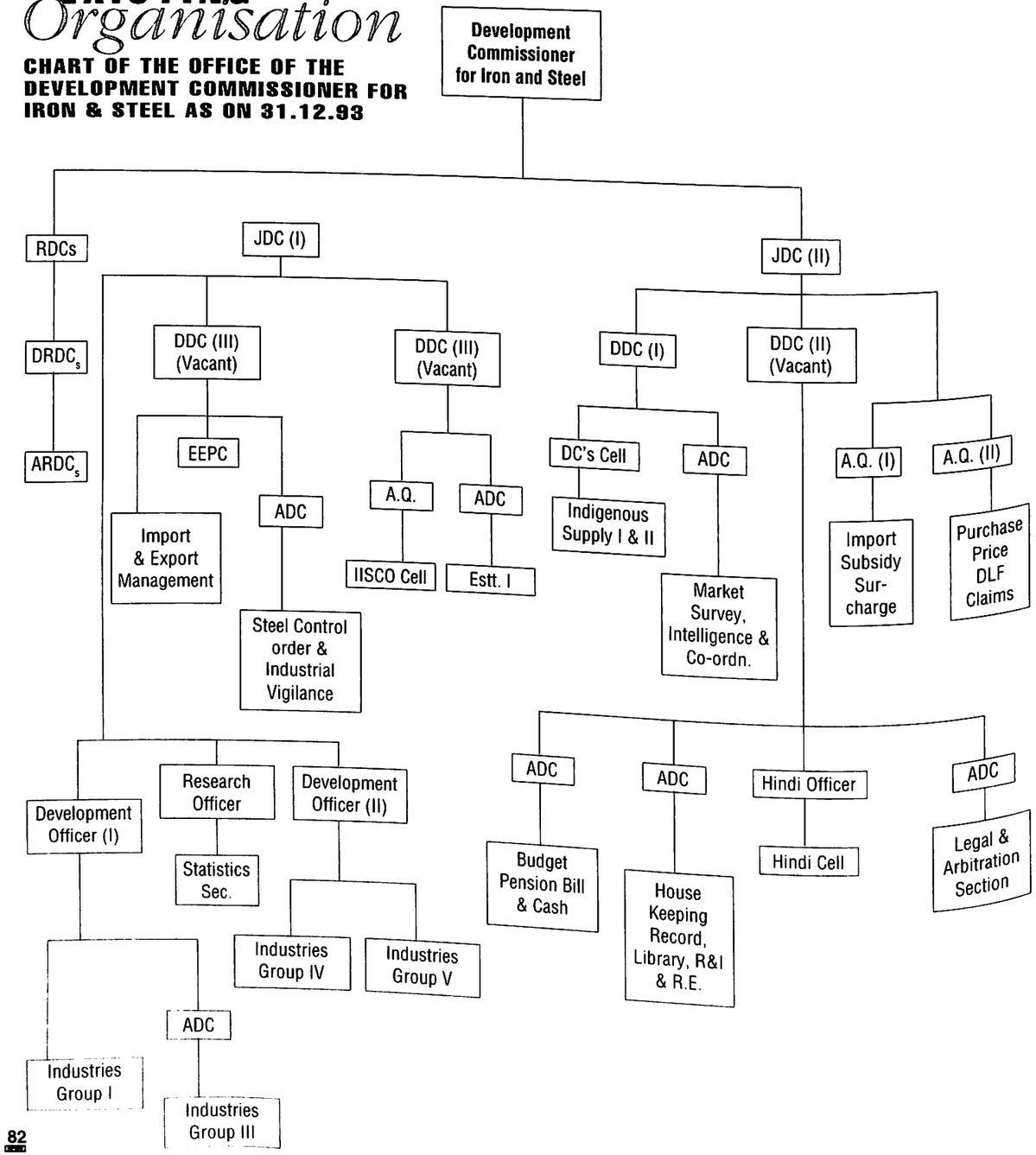
MINISTRY OF STEEL



(In addition there are six Desk Officers 15 Section Officers One Financial Analyst and one Assistant Director (Official Language) and other staff

EXISTING *Organisation*

CHART OF THE OFFICE OF THE DEVELOPMENT COMMISSIONER FOR IRON & STEEL AS ON 31.12.93



WELFARE OF THE *Weaker Sections*

A Cell under the charge of a Liaison Officer functions for monitoring the Government policy relating to reservations for and representation of Scheduled Castes and Scheduled Tribes in the Ministry of Steel, the attached and sub-ordinate offices and the Services of the Public Sector Undertakings under its administrative control. Periodic reviews and annual reports received from the Public Sector Undertakings regarding recruitment/promotion of SCs/STs against the vacancies reserved for them are scrutinised in the Cell and appropriate instructions issued to the PSUs, as and when necessary.

The actual record of performance of some of the major PSUs in respect of representation of SCs/STs during 1994-95 is indicated below:-

1. STEEL AUTHORITY OF INDIA LIMITED(SAIL)

SAIL has been playing an active role in undertaking various welfare measures like providing drinking water facilities, health care programmes, educational facilities, recreational activities etc. under their Periphery Development Programme. These measures mostly benefit SC/ST population living in the vicinity of the various projects of the integrated steel plants under SAIL. During 1994-95 an amount of Rs. 5.00 crores has been provided on this account.

The following table shows the total number of employees and number of SC & ST persons among them as on 1.1.94 :

	Total	SC		ST	
		No.	%	No.	%
Group 'A'	20081	1194	5.95	503	2.50
Group 'B'	32032	1750	5.46	1370	4.28
Group 'C' (Excluding Safai Karamchari)	142746	21030	14.73	18183	12.74
Group 'C' (Safai Karamchari only)	3627	3038	83.76	249	6.87

2. VISAKHAPATNAM STEEL PLANT (VSP)

Manpower and Recruitment: As on 30th September, 1994 out of the total manpower of 17,400, there are 2,733 employees belonging to Scheduled Caste (15.71%) and 863 to Scheduled Tribes (4.96%). Groupwise details are given in the following table:

MANPOWER OF VISAKHAPATNAM STEEL PLANT UPTO SEPTEMBER, 1994

Group	No. of total Employees	No. of SC Employees	% of Sc Employees	No. of ST Employees	% of ST Employees
A	2433	380	15.55	39	1.6
B	9332	1510	16.18	506	5.4
C	3387	577	17.04	274	8.1
D	2238	266	11.89	64	2.86
Total	17400	2733	15.71	863	4.96

House Allotment: In the matter of allotment of quarters, VSP provides reservation for SC/ST employees to the extent of 10% in 'A' and 'B' types, LIG and Executives Flats; and 5% in respect of 'C' and 'D' types as also MIG houses.

Scholarships : There is a scheme for grant of scholarships for the school level children of SC/ST employees. In addition, there is another scheme to grant scholarships to under graduate engineering students belonging to Scheduled Castes and Scheduled Tribes.

Educational Merit Award: In the name of Dr. Ambedkar, under an Annual Merit Award Scheme, a cash award is given to the students securing the highest marks in the 10th class examination amongst students belonging to the SC/ST community, based on the results of the final examination.

3. NATIONAL MINERAL DEVELOPMENT CORPORATION LTD. (NMDC)

Manpower Position

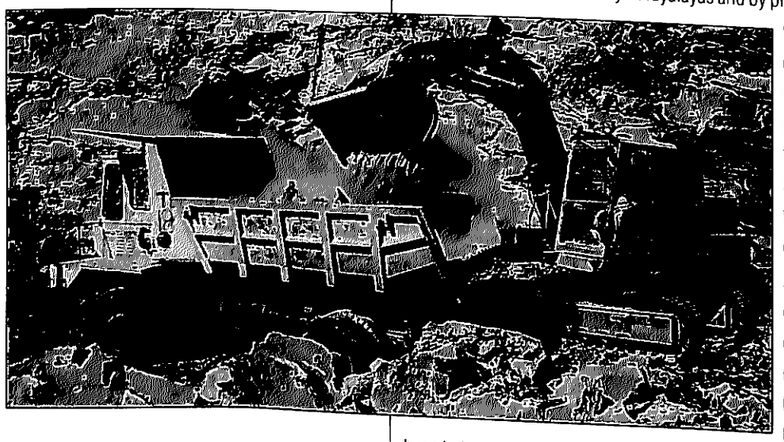
As on October 31, 1994 the manpower position in different units of the Company was as follows:-

Group	Total No. of Regular Employees on 31.10.94	No. of SC Employees out of col. 2	No. of ST Employees out of col. 2	No. of women Employees out of col. 2
(1)	(2)	(3)	(4)	(5)
A	756	48	5	18
B	1161	90	31	54
C	3086	480	628	130
D	1807	467	417	211
Total	6810	1085	1081	413

Welfare Of the Weaker Sections

The total number of employees in NMDC as on 31.10.1994 was 6810 out of which 1085 persons belong to Scheduled Castes and 1081 persons belong to Scheduled Tribes.

The Corporation gives facilities for promotion of education among the children of SCs/STs by offering scholarships in Local Kendriya Vidyalayas and by providing free education facilities to children of tribals who seek admission in project schools. A school exclusively for children of tribals is being run by the Corporation at the Bailadila-5 Project. All tribals residing in the Project area are offered free medical facilities at the NMDC project hospitals. Members of Scheduled Tribe Communities avail of the services of the Project Co-operative Societies even if they are not employees of the Corporation.



At Bailadila Projects, NMDC has constructed two community centres. Weekly film shows and other entertainment is provided at these centres. A weekly market (Haat) is being organised in Kirandul and Bacheli where the Adivasis get an opportunity to sell their products directly to consumers. NMDC also has been helping the villages around the Projects by providing hand pumps, digging wells for drinking water, providing mobile dispensary facilities, constructing approach roads to their villages etc.

4. MANGANESE ORE (INDIA) LIMITED (MOIL)

Social Commitment

MOIL has adopted a tribal village-Gondi close to Ukwa Mine in Madhya Pradesh. The Company has introduced a wide range of development activities such as repairs of roads, construction of houses for homeless tribals, construction of school buildings to impart education to tribal children, etc as part of their ongoing efforts to promote social welfare.

Manpower

The composition of the work force of the company as on September, 1994 was as under :-

Group	SC	ST	Others	Total
A	20	4	198	222
B	13	11	157	181
C	344	461	1555	2360
D	1285	1975	3441	6701
Total:	1662	2451	5351	9464

Out of the total number of 9464 employees, 1560 are women.

5. KUDREMUKH IRON ORE COMPANY LIMITED (KIOCL)

Manpower Position

As on 30th November, 1994, the total number of employees in KIOCL were as follows :-

Group	Total No. of Employees including SC, ST as on 30th November, 1994	SC in position	ST in position
1	2	3	4
'A'	452	36	12
'B'	211	11	2
'C'	1527	195	25
'D'	241	83	31
Total	2431	325	70

6. BHARAT REFRACTORIES LIMITED (BRL)

The employment statistics of the Company including SC/STs are as below:-

The manpower on the roll of the Company as on 31st March, 1994 was 2968 comprising of 362 and 403 employees belonging to Scheduled Caste and Scheduled Tribe Communities respectively. Besides, 57 employees belonging to ex-servicemen, 18 physically handicapped and 120 women employees were on the rolls of the Company as on 31st March, 1994.

In the subsidiary Company, IFICO Ltd., 974 employees were on the rolls as on 31st March, 1994. This comprised 45 employees from the SC and 128 employees from the ST Community. The ex-servicemen and women in employment as on 31.3.1994 were 17 and 45 respectively.

7. SPONGE IRON INDIA LIMITED (SIIL)

Manpower

The total number of employees of the Company as on 30.9.1994 is furnished below indicating separately persons belonging to Scheduled Castes, Scheduled Tribes, Ex-servicemen, Physically Handicapped (PHC) and Women.

Sl.	Groups	Total No. of Employees	SC	ST	Ex-Servicemen	PHC	Women
1.	Group A	112	13	-	-	-	-
2.	Group B	98	17	6	1	1	6
3.	Group C	241	40	22	3	3	15
4.	Group D	161	32	29	1	6	15
	Total	612	102	57	5	10	36

8. METAL SCRAP TRADE CORPORATION (MSTC)

The employment statistics of the Company are given below:-

Scheduled Castes/Tribes, Ex-servicemen and physically handicapped persons:

Group	Total	SC	ST	Physically handicapped	Ex-Servicemen
A	111	11	1	Nil	1
B	25	05	1	1	-
C	108	22	5	2	3
D	23	8	1	1	-
	267	46	8	4	4

9. FERRO SCRAP NIGAM LIMITED (FSNL)

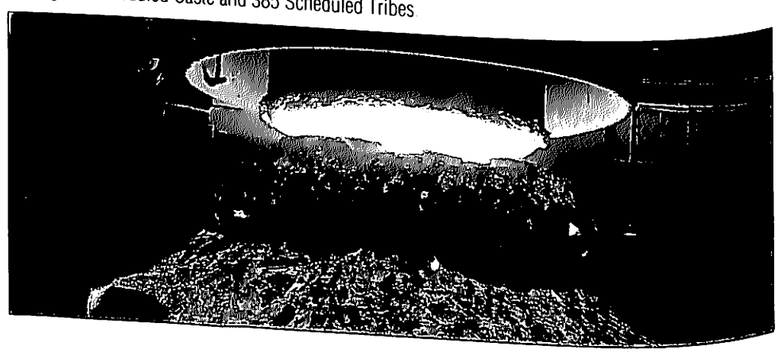
The number of Scheduled Castes/Tribes, Ex-servicemen and Physically Handicapped Persons are as follows:

GROUP	NO. OF EMPLOYEES	SC	ST	EX-SERVICEMEN	PHYSICALLY HANDICAPPED
A	140	11	4	3	-
B	276	6	-	-	-
C	981	189	144	59	2
D	4	4	-	-	-
	1401	210	148	62	2

10. METALLURGICAL & ENGINEERING CONSULTANTS INDIA LIMITED (MECON)

Manpower Position

The total number of employees in the Company as on 30th September, 1994 is 3750, out of which 320 belongs to Scheduled Caste and 385 Scheduled Tribes



PROGRESSIVE USE OF *Hindi*

1.The Ministry continued its efforts for greater use of Hindi in official work during the year 1994-95 keeping in view the Annual Programme prepared by the Department of Official Languages (Ministry of Home Affairs) for implementation of the Official Language policy of the Union.

2. The work relating to the progressive use of Hindi in the Ministry of Steel is under the administrative control of a Joint Secretary and is looked after by a Deputy Secretary. The Hindi Section consists of an Assistant Director, a Senior Translator, three Junior Translators and two LDCs. There are 53 Devanagari Typewriters including 27bilingual electronic Typewriters. Adequate reading material in Hindi is available in the Ministry. A number of measures have been taken for the promotion of progressive use of Hindi in the Ministry and in the office of the Development Commissioner for Iron and Steel. All communications received in Hindi are being replied to in Hindi.

3. Some important items in regard to the use of Hindi in the working of the Ministry and its PSUs are indicated below:

a) Almost all the Public Sector Undertakings under the administrative control of this Ministry are publishing their house journals in Hindi also. In addition, Hindi magazines and books are available in their libraries.

b) An inspection team of the Ministry oversees the status of implementation of the provision of the Official Language Act/Rules in its attached office and Public Sector Undertakings under the administrative control of the Ministry. In the year under review this Inspection team had made 10 such inspections

4. Official Language Implementation Committee

There is an Official Language Implementation Committee under the Chairmanship of a Joint Secretary in the Ministry. This Committee reviews the progress made in the use of Hindi in the Ministry, its attached office and Public Sector Undertakings. Meetings of the Committee are held from time to time During the year under report two meetings were held.

5. Hindi Salahkar Samiti

In accordance with Government instructions, the Ministry of Steel has constituted a Hindi Salahkar Samiti Besides, Members of Parliament, senior officers of the Ministry of Steel, Department of Official Languages Development Commissioner for Iron and Steel, Chairman-cum-Managing Directors of Undertakings eminent persons working for the propagation of Hindi are also its members A meeting of this samiti was held on 14.2.94 under the Chairmanship of Steel Minister

6. Rajbhasha Shield Trophies

In order to encourage the use of Hindi in the Offices and Undertakings under the administrative control of the Ministry of Steel, a Chal Vaijayanti, a Rajbhasha Shield and two Trophies have been instituted These awards are given each year to the office/Undertakings whose performance in this field is judged the best Besides, a medal is also awarded to the officer/employee of the Ministry whose work in Hindi is rated the best

7. Implementation of Section 3(3) of the Official Language Act

In pursuance of Official Language Policy of Govt almost all documents covered under section [illegible] Official Language Act are prepared both in Hindi and English In order to ensure issue of letters [illegible]

to Central Government Offices located in Regions 'A', 'B' and 'C' "Checkpoints" have been identified in the Ministry.

8. Incentive Scheme for Original Work in Hindi

The cash incentive Scheme for Original work in Hindi introduced by the Department of Official Languages is being implemented in the Ministry. Almost all Sections/Desks of the Ministry have started writing short/ routine notes in Hindi. Officers have been requested to use Hindi to the extent possible in their work so as to set an example for the staff under them. Seven persons have been given cash prizes under the incentive scheme during the year.

9. Cash Prizes Scheme for Dictation in Hindi

An incentive scheme for officers for giving dictations in Hindi is in operation in this Ministry. During the year, an officer was awarded a cash prize under the scheme.

10. Award for writing of Hindi Books

A Scheme for awarding cash prizes for writing technical books in Hindi on the various disciplines related to the Steel industry and its allied subjects is also in operation in the Ministry. Under the scheme, three prizes of Rs. 10,000/-, Rs. 7,500/- and Rs. 5,000/- are given to the first three books selected on merit.

11. Hindi Fortnight

In order to create interest in the use of Hindi in Official work among officers/employees of the Ministry, a "Hindi Fortnight" was observed from 14.9.1994 to 28.9.1994. An appeal was issued by the Hon'ble Steel Minister exhorting staff of the Ministry and the Public Sector Undertakings to increase the use of Hindi in Official Work. During this period Hindi essay writing/Hindi typing/Hindi Stenography competitions were conducted and prizes awarded.

12. Training of staff in Hindi/Hindi Typewriting/Hindi Stenography

A programme has been drawn up for imparting training in Hindi/Hindi Typewriting/Hindi Stenography to those employees for whom in service training is obligatory. The position regarding training in Hindi/Hindi typing/Hindi Stenography in the Ministry is as under :-

Training course	Nos. of trained persons
a) Hindi Typing	4
b) Hindi Stenography	17
c) Hindi Training	
(i) Total No. of employees/Officers (Group A, B & C)	171
(ii) Total Nos. of employees/officers possessing working knowledge of Hindi	161

13. Officers and staff of the attached office and Public Sector Undertakings are given training under the Hindi Teaching Scheme of the Ministry of Home Affairs, wherever such facilities exist. In other places, employees are encouraged to learn Hindi through correspondence courses conducted by the Central Hindi Directorate.

14. SAIL have initiated their own Hindi teaching programme through correspondence.

15. The expenditure on such training is borne by the concerned organisations.

to Central Government Offices located in Regions 'A', 'B' and 'C' "Checkpoints" have been identified in the Ministry.

8. Incentive Scheme for Original Work in Hindi

The cash incentive Scheme for Original work in Hindi introduced by the Department of Official Languages is being implemented in the Ministry. Almost all Sections/Desks of the Ministry have started writing short/ routine notes in Hindi. Officers have been requested to use Hindi to the extent possible in their work so as to set an example for the staff under them. Seven persons have been given cash prizes under the incentive scheme during the year.

9. Cash Prizes Scheme for Dictation in Hindi

An incentive scheme for officers for giving dictations in Hindi is in operation in this Ministry. During the year, an officer was awarded a cash prize under the scheme.

10. Award for writing of Hindi Books

A Scheme for awarding cash prizes for writing technical books in Hindi on the various disciplines related to the Steel industry and its allied subjects is also in operation in the Ministry. Under the scheme, three prizes of Rs. 10,000/-, Rs. 7,500/- and Rs. 5,000/- are given to the first three books selected on merit

11. Hindi Fortnight

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