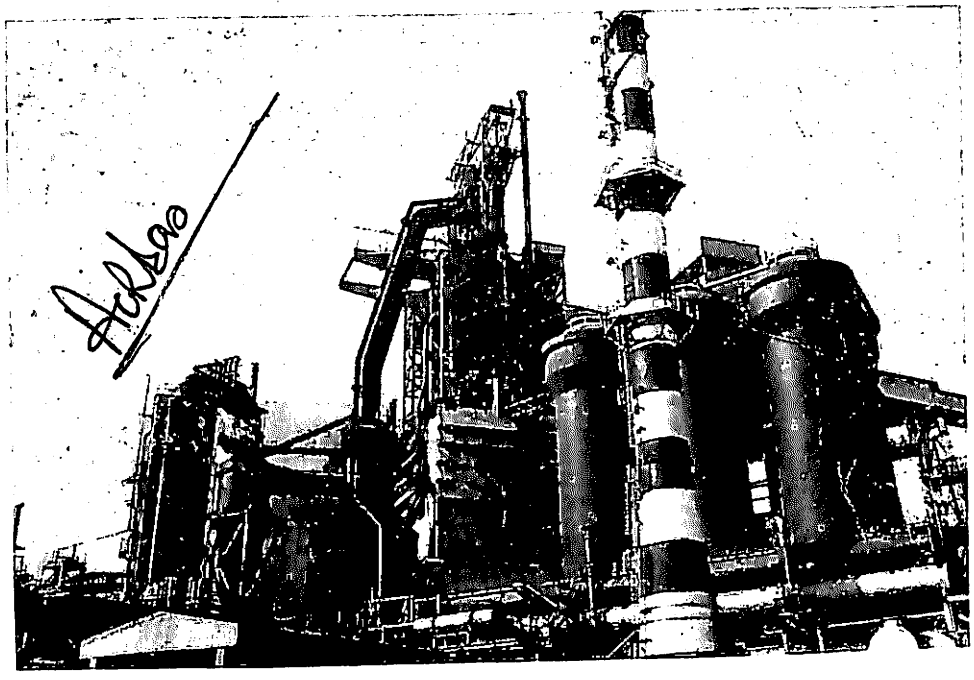
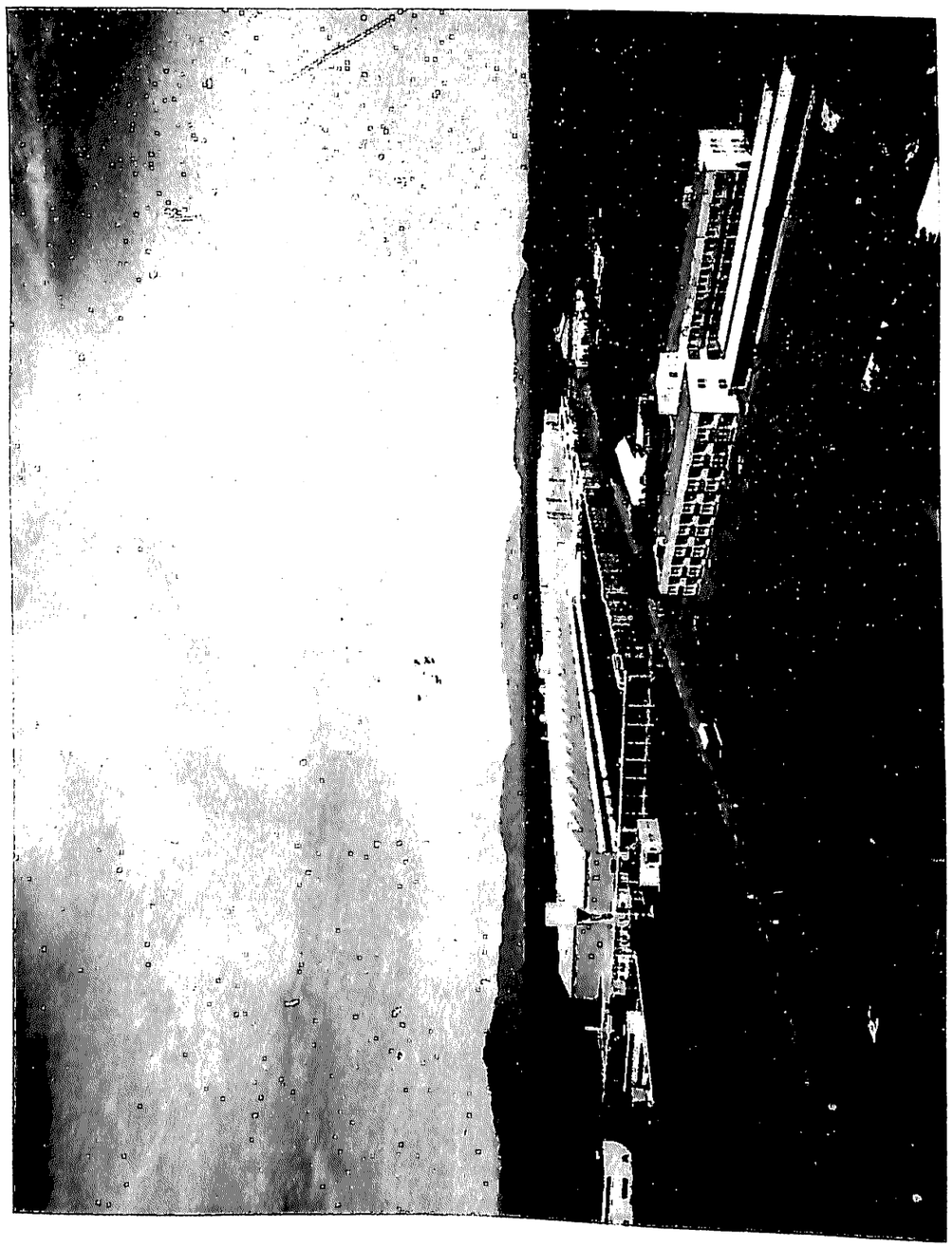
सत्यमेव जयते

ANNUAL REPORT 1993-94



MINISTRY OF STEEL

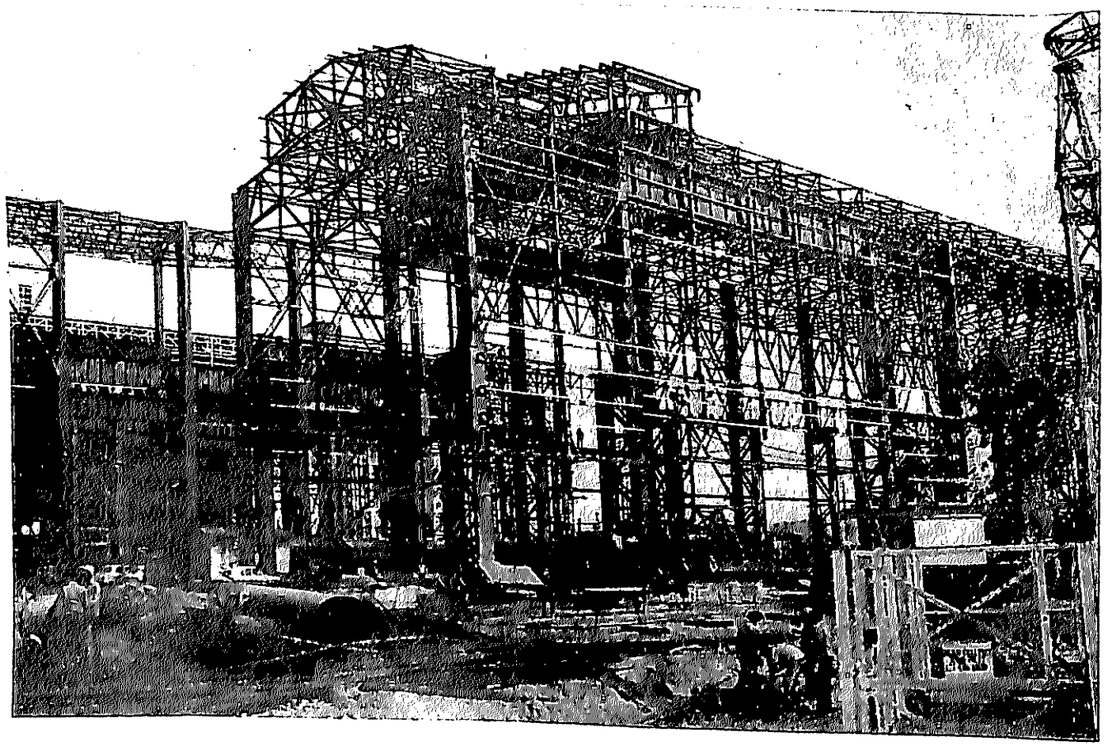
CONTENTS



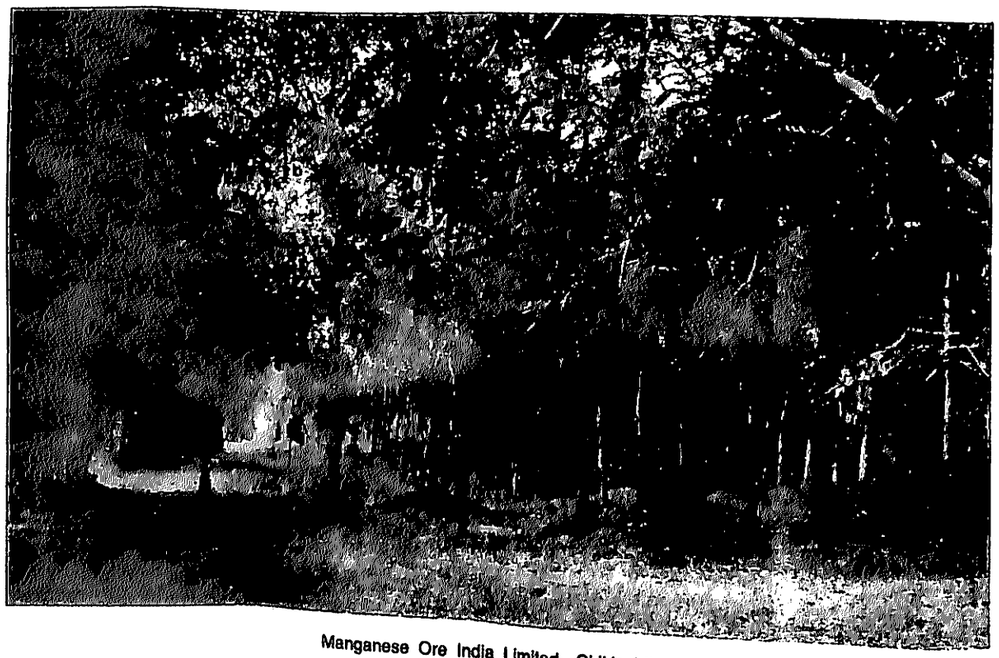
Salem Steel Plant—A Panoramic view

YEAR'S HIGHLIGHTS

- After achieving a record production of saleable steel at 8.335 million tonnes in 1992-93, Steel Authority of India Ltd., (SAIL) is set to cross the target of 8.600 million tonnes of saleable steel production in 1993-94.
- SAIL recorded the highest ever pre-tax profit at Rs. 423 crores in 1992-93. For the second time a dividend of Rs. 79.72 crores paid to its share holders.
- For the first six months of 1993-94, SAIL recorded a net profit of Rs. 62.47 crores as against Rs. 52.67 crores for the corresponding period in 1992-93, representing an increase of 16%
- Government has disinvested 10.52% of its equity in SAIL.
- On the recommendation of a Task Force set up by Government to prepare a 20 years action plan for growth of Indian Iron & Steel Industry, Government has set up a Standing Committee to review the Steel Industry and to suggest various policy measures to the Government.
- Work on Phase-II of Rourkela Steel Plant Modernisation has begun. Work on Durgapur Steel Plant modernisation is at an advanced stage of implementation.
- Modernisation of Bhilai Steel Plant (Phase-I) was approved by Government in July, 1993.
- Production of Crude Steel in Visakhapatnam Steel Plant increased by 40%.
- Saleable Steel production in Visakhapatnam Steel Plant increased by 57%.
- Coke rate per tonne of Hot Metal in Visakhapatnam Steel Plant brought down to 571 Kg. as against 583 Kg. during 1992-93.
- Specific Energy Consumption in Visakhapatnam Steel Plant reduced to 8.43 G. Cal. as against 10.10 G. Cal. during 1992-93.
- Visakhapatnam Steel Plant has exported power to Andhra Pradesh State Electricity Board Grid on many occasions during the year.
- Steel exported by Visakhapatnam Steel Plant has exceeded Rs. 300 crores during the first half year as against Rs. 212 crores during 1992-93.
- MSTC's Corporate Plan approved by Government — the company plans diversification in areas of manufacture relating to the iron and steel industry in the long run.
- FSNL crosses production of one million tonnes of scrap during 1992-93, recording its highest ever production of scrap — plans technology upgradation along with its foreign Collaborator.
- KIOCL wiped off its entire accumulated losses and paid a maiden dividend @ 3% on the paid up capital (amounting to Rs. 19.04 crores) for the year 1992-93.
- NMDC paid divident @ 20% of the paid up capital (amounting to Rs. 26.43 crores) for the year 1992-93. This was the third year in succession for payment of dividend.



LD Converter 2—Construction site



Manganese Ore India Limited—Chikla Mine

1

THE YEAR AT A GLANCE

1. PRODUCTION OF STEEL

Production of saleable steel in the five integrated steel plants of Steel Authority of India Limited (SAIL) during the year 1993-94 is expected to be about 8.60 million tonnes as against the production of 8.34 million tonnes representing an increase of 4.2 per cent over the production in 1992-93.

Production by Visakhapatnam Steel Plant is estimated to be 1.39 million tonnes as against 0.91 million tonnes in 1992-93. TISCO is expected to produce 2.40 million tonnes of saleable steel in 1993-94 as against 2.12 million tonnes in 1992-93. Production of saleable steel by the secondary producers is expected to be 4.70 million tonnes as against 3.40 million tonnes in 1992-93.

Total production of saleable steel in 1993-94 is thus expected at about 17.35 million tonnes, as compared to 14.68 million tonnes in 1992-93, representing an increase of 18.2 per cent.

1.2 DEMAND AND AVAILABILITY OF STEEL

Total demand for finished steel in 1993-94 is estimated at 18.95 million tonnes. Against this, the domestic availability in the year is expected at 17.24 million tonnes, leaving a gap of 1.71 million tonnes.

In the case of pig iron, the domestic availability is estimated at 1.89 million tonnes, against an estimated demand of 2.20 million tonnes. The gap is likely to be met to some extent through imports. It is expected that the import of finished steel in 1992-93 may be about 1 million tonnes and of pig iron about 0.1 million tonnes.

1.3 PERFORMANCE OF SAIL

Production of saleable steel in the five integrated steel plants of SAIL for 1993-94 (upto September, 1993) was 4.06 million tonnes representing an increase of 4% over the production during the corresponding period in 1992-93. Production of crude steel was 4.696 million tonnes as against 4.699 achieved during the corresponding period in 1992-93.

HALF YEARLY WORKING RESULTS OF SAIL

In spite of various odds, the net profit of SAIL for six months ended on 30th September, 1993 at Rs. 62.47 crores as against Rs. 52.76 crores for the corresponding period of last year was up by 36%. The Gross Margin *i.e.* profit before depreciation and interest was Rs. 823.27 crores against Rs. 707.24 crores during the corresponding period of last year, *i.e.* an increase of over 16%. During the first six months of the 1993-94 the company has recorded a sales turnover and other income of Rs. 4904 crores as against Rs. 4423.80 crores during the first six months of the previous year.

1.4 MAJOR CONSTRUCTION PROJECTS—SAIL

1. Implementation of the Durgapur Steel Plant Modernisation—project is now in its final stage. Except for the blast furnace package, the remaining components of the project are expected to be completed by June, 1994. The modernisation is expected to increase production and productivity in Durgapur Steel Plant and also improve techno-economic parameters.

2. The modernisation scheme for Rourkela Steel Plant in two phases was approved in December, 89. The Revised cost estimates for the project was sactioned in May, 1992. The project is being implemented generally as per schedule and is to be completed by December, 1995.

3. Government have sanctioned the modernisation of Bokaro Steel plant on 23rd July, 1993 at a total cost of Rs. 1625.79 crores. Preliminary works are nearing completion. Orders are likely to be placed by June, 1994 and the modernisation work is scheduled to be completed by June, 1997.

1.5 VISAKHAPATNAM STEEL PLANT

Visakhapatnam Steel Plant with an annual capacity of 3 million tonnes of Crude Steel was fully commissioned in July, 1992. Most of the units, under

Stage-II are still in the process of stabilisation. Despite this, there has been a consistent improvement in production as well as techno-economic parameters. During the period April—September, 1993 Visakhapatnam Steel Plant has achieved 23% growth in production of Hot Metal over the previous year, 40% in Crude Steel and 57% in Saleable Steel. It has reduced the coke rate to 571 Kg. per tonne of Hot Metal during April—September, 1993 as against 584 Kg. during 1992-93. The specific energy consumption during this period has been reduced to 8.46 G. Cal. from 10.10 G. Cal. during 1992-93. With consistently good performance by captive power plant, an average load factor of 0.85 was achieved in the period form April—September, 1993 as against 0.7 during 1992-93. Visakhapatam Steel Plant continues to make efforts for export of its products. During the period April—September, 1993 it has exported steel worth over Rs. 300 crores as against Rs. 212 crores exported during the year 1992-93.

1.6 ELECTRIC ARC FURNACE INDUSTRY

At present 178 number of Electric Arc Furnace Units have been commissioned. Out of this, 176 number of Electric Arc Furnace units held Industrial Licence with a capacity of 7.2 million tonnes and the balance 2 units have filed IEMs with STA, Ministry of Industry and have commenced production.

Production of Ingots/concast billets by EAF units, which are reporting their production to the office of the Development Commissioner for Iron and Steel, during the last three years and for April-July, 1993 is given below:—

Category	1990-91	1991-92	1992-93	1993-94 (Prev.)
Mild Steel	2363.0	1672.0	1498.7	303.2 (April to July)
Medium/High Carbon steel	371.6	341.2	293.1	75.4
Alloy Steel	598.8	516.1	585.0	157.1
Stainless steel	176.0	197.7	152.1	44.0
Total Reported	3509.4	2726.0	2528.9	579.7

The above figures do not include production of steel by casting units registered with DGTD.

1.7 SPONGE IRON SECTOR

Sponge iron is a metallic product produced by direct reduction of high grade iron or iron ore pellets into 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 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 27.70 lakh tonnes by the end of December 1993. The total sponge iron production in the current year is likely to be about 23 lakh tonnes as against the last year's production of 15.59 lakh tonnes. The performance of the sponge iron units that are already commissioned is given below:—

(in lakh tonnes)

Sl. No.	Name of the Unit	Plant Location	Installed capacity (in lakh)	Production 1992-93 (April-December 1993)	Production 1993-94 (Provisional)
1	2	3	4	5	6
	(a) Coal based				
1.	Sponge Iron India Ltd.	Kothagudem, Distt. Khammam, Andhra Pradesh	0.6	0.49	0.35

1	2	3	4	5	6
2.	Orissa Sponge Iron Ltd.	Palaspanga, Distt. Keonjhar, Orissa.	1.00 (De-rated capacity)	0.94	0.77
3.	IPITATA Sponge Iron Ltd.	Joda, Distt. Keonjhar, Orissa.	1.20	0.99	0.79
4.	Bihar Sponge Iron Ltd.	Chandil, Distt. Singhbhum, Bihar	1.20	1.18	0.89
5.	Sunflag Iron & Steel Co. Ltd.	Bhandara, Maharashtra.	1.50	1.21	0.70
6.	Jindal Strips Ltd.	Raigarh, Madhya Pradesh.	3.00	0.53	0.63
7.	HEG Ltd.	Durg, Madhya Pradesh.	0.60	0.55	0.43
8.	Kumar's Metallurgical Corpn. Ltd.	Nalgonda, Andhra Pradesh.	0.30	—	0.10
9.	Bellary Steel & Alloys Ltd.	Bellary, Karnataka.	0.60	0.10	0.16
10.	Goldstar Steel & Alloys Ltd.	Vizianagram Andhra Pradesh	2.20	0.45	0.64
11.	Prakash Industries Ltd. (Commissioned in Nov. '93)	Champa, Bilaspur.	1.50	—	0.24
	(b) Gas based				
1.	Essar Gujarat Ltd.	Hazira, Gujarat.	8.00	9.15	10.72
2.	Grasim Industries (Commissioned on 31.3.93)	Raigad, Maharashtra.	6.00	—	0.31
		Total (a) & (b)	27.70	15.59	16.63

1.8 PIG IRON INDUSTRY

1.8 Pig Iron, a major raw material for the engineering industry, is in short supply. Efforts are being made to create pig iron manufacturing facilities in the secondary sector. The All India Financial Institutions have already sanctioned financial assistance to 13 units for a proposed capacity of approximately 16.95 lakh tonnes, & assistance is being sanctioned for another unit for a capacity of 2.50 lakh tonnes. The pig iron units of M/s Sesa Goa Ltd., M/s Usha Ispat Ltd. and M/s Mid-West Iron and Steel Co. Ltd. have already gone into production.

(ii) Growth of the pig iron industry depends on easy availability of coke. Manufacture of coke has been delicensed under the New Industrial Policy of July, 1991. Efforts are being made to encourage setting up of merchant coke oven batteries in the secondary sector.

1.9 IRON ORE EXPORT

During the year 1992-93, India exported around 28 million tonnes of iron ore. The exports during 1993-94 (upto August), have been around 10.5 million tonnes.

1.10 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 and promoting greater utilisation of the lower grade ores through beneficiation and other means. In keeping with this policy ceilings were fixed on exports of manganese and other ores.

1.11 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 supply availability, quality and the market trends of iron and steel in the country.

The last meeting of the Steel Consumers' Council was held on 8th July, 1993 at Bangalore.

1.12 MANAGEMENT INFORMATION SYSTEM

The computerised MIS introduced in the Ministry of Steel with the assistance of National Informations Centre (NIC) is functional in the areas of Administration, Public Enterprise Management, Personnel Management, project Monitering, 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 Pakage. Terminals have been provises to senier 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.

1.13 RESEARCH AND DEVELOPMENT

The thrust of R & D in the Iron and Steel Sector have been towards:

(i) — Plant performance improvement projects leading to:

— increase in productivity, yield, profitability and value addition.

— Optimum utilisaiton of resources

— decrease in rejection, input costs and specific energy and materials.

— improved quality of products and customer satisfaction.

(ii) Basic and scientific research to foster creativity and originality and expand the knowledge base as well as major technology development.

1.14 ENERGY CONSERVATION

The thrust on energy conservation was sustained, with the result that energy consumption and coke rate have come down during the year in succession:—

— In SAIL Plants specific energy consumption and coke rate have declined for the sixth successive year. Energy Consumption during 1992-93 has improved by 1.3% over the previous year and further reduction of 1.2% is envisaged during 1993.94.

BSP records the lowest energy consumption of 820 G.Cal/tec amongst the integrated Steel Plants of the country.

— VSP has achieved reduction of 17.76% during 1992-93 over that of 1991-92. A further reduction of 17.33% is envisaged in 1993-94.

— TISCO have achieved a marginal reduction of 0.5% during 1992-93 over the previous year.

1.15 WELFARE OF SCHEDULED CASTES AND SCHEDULED TRIBES AND WELFARE OF MINORITIES

The Public Sector Undertakings under the administrative control of Ministry of Steel continued 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.

1.16 ENVIRONMENTAL MANAGEMENT & POLLUTION CONTROL

The iron and steel plants have drawn up short term and long term action plans for expeditious achievement of pollution control norms:—

— out of 116 jobs of action plan in SAIL plants, 46 have already been completed before September, 1993. Another 37 schemes are expected to be completed by December, 1993, bringing the total to 83 and leaving 33 schemes to spill over December, 1993.

— In addition, 58 smaller sized schemes were also completed during the year 1992-93.

— VSP has gone for elaborate measures to combat pollution and expects to complete all the adentified pullution control schemes by December, 1993.

— TISCO has made sizeable progress in the area of environment protection during the year 1992-93 and have taken steps to identify the appropriate technology for control of pollution of open hearth furnaces by December, 1993, or they may phase out these plants in the near future.

— While the compliance by all the mini steel plants is not upto the mark, other units are by and large complying with the specified pollution control norms.

1.17 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 Week was organised in the Ministry in the month of Sept., 1993. During the year the reconstituted Hindi Salahkar Samiti of the Ministry of Steel held its first meeting under the Chairmanship of Minister of Steel on 28th July, 1993 at New Delhi. A Hindi Workshop for the officers of the level of Under Secretaries and above was organised on 14th Septemeber, 1993. The Workshop was inaugurated by the Secretary (Steel).

2

A PERSPECTIVE VIEW

In line with the new Industrial policy, announced in July 1991, the Steel Industry has also witnessed several important changes over the two years. These are as under:—

1. Iron and Steel Industry has been delicensed.
2. Pricing and distribution of Iron & Steel materials has been decontrolled. (except for few priority sectors)
3. Main producers are now free to determine and announce their domestic prices.
4. All restriction on import of iron and steel items have been removed and these have now been made freely importable.

The new Trade policy for the years 1992 to 1997 has been further liberalised in so far as iron and steel items are concerned. These changes include:

(a) All imports of iron and steel items have been decanalised.

(b) Even Pig iron and mild steel which were earlier on the negative list of exports have been made freely exportable.

The duties on several important inputs for steel industry such as refractory raw materials, ferro alloys, iron ore pellets etc. were reduced during the year. Further duties on certain finished steel products have also been reduced in line with general economic policy. this reduction is aimed at making the Indian Steel Industry more competitive.

Being a basic industry, 'Steel' plays an important role in the economic grwoth and is recognised as a supporting pillar of industrial development. The co-relation between steel production and gross domestic Product of a country cannot be undermined.

India is the 8th largest steel producer in the world producing about 18.1 million tonnes of crude steel annually, yet its per capita steel consumption is only arouand 26kg., being one of the lowest in the world. Compared to this, the world average per capita consumption is 149 kg. In some of the industrialised countries the consumption of steel is as high as 802 kg. in Japan and 540 in Germany. The potential of the growth in the steel industry can be gauged from our current low consumption figures.

Growth of the steel industry in India has followed a cyclical pattern and in the two decades immediately after independence, the average growth rate of steel production was more than 8%. In the next decade it fell below6% and during the last decade it has again picked up to about 6.4%. Indian steel sector has to be viewed in the global perspective where three significant developments have taken place. Firstly world steel production has declined gradually from 784 million tonnes in 1989 to 714 million tonnes in 1992. Secondly, the share of crude steel production from the developing countries has increased from 7.9% in 1980 to 16% in 1992, and finally China has emerged as one of the major steel producers producing almost 80 million tonnes of steel in 1992 as compared to 37 million tonnes in 1980.

In the new industrial policy the steel sector has been opned up to private investors and good response has been received from the entrepreneures. Steel Ministry is monitoring these developments and exploring possibilities of assistance from financial institutions and the State and Central Governments. After liberalisation, exports of steel have taken off in a big way. Steel export from India has increased from 3.1 lakh tonnes during 1991-92 to nearly 9 lakh tonnes during 1992-93. The target for 1993-94 is over 2 million tonnes. This is a sign of the levels of international competitiveness already achieved by the Indian Steel Industry.

The commissioning of new capacities at TISCO and modernisation programme at Durgapur, Rourkela and Bokaro Steel plants of SAIL and new units of ESSAR (Gujarat) and others will substantially add to the availability of the flat steel products in the country. By the end of the 9th Plan exports of over 5 million tonnes of various steel products including HR and CR coils are planned.

India has the requisits resources for a rich and vibrant steel industry. The first Indian integrated

steel plant was built in 1907 which was followed in the late fifties and early sixties with the setting up of steel plants in the public sector. During the late sixties and early seventies the country saw the emergence of a large number of mini mills. The alternative route of iron making by direct reduction was introduced in the eighties. Today, the country produces approx. 18 million tonnes of crude steel in a year with an installed steel making capacity of approximately 25 million tonnes.

The 8th Five Year Plan has been extended by two years, i.e. 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				
1993-94	18.95	9.64	7.60	17.24
1996-97 (Projected)	25.00	13.06	11.03	24.09
2. PIG IRON				
1993-94	2.20	1.85	0.30	2.15
1996-97 (Projected)	3.03	2.13	1.00	3.13

SOURCES OF FINISHED STEEL

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

(In '000 Tonnes)

	FINISHED STEEL		PIG IRON	
	1993-94	1996-97	1993-94	1996-97
SAIL	7334	8726	850	1655
TISCO	1208	2167	—	—
VSP	1100	2165	1000	475
TOTAL MAIN PRODUCERS	9642	13058	1850	2130
SECONDARY PRODUCERS	7595	11034	220	1000
TOTAL	17237	24092	2070	3130

ACTUAL PRODUCTION OF FINISHED IN 91-92 AND 92-93 HAS BEEN AS FOLLOWS:—

(In '000 Tonnes)

	1991-92	1992-93
SAIL	6398	6607
IISCO	317	322
TISCO	993	945
VSP	247	540
TOTAL MAIN PRODUCERS	7955	8414
SECONDARY PRODUCERS	6374	6790
TOTAL:	14329	15204

SAIL has already embarked on an ambitious modernisation programme of its plants in Durgapur and Rourkela 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 the first two phases of their modernisation programme and is likely to complete the remaining phases in the next couple of years.

In order to accelerate steel production certain steps have been taken in the last one year to assist the potential enterpreneurs in making investment decisions. It is anticipated that the private sector will play a major role in meeting the projected demand for steel by 1996-97 and in order to facilitate the establishment of steel industries in the private sector a comprehensive set of Guidelines for prospective entrepreneurs has been issued by the Ministry of Steel, which provide exhaustive details on the policy framework in the steel industry, availability of essential raw materials, infrastructural facilities, technological capacity, existing within the industries and the environmental standards that are required to be met with.

Ministry of Steel had set up a Task Force for formulating a 20 Year Action Plan for growth of the iron and steel industry, setting a realistic target for steel production and also suggesting practical ways of achieving the accelerated growth rate. The Report of the Task Force has been accepted by Government and steps to implement the recommendations of the Report have already been initiated.

3

RAW MATERIAL

1. Total Reserves and Distribution

The reserverable reserves of Iron Ore, i.e. hacmatite and magnetite as on 1.4.90 are placed at 9581 and 3143 million tonnes respectively, distributed over five zones in the country. The grade-wise distribution of haematite ores in different states is given in the table below:—

GRADE-WISE DISTRIBUTION OF HAEMETITE ORE IN THE COUNTRY (AS ON 1.4.1990)

(In million tonnes)

Sl. No.	Zone / State	High grade ore Fe 65%	Medium grade ore Fe 62-65%	Low grade ore (below Fe 62%)	Unclassified	Others	Blue dust / black Iron	Total
1.	ZONE 'A'							
	Bihar	34.4	1791.3	903.2	186.3	—	50.8	2966.00
	Orissa	313.3	1287.6	752.0	304.8	—	8.6	2666.3
	Total	347.7	3078.9	1655.2	491.1	—	59.4	5632.3
2.	ZONE 'B'							
	Madhya Pradesh	558.4	483.2	516.0	401.8	.045	71.0	2030.4
	Maharashtra	0.348	34.5	14.8	126.3	—	—	175.9
	Total	558.74	517.7	530.8	528.1	.045	71.0	2206.3
3.	ZONE 'C'							
	Karnataka	221.2	437.9	72.3	194.5	.257	.550	926.7
4.	ZONE 'D'							761.5
	Goa Region	13.5	153.2	465.4	80.6	36.6	12.2	
5.	ZONE 'E'							
	Andhra Pradesh	6.4	5.2	31.7	2.6	—	—	45.9
	Rajasthan	—	200	6.4	2.334	.046	—	8.9
	Total	6.4	5.4	38.1	4,9	.046	—	54.8
	GRAND TOTAL:	1147.54	4193.1	2761.8	1299.23	36.94	143.15	9581.6

2. Production of Iron Ore

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:

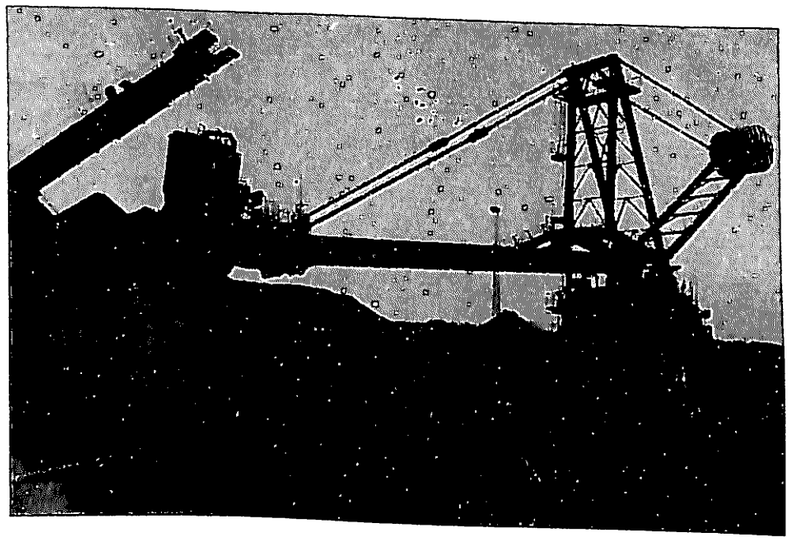
(a) Captive mines, owned and operated by individual steel plant, mainly for their own use;

(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.

3. Production and Despatches

Production of iron ore (including concentrates) during the year 1993-94 is estimated at 56.4 million tonnes as against recorded figures of 55.8 million tonnes in the previous year. State-wise production figures indicated that Madhya Pradesh would be the chief iron ore producing state accounting for 14.3 million tonnes (25.4%) of the total production during 1993-94 followed by Goa 12.8 million tonnes (22.6%) Karnataka 11.2 million tonnes (19.8%), Bihar 10.0 million tonnes (17.7%) and Orissa 7.9 million tonnes (14.1%). The remaining production of 0.2 million tonnes would be from Andhra Pradesh, Maharashtra, Rajasthan and Haryana.



Bedding and Blending Plant of Bedding, Blending and Sinter Plant-2

Despatches of iron ore (including concentrates) in 1993-94 are estimated at 54.2 million tonnes. The share of despatches for internal consumption and exports would be 28.0 million tonnes and 26.2 million tonnes respectivcly.

MANGANESE ORE

Reserves

As per the latest inventory the reserves of manganese ore is 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.

Production

The production of mangancse ore during 1992-93 and estimatcd during 1993-94 is indicated below:

Year	Qty. (in '000 tonnes)	Value (Rs. in crores)
1992-93	1870	138.81
1993-94 (Estimated)	1781	132.19

Orissa, Karnataka, Madhya Pradesh and Maharashtra would be the principle producing states accounting for 36%, 21%, 19% and 18% respectivly of the total production of manganes ore in 1993-94.

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 minimum 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

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

(c) Managanese 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)
1992-93	2.59	33.94
1993-94 (April-Oct., 93)	1.29	18.76

CHROMITE ORE

Reserves

As per the latest inventory, the total recoverable reserves of chromitc 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.

Production

Production of chromite during 1992-93 and estimatcd during 93-94 are given below:

Year	Qty. (in Th. tonnes)	Value (in crores)
1992-93	1070	204.88
1993-94	1094	209.59

Exports

Keeping in view the limited reserves of chromite ore in the country, only certain grades of ore are allowed for export, and emphasis has been laid on export of beneficiated chromite concentrates. From the year 1993-94 a three year Export Policy has been decidcd upon by Govt. so as to enable the exporters to establish their presencc in the international market. The minimum 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)
1992-93	4.21	61.20
1993-94 (April—Oct. '93)	1.13	25.90

Coking Coal

8.1 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.

8.2 During 1992-93, the consumption of cooking coal in SAIL steel plants (including IISCO), TISCO and VSP was as under:

(Million Tonnes)

	SAIL	TISCO	VSP*
Indigenous sources	9.736	1.718	0.691
Imports	4.089	0.659	1.547
Total	13.825	2.377	2.238

The estimated consumption during 1993-94 by these plants is as under:

(Million Tonnes)

	SAIL	TISCO	VSP
Indigenous sources	9.90	2.153	0.845
Imports	4.10	0.444	1.785
Total	14.00	2.597	2.670

Non-Coking Coal

During the year 1992-93, SAIL steel plants (including IISCO) consumed 4.20 million tonnes of non-coking coal produced from domestic sources. The likely consumption in 1993-94 is 4.50 million tonnes.

During 1992-93, TISCO consumed 1.63 MT of non-coking coal. Expected consumption during 1993-94 is 1.57 million tonnes.

During 1992-93, VSP consumed 0.999 MT of non-coking coal. Expected consumption during 1993-94 is .020 million tonnes.

REFRACTORY

Refractories are the primary meterials used in the industrial sector in the internal lining of Industrial Furnances. Refractories are Classified, from chemical composition angle into 3 classes—Acid Refractories, Basic Refractories and Neutral Refractories. Refractories are also used for lining of all the furnances including coke oven battery, Blas Furnance, Steel produciton furnances, re-heating furnances, electric arc furnances etc. the consumption of refractories per tonne of crude steel varies widely depending upon the quality of raw material technology and operational practices. the adoption of large size blast furnances and basic oxygen furnances in place of open hearth furnances, secondary refining and continuous casting etc. have not only reduced the consumption of refractories, but have also led to a major change in the demand pattern towards more specialised refractories. These trends have resulted in the capacity in the refractory industry remaining unutilised to a great extent as the industry has not kept pace with the changed situation. The domestic refractory industry is now beginning to respond to the changed situation and has taken up technical upgradation.

2. The domestic production of various categories of refractory in the last two years as furnished by the Indian Refractory Makers Association is as under:

	1990-91	1991-92	1992-93 (M.T.)
Fire Bricks	168,940	179,023	164,281
High Al/Hi-grog	134,131	151,760	143,339
Silica bricks	26,640	19,051	26,808
Basic Bricks	183,140	209,336	218,735
Dead Burnt Mag.	126,100	126,826	128,718
Special refractr.	8,724	7,922	9,801

3. The raw materials required for manufacture of specialised refractories are basically high quality Sintered Magnesia, Sintered Tabular Alumina, Sinter mullite. the import of raw materials during 1991-92 was 1.10 lakh tonnes of high purity Magnesia. The Refractory Industry is concerned about availability of high quality sintered magnesia, calcined bauxite, low silica chrome ore and graphite.

4. Certain varieties of refractories like chemical bonded basic bricks, slide gate plates and electrocast refractories are being exported. The Refractory Industry has achived Rs. 10 crores exports during 1991-92 and Rs. 21 crores in 1992-93. The industry considers that a target of Rs. 35 crores for 1993-94 will be achieved. Targets of Rs. 50 crores for 1994-95, Rs. 75 crores for 1995-96 fand Rs. 100 crores for 1996-97 have been set. The high quality of Indian coke oven silica bricks has been accepted abroad, and if current offers fructify, a quantum jump in exports is possible.

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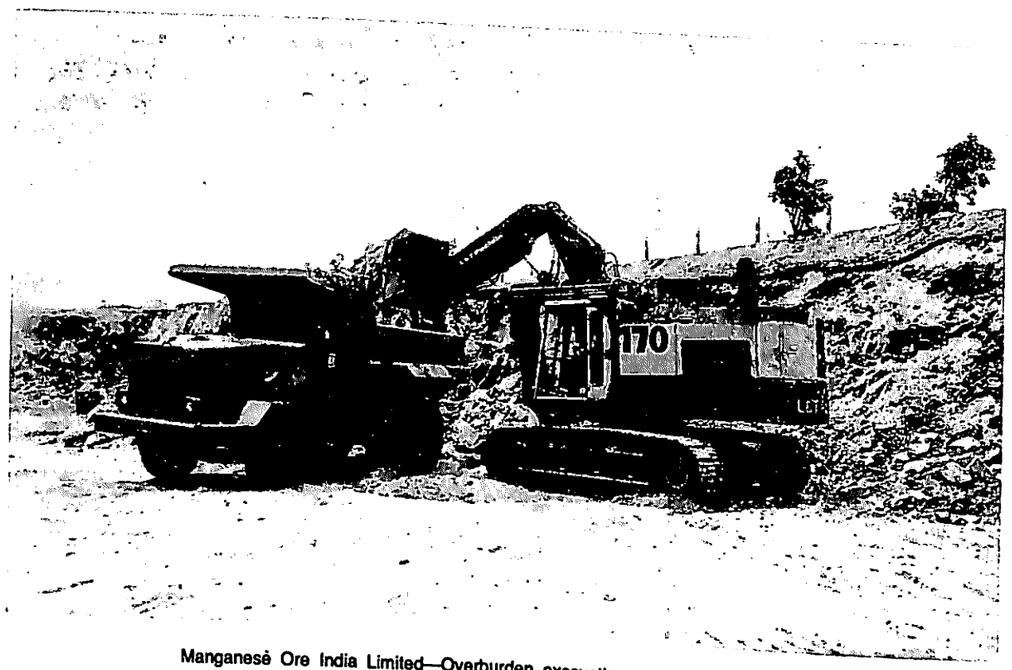
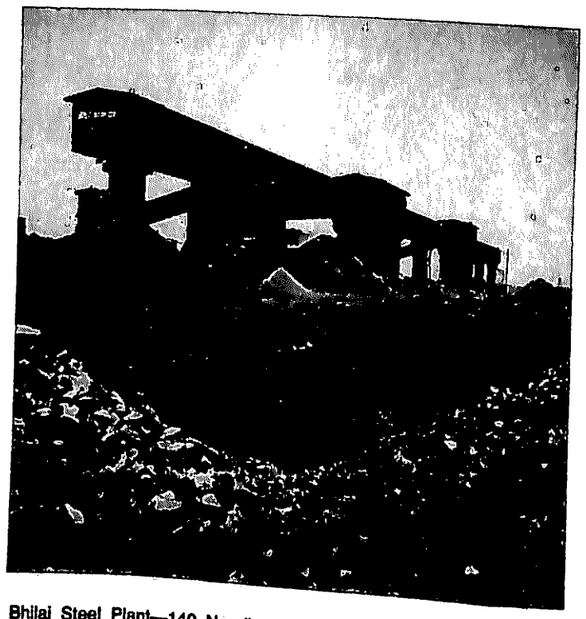


Manganese Ore India Limited—Overburden excavation at Dongri Buzurg Mine



Bhilai Steel Plant—140 Nandini Lime Stone Mine—Crushing Plant

5. The World export-import trade in refractories is estimated to be Rs. 30,000 crores. With the cost advantages in skilled and technical man-power in India, the quality of products, technical support sarvices, and so on, India can gain a share in this volume of trade. However, the continuing recession in developed countries, decline in specific consumption of refractories, and over-capacity abroad are negative aspect. Taking size of major consuming industries like steel, cement, glass etc. in the target countries abroad, the state of development of the domestic refractory industry in those countries and the degree of competition from other foreign refractory suppliers in the target markets, the targets of export as above have been set.

4

DISTRIBUTION AND AVAILABILITY

The table below gives the availability of iron and steel in the domestic market during 1992-93 and estimated availability during 1993-94:

(In '000 tonnes)

Item	Finished Steel		Pig Iron	
	1992-93 (Provisional)	1993-94 (Estimated)	1992-93 (Provisional)	1993-94 (Estimated)
1. Production				
(a) Main Producers	8414	9642	1679	1539
(b) Secondary Producers	6790	7595	160	350
2. Import	1030	1000	67	100
3. Total (1+2)	16234	18237	1906	1989
4. Export	741	1395	16	246
5. Inter Plant transfers	82	110	—	—
6. Net Availability (3-4-5)	15411	16732	1890	1743

2. PRICING AND DISTRIBUTION

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 would, however, 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 Order for supplies to exporters of engineering goods, and makes annual suply plans for the North Eastern Region. The requirments of Defence and Railways are met by the main producers directly.

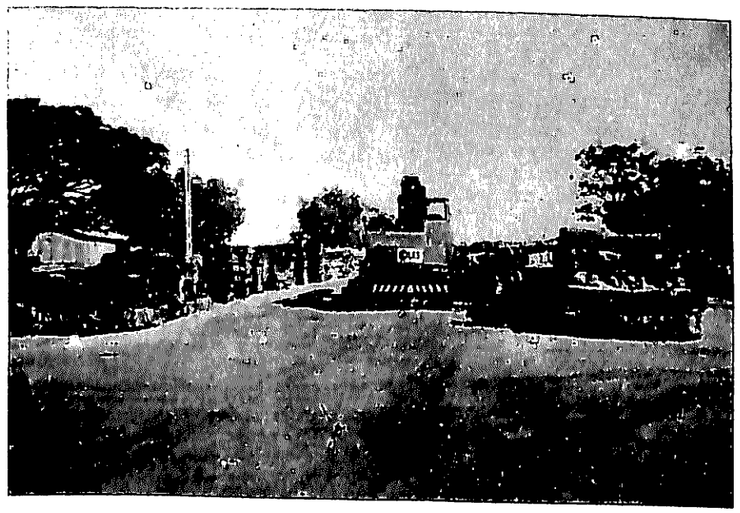
2.3 Considering the special problems in meeting the requirements of consumers in the North-Eastern Region, special effortsf continue to be made to ensure that adequate and timely supplies are made to the region.

2.4 The levies on account of the Steel Development Fund (SDF), Engineering Goods Export Assistance Fund (EGEAF) and the JPC cess are added by the main producers (excluding IISCO) to their ex-works prices and remitted to the JPC. The SDF levy is payable on steel materials, ranging from Rs. 350.00 to Rs. 500.00 per tonne on different categories. The EGEAF levy is Rs. 113.00 per tonne on pig iron and Rs. 300.00 per tonne on steel items.

2.5 In replacement 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. 1210/- per tonne in case of steel and Rs. 820/- per tonne in case of pig iron), whichever 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 name 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.

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.



A view of Secundrabad Stock yard of SAIL

3. Import and Export of Iron and Steel

3.1 The general policy and procedures for export and import of iron and steel, ferro alloys and ferrous scrap are 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. The Development Commissioner for Iron & Steel is no longer required to clear requests for imports from indigenous angle.

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 flexiable particularly with the introduction of value based advance licence.

3.4 The liberalisation of import has not resulted in higher import. As against the average annual import of about 1.24 million tonnes of steel during the preceding three years, the import in 1992-93 was about 1.06 million tonnes. Import of only some items like hot rolled coils and strips, tin mill black plates and steel melting scrap, which are in the nature of raw material has shown and increasing trend. However, the import of finished steel items like bars and rods, railway material, cold rolled coil/sheet, tinplate and electrical sheet has shown a downward trend.

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

3.6 Efforts are made by the DCI&S and this Ministry to ensure adequate supplies of raw materials to meet requirements of engineering exporters from domestic production.

3.7 As a result of various policy measures taken by Govt. like liberalization of import-export policy, flexibility of value based advance licensing scheme and convertibility of rupee, the export of iron and steel has shown a quantum jump. The export of iron and steel by main producers during 92-93 was 9.10 lakh tonnes valued at Rs. 703 crore as against the export of 3.87 lakh tonnes valued at Rs. 283 crores in 91-92 showing an incease of 135% in quantity term and 150% in value term. The exports consist mainly of Bars & rods, Plates, Semis, Structurals and Pig Iron. It is expected that export of iron and steel both from main and secondary producers during 93-94 will be over about 2.5 million tonne valued at Rs. 2000 crores.

4. Functions of the office of the Development Commissioner for Iron and Steel

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

With 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 of 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) Managment 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;

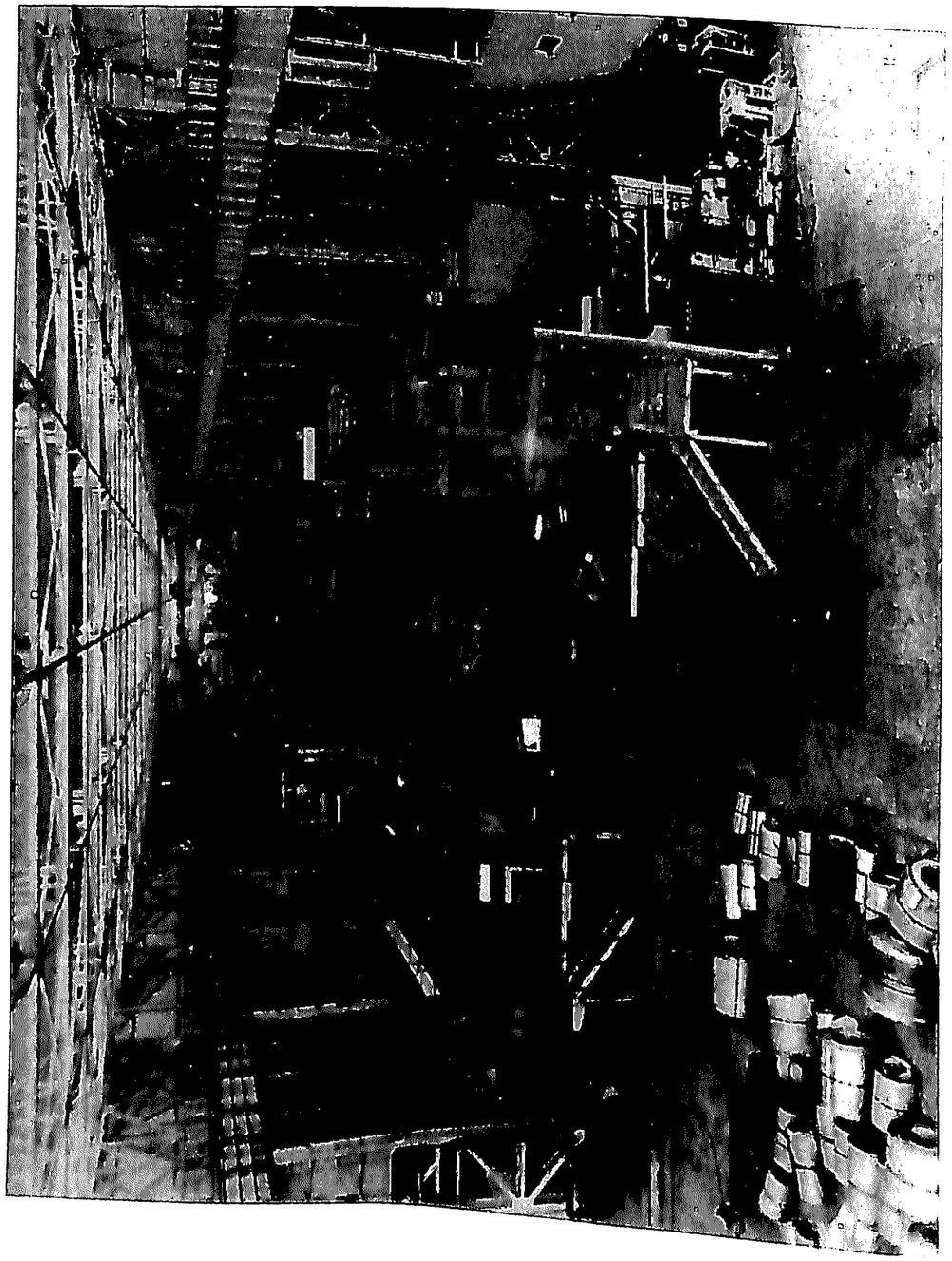
(i) Operation of the Engineering Goods Export Assistance Fund and the Steel Development Fund;

(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 diffenrent consumer groups to facilitate consumer-producer interaction;

(l) Coordination for movement of raw materials to steel plants;

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



Annealing and pickling line at Salem Steel Plant

5

PUBLIC SECTOR

The Public Sector has been assigned a very important role in the economic development of the country. It was conceived by the planners to attain the commanding heights of Indian economy and this has been amply proved in its size and strength in the steel sector. Over the years, the public sector has increased its areas of activity and today encompasses virtually all segments of steel industry in the country.

Under the New Industrial Policy announced by Government in July, 1991, steel industry has been removed from the purview of the compulsory licensing and private sector is now free to set up steel plants, subject to certain locational restrictions. As a part of further liberalisation measure Government have abolished the price and distribution regulation, subject to certain safeguards to certain priority sectors. Still the public sector steel plants will continue to play a leading role in the steel sector.

Steel Authority of India Limited

1. General

Steel Authority of India Limited (SAIL) is a company registered under the Company Act. 1956 and is a 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 Company Limited, 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 (Tamil Nadu), Chandrapur (Maharashtra) and Bhadravati (Karnataka). The Plants at Chandrapur and Bhadravati belong to the Maharashtra Elektrosmelt Limited and Visvesvaraya Iron & Steel Limited respectively which are also subsidiaries of SAIL. Besides, SAIL has three central units located at Ranchi, the Research and Development Centre for Iron and Steel (RDCIS) the Centre for Engineering and Technology (CET) and the Management Training Institute (MTI). The IISCO-Ujjain Pipe & Foundry Company Limited, a subsidiary of IISCO, produce cast Iron Spun Pipes at its works at Ujjain (Madhya Pradesh). The marketing of products of SAIL plants is done through the Central Marketing Organisation (CMO), Calcutta which has a country-wide distribution network.

2. SAIL (Excluding Subsidiaries)

Finance

2.1 Turnover and Profit in 1992-93

The Company recorded the highest ever turnover of Rs. 10174.87 crores during the year registering an increase of about 9 per cent over the previous year. The profit before tax for the year was Rs. 423.40 crores after providing interest and depreciation of Rs. 1376.23 crores. The Company has declared a dividend of Rs. 79.72 crores.

2.2 The authorised capital of SAIL is Rs. 5,000 crores. The paid-up capital of the Company was Rs. 3985.89 crores as on 31st March, 1993 which is held to the extent of 89.48% by the Government of India and the balance 10.52% by the financial Institution/Banks/Individuals.

2.3 The Company received fresh loans of Rs. 652.80 crores from Steel Development Fund. During the year the Company rapid loans to the Government and to Steel Development Fund to the tune of Rs. 257.05 crores. The outstanding loans at the end of the year 1992-93 stood at Rs. 351.73 crores from Government of India and Rs. 3714.77 croes from the Steel Development Fund as against Rs. 406.86 crores and Rs. 3263.89 crores respectively as on 31st March, 1992.

2.4 Under the Public Deposit Scheme of the Company, the net deposit (i.e. net of repayments and renewals) as on 31st March, 1993 stood at Rs. 952.77 crores. The number of depositors as on 31st March, 1993 were 82600.

2.5 Capital Expenditure

The overall expenditure on various capital schemes (on cash basis) during the year was Rs. 1976.47 crores. A sum of Rs. 76.41 crores was spent on continuing schemes; Rs. 1312.37 crores on modernisation and other new schemes; Rs. 560.14 crores on addition, modification and replacement schemes and Rs. 27.55 crores on township, research

& development and feasibility studies. The capital expenditure was financed from internal resources, drawls from Steel Development Fund and other borrowings.

3. Production Performance 1992-93

The four integrated steel plants of SAIL at Bhilai, Durgapur, Rourkela and Bokaro finished the year 1992-93 with best ever production of 9.92 million tonnes of Hot Metal, 9.46 million tonnes of crude steel and 7.94 million tonnes of saleable steel recroding a growth of 1.3 per cent, 2.1 per cent and 3.9 per cent respectively over previous year. The crude steel capacity utilisation went up from 87.4 per cent to 89.2 per cent and saleable steel capacity utilisation improved by 3.5 per cent to 94.3 per cent during the year.

The details of production plan and achievement during 1992-93 are as follows:—

(Unit M.T.)

Item	*Target*	*Actual*	*%fulfilment*
Hot Metal	9.960	9.919	99.59
Crude Steel	9.550	9.464	99.10
Salcable Steel	7.810	7.936	101.61

The Company gave greater stress on a market driven product-mix during the year. Mid-course corrections were made in the plants to enhance production of market oriented products. Significant growth was achieved in several high demands products such as HR Coils/Skelp (2.5mm & below), CR Coils/Sheets (0.63mm & below), GP/GC Sheets (0.5mm & below), Wire rods (6 & 7mm), EQ Wire rods, Rails 90 UTS, CRNO Electrical Sheets, LPG sheets, DD/EDD CR products, TMBP etc. The Company continued with its efforts towards product development to develop many new quality products such as API × 60 and 5L × 65 plates, TMT bars, Stainless Steel HR Coils as import subsitute, IRSM 41 CR Coils/Sheets, non-oil can TMBP etc.

SAIL plants had to operate with low coking coal stocks for most part of the year, leading to blend fluctuations, and operations problems. Poor and inconsistent power supply from utilities, particularly DVC continued to affect production. The production of Durgapur Steel Plant suffered due to delay in commissioning of Blast Furnace No. 2.

3.1 Energy Conservation

The continued emphasis on Energy Conservation measures helped further in reducing energy consumption per tonne of crude steel for the sixth successive year and has reached a level of 8.89 G. cal/tes for the four integrated steel plants. This was reduction of 1 per cent over previous year.

3.2 Equipment Performance

Maintenance of plant and equipment received close attention by elaborate planning and execution of capital repairs, scheduled shutdown and preventive maintenance programmes. Condition based maintenance is being gradually inducted in plant maintenance systems for getting the optimum life of equipment. A special effort is being made to solve the tribological problems among SAIL plants.

3.3 Import Substitution

Inspite of liberalisation in Trade Policy, emphasis continued to be laid in the area of Import Substitution. As a result of coordinated efforts made by Growth Division, it was possible to indigenise 730 numbers of items valued at Rs. 27.42 cores.

3.4 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 spares items purchased from these units was of the order of Rs. 106.80 crores which was marginally less than the orders placed during the previous year. This was mainly due to resource constraints and also due to stringent measures initiated to have better inventory management.

3.5 Captive Power Generation

During the year Captive Power generation averaged a record high of 444 MW, an increase of 3.5 per cent over the previous year. Durgapur Steel Plant exported 168 MU of power to DVC Grid after meeting own demand and assistance Alloy Steels Plant.

3.6 Environment Management

Continuous efforts are being made by the Company to generate awareness for Environment Management and Pollution Control with the objective of not only complying with Government legislations but to fulfil its social obligations of ensuring clear and safe environment. As a part of a comprehensive implementation strategy, about 120 schemes on Pollution control have been prioritised in the steel plants with an estimated cost of Rs. 500 crores. Special thrust have been given to solid waste management and planned afforestation.

4. Sales & Marketing Performance
Domestic Sales

Despite difficult market conditions, reduced demand from important sectors, fierce competition and pressure on market prices, SAIL recroded an all time high total sales (including Exports and Plant disposals) of 7.094 million tonnes during the year:

(In ,000 MTs)

Home Sales	6160.9
Exports	268.7
Plant Sales	664.0
	7093.6

During the year 118,000 MTs of Special Steel products from the Salem Steel Plant and Alloy Steel Plant, Durgapur, were sold.

To maintain a competitive edge, greater stress was laid on market oriented product-mix. There was significant growth in several of the high demand products like thinner gauges of hot rolled products (coil/skelp), cold rolled coil/sheet, wire rods, galvanized sheets (plain and corrugated), corten steel and DD/EDD quality CR products, etc.

Certain new products like Thermo-Mechanically Treated (TMT) Bars, API Grade 5LX-60 plates and M-43 grade of cold rolled non-oriented Electrical steel sheets were introduced.

Sale of fertilizers registered a growth of 12 per cent compared to the previous year.

4.1 Exports

The Company exported 269,000 MTs of Mild Steel and 6,000 MTs of Stainless Steel during the year. The exports of Mild Steel registered a growth of over 50 per cent in quantity and over 60 per cent in value terms as compared to the previous year.

SAIL also enlarged its exportable product range from that of plate to a variety of items like HR coils, CR Coils, Structurals, GC Sheets, Wire Rods, Semis, etc.

For the first time exports of ASP Billets, Ship Building quality Plates and GI Wires (converted out of Bhilai Wire Rods) were made.

Exports of GP Sheets, Wire Rods and MS Slabs took place after a gap of many years. SAIL also re-enterd into some export markets which were lost for over 10 years.

In addition to physical exports, SAIL also supplied steel valued at 18.75 crores under "Deemed Export", an increase of approx. 88 per cent over 1991-92.

Production Performance 1993-94

For the four integrated steel plants at Bhilai, Durgapur, Rourkela and Bokaro, SAIL has planned to produced 10.450, 9.947 and 8.200 MT of Hot Metal, Crude Steel and Saleable Steel respectively during 1993-94. The production of Hot Metal, Crude Steel and Saleable Steel during April-September 1993 has been 4.693, 4.523 and 3.801 MT respectively.

The details of production plan and achievement during April to September, 1993 are as follows:—

(Unit M.T.)

Item	Annual Traget	Target April-Sept.	Actual April-Sept.	% fulfilment
Hot Metal	10.450	5.002	4.694	93.84
Crude Steel	9.947	4.801	4.523	94.21
Saleable Steel	8.200	3.913	3.901	99.69

5. Capital Schemes

At present three major Modernisation works are in Progress at Durgapur Steel Plant, Rourkela Steel Plant and Bokaro Steel Plant. The present position of these modernisation works are as under:

5.1 Durgapur Steel Plant

The various units of modernisation work at Durgapur Steel Plant are in advanced stages of completion and commissioning. Out of the 16 packages under modernisation (6 global & 10 Indigenous), three packages (1 Global and 2 Indigenous) have been commissioned and in other 8 packages, part facilities are completed. The total modernisation work is expected to be completed by June, 1994 except the BF package which is expected to be completed by June, 1995.

5.2 Rourkela Steel Plant

The Rourkela Steel Plant modernisation work is being implemented in two Phases viz. Phase I & Phase II through 9 packages in Phase I and 20 Packages (5 Global & 15 Indigenous) in Phase II. In Phase I, 3 packages viz. Oxygen Plant, Power Distribution system and Cast House Slag granulation Plant have been commissioned. Part facilities for the another 4 packages viz. Sinter screening and conveyorisation of BF's, Dolomite Brick Plant, Coal handling Plant & Combined blowing in LD are

Capital Schemes

The Company incurred expenditure of Rs. 25.36 crores (on cash basis) on various Capital Schemes during the year as against Rs. 53.86 crores during the previous year. In addition, an expenditure of Rs. 78 lakhs was also incurred on enabling works under Modernisation.

Financial Performance

The turnover of the Company in 1992-93 at Rs. 814.74 crores was higher by 15 per cent over the previous year. The net loss for the year was Rs. 58.96 crores as compared to Rs. 22.29 crores during 1991-92.

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. 2,69,954 5% Cumulative Preference Shares of Rs. 100/- each were redeemed on 4th June, 1993 out of the proceeds of fresh issue of 26,99,540 Equity Shares of Rs. 10/- each. SAIL provided Rs. 37.18 crores for capital schemes of mines and collieries. SAIL waived interest of Rs. 77.74 crores on loans.

Sales & Marketing

Despite unfavourable market conditions, the company, with greater customer contacts and better customer services, sold 357.3 thousand tonnes of Steel and 336.6 thousand tonnes of Pig Iron thereby registering increases of 11.8 per cent and 17.6 per cent respectively over the previous year. Cast Iron Spun Pipes sales were lower at 15.7 thousand tonnes because of continuing adverse market situation. Sales of 30.5 thousand tonnes of castings were lower than the previous year.

Total despatches of Iron Ore Fines of 801 thousand tonnes were higher by 16.4 per cent over the previous year.

Kulti Works exported 996 M.T. of Pipes and Fittings to Nepal. Gua Ore Mines despatched 12 thousand tonnes of Iron Ore Fines for export to China.

Human Resource & Management

Industrial Relations situation remained generally peaceful during the year. Emphasis continued to be laid on improvement of the quality of training, multi-skill training, modernisation training, technical literacy etc. 2069 executives and 5409 non-executives were trained in various fields during the year.

Scheduled Caste and Scheduled Tribe employees constituted 16 per cent and 20.5 per cent respectively of the total number of employees. Intake of SC and ST candidates was 17.39 per cent and 6 percent 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 vigorously implementation of the Official Language Policy of the Government. Various competitions, Official Language celebrations and workshops were held during the year to encourage employees to use Hindi progressively for doing official work. The Company won the Indira Gandhi Rajbhasha Shield—Second Prize—for 'C' Region for the year 1990-91. The Shield was presented by the Hon'ble President of India to the Managing Director and Dy. General Manager (P&A) at a function held on 26th June, 1993.

IISCO-Ujjain Pipe and Foundry Company Limited

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.

Production Performance

Production of Cast Iron Spun Pipes was 15084 tonnes which was 38 per cent of the Annual Performance Plan Target. Sales despatches were 19116 tonnes as against 33133 tonnes in 1991-92. Due to non availablity of balanced order load and negative contribution production of Cast Iron Spun Pipes was suspended from 27th January, 1993.

Financial Performance

During the year, the turnover of the Company was Rs. 1837.92 lakhs as against Rs. 3057.86 lakhs in the previous year. The net loss for the year was Rs. 545.15 lakhs as compared to previous year's net loss of Rs. 344.26 lakhs. The increase in loss was mainly due to substantial rise in input costs without proportionate increase in selling prices. Escalation of rate contract prices sought for by the Company is under consideration of DGS&D.

Sales Marketing

The recession in the Cast Iron Spun Pipes demand in the country continue the order booking during the year was 18.14 thousand tonnes. Sales despatches were lower at 19.11 thousand tonnes. Due to non-

availability of balanced order load and negative contribution production of Cast Iron Spun Pipes was suspended from 27th January, 1993.

Industrial Relations

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

Use of Hindi

The Company continued to purse its efforts in implementing the Official Language Policy of the Government. Regular meetings of Hindi Implementation Committee were held where various suggestions were considered for effective implementation of Rajbhasha. Hindi workshops and classes were conducted for the employees.

Maharashtra Elektrosmelt Limited

Background

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

Financial Performance

The Company achieved the highest turnover of Rs. 129.90 crores during the year 1992-93 as compared to 124.02 crores during the previous year. The Company during the year recorded a net profit of Rs. 6.18 crores, thus wiping out all the accumulated loss and posting a net surplus of Rs. 54.00 lakhs for the first time. The authorised capital of the company is Rs. 5 crores which is fully issued. SAIL holds approximately 96 per cent of the paid up capital.

Production Performance

The production of all grades of Ferro Alloys during the year was 75894 tonnes as per the following break up:

High Carbon Ferro Manganese	53038 tonnes
Silico Manganese	16706 tonnes
Medium Carbon Ferro Manganese	6150 tonnes
	75894

Research & Development

In association with SAIL/RDCIS joint studies/ literature study for benefication of Manganese Ore fines and dephosphorisation of molten high carbon ferro manganese were carried out. Pilot scale trials will be carried out during 1993-94.

Successful in-house efforts to convert waste granulated silico manganese slag into bricks have yielded very good results.

Technology Absorption, Adaptation & Innovation

Corporate Plan (2005 AD) envisages installation of a Ferro Nickel furnace at MEL. Preliminary studies on various aspects related with the project such as utilisation of indigenous Sukinda Valley Nickel ore reserves upgradation of ore, selection of appropriate technological route for production of Ferro-nickel, project cost, techno-economic viability of the project etc., were carried out. Detailed feasibility studies are planned in the near future.

Visvesvaraya Iron and Steel Limited

General

Visvesvaraya Iron & Steel Company Limited situated in 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.

Financial Performance

The authorised capital of the company as on 31st March, 1993 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.

Inspite of severe recession all round the Company has achieved a record turnover of Rs. 200.38 crores signifying an increase of 7.5 per cent over the previous year. Despite all round improvement made during the year, the Company ended with a loss of Rs. 8.39 crores after providing for depreciation and interest. This is mainly due to steep hike in power tariff and increase in other input costs.

Production Performance

During the year 73169 tonnes of saleable steel inclusive of 45656 tonnes of Alloy and Special Steel and 27513 tonnes of Mild Steel were produced. There was a decline of 25 per cent compared to last year (in quantitative terms). This was mainly due to recession in the industry resulting in lower off take. However, production of Ferro Silicon at 18665 tonnes was slightly higher than the last year.

Capital Schemes

Work on the installation of Blast Furnace is in full swing and the project is scheduled to be commissioned in March, 1994 though effort is being made to advance to December, 1993. Besides, modernisation of two numbers of 12 MVA Ferro Silicon Furnaces has also been taken up.

A Project for installation of Air Pollution Control equipment at an approximate cost of Rs. 10 crores under World Bank Technical Assistance Loan Scheme has been launched and installation of these equipment is expected to be completed by March, 1994.

Sales and Marketing

Sales turnover of Rs. 200.38 crores registered 7.5 per cent growth compared to the last year turnover of Rs. 186.48 crores. There was also a growth in the value of all major products viz. alloy and special steel, mild steel, ferro silicon in spite of no increase in sale price. Major thrust was given to production of high value items. Market being tough and very competitive, continuous efforts are being made to enter into new markets, improve quality and yield reduce cost of production and improvement in internal systems and procedurcs. For achieving better customer satisfaction and also enhance 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 is September, 1994.

Human Resources Management Review

Total manpower strength as on 31st March, 1993 was 6363 comprising 463 executives and 5900 non executives. Percentage of SC and ST to total employment was 11.74 and 1.13 per cent respectively. During the year under report 495 employees have availed Voluntary Retirement under VR scheme. For enhancing efficiency and skill of workforce, several training programmes were arranged to both executives and non-executives. Industrial relations continued to be extremely satisfactory. Expenditure incurred on training abroad during the year was Rs. 71.18 lakhs. Experts from Austria had also visited the Company to impart technical training. There has been further improvement in the work culture and the overall industrial relations situation continued to be satisfactory.

2. Rashtriya Ispat Nigam Limited Visakhapatnam Steel Plant

1.0 **Background**

The setting up of the first shore based Integrated Steel Plant in Andhra Pradesh was approved by Government of India in June, 1979. The location of the steel Plant at Visakhapatnam was selected by Government with a view to facilitating to a great extent, the export of its quality products to International Market and also to import the high quality coking coal. Being the first integrated steel plant in the Southern Region it would help in the growth of industries in that region. Rashtriya Ispat Nigam Limited, a Company incorporated in Public Sector in February, 1982 was entrusted with the responsiblity of establishing the Steel Plant at Visakhapatnam. The project was implemented in two stages and fully commissioned in July, 1992. The Steel Plant was dedicated to the Nation by Hon'ble Prime Minister on 1st August, 1992.

2.0 **Project Profile**

Visakhapatnam Steel Plant (VSP) is the best laidout steel plant of the country with a potential for substantial expansion as well as provision for a captive harbour. The Plant has been built to exacting international standards in design and engineering, incorporating extensive engergy saving and pollution control measures.

The Plant incorporates some of the most modern technologies which include 7 meter tall Coke Ovens, Dry quenching of coke with auxiliary power generation facilities from the waste heat, 3200 CU M Blast Furnance with Gas Expansion Turbine Station to generate auxiliary power fron the high top pressure, Cast House slag granulation for Blast Furnance, 100% Continuous Casting of Liquid Steel, High speed and highly automated Rolling Mills etc.

3.0 **Project Cost**

As per the Detailed Project Report prepared by M/S. M.N. Dastur & Co (P) Limited, the principal consultants, the estimated cost of the steel project was placed at Rs. 3897.28 (based on the 4th Quarter, 1981) which was approved by Government in 1982. However, in 1984, a revised Rationalised Concept was evovled to contain the cost of the project. While the capacity of the Hot Metal was retained at 3.4 million tonnes the capacity of Crude Steel was reduced marginally to 3 million tonnes per annum. The revised cost estimates of the project at Rs. 6849.70 crores (based on 4th Quarter, 1987 prices) were approved by Government in June, 1988. The updated cost of the Project excluding the cost of Mines amounting to Rs. 54.92 crores has been placed by the VSP Management at Rs. 8529.13 crores (based on 2nd Quarter, 1992 prices) which is under consideration of the Government. The capital expenditure upto 30th Sept., 1993 was Rs. 7719 crores.

4.0 **Production Performance**

Integrated operations of the 3.0 MT stage steel plant commenced from August, 1992 with the commissioning of the Stage-II units by July, 1992.

For the period April-September of 1993-94, the percentage fulfilment in production of hot metal, liquid steel and saleable steel has been 79%, 59% and 60% respectively. VSP registered a growth of 23%, 40% and 57% in respect of hot metal, liquid steel and saleable steel respectively compared to the corresponding period of last year. Details are given in the following table.

(Unit: 000t)

Item	1972-93 Actual	1993-94				% Growth over Apr-Sept 1992
		Annual Target	Target for Apr-Sept	Actual Apr-Sept	% Ful.	
Hot Metal	1981	3060	1415	1124	79	23
Liquid Steel	1052	2400	1070	627	59	40
Saleable Steel	879	2130	951	569	60	57
Pig Iron for sale	914	700	391	482	123	9

5.0 **Techno-Economic Performance**

In the techno-economic performance, Visakhapatnam Steel Plant has shown improvements in most of the parameters as compared to previous year.

Some of the important techno-economic parameters achieved are indicated below:

Parameters	Unit	DPR Norm	1992-93 Actual	1993-94 Apr-Sept
Coke Rate	Kg/THM	627..00	583.55	571.08
Yield of Billets from Blooms rolled	%	97.00	96.79	96.81
Yield of Wire Rods from Billets rolled	%	96.00	96.25	95.99
Specific energy consumption	G.Cal	7.78	10.10	8.46

6.0 **Captive Power Generation**

With consistently good performance by the Capitve Power Plant, an average plant load factor of 0.85 could be achieved at VSP in the period from April to Sept. 93 as against 0.75 during 92-93. With the additional power generated by the conversion of waste heat and energy in the Back Pressure Turbine Station of Coke-Oven Batteries and the Gas Expansion Turbine Stations of the Blast Furnances, VSP was able to export power to APSEB Grid on many occasions.

7.0 **Raw Materials**

Due to the non-availability of indigenous prime coking coal, VSP has gone in for higher imports of coking coal, upto 80% of the blend, SMS Grade Lime Stone is also being imported as Railways expressed their inability to transport the indigenous Lime Stone from Jaisalmer in Rajasthan to Visakhapatnam. Though VSP has been linked to Bailadila Mines in Orissa for its Iron Ore, due to export commitments of NMDC and restraints in rail movements, a part of VSP's Iron Ore requirements are also being met from Donimalai in Karnataka.

8.0 **Restructuring of Capital base of VSP**

Non-availability of adequate funds from budgetary resources and delay in the supply of machinery and equipment by the manufacturing units in the erstwhile USSR due to the changing political situation in that country had attributed to heavy cost and time overrun of the project. Analysis carried out with the help of the SBI Capital Market Limited indicated that VSP can not continue to function as a viable unit even if operated at 100% capacity utilisation. The study also revealed that the problems were mainly of financial nature. It was accordingly felt that the capital base of Rashtriya Ispat Nigam Limited—VSP should be restructured in a manner to enable the company to generate cash surpluses on its own and also to enable it to take recourse to the capital market for undertaking its future programme for expansion/modernisation without budgetary support from the Government.

Accordingly by the following scheme for restructuring its capital base has been cleared by Government:—

1. Conversion of 50% of outstanding Government of India loans of Rs. 2369 crores as on 31st March, 1992 into equity share capital.
2. Conversion of balance of 50% of outstanding Govt. of India loans as on 31st March, 1992 into

7% non-cumulative Preference Share Capital redeemable at the end of 10 years.

3. Conversion of interest liability on Govt. of India loans as on 31st July, 1992 to the extent of Rs. 791 crores, into interest free loan for a period of seven years.
4. Loans drawn from Government of India after 1st August, 1992 to be converted into 7% non-Cumulative redeemable preference share capital redeemable at the end of ten years.
5. Waiver of penal interest chargeable on defaults in payment of principal as well as interest on Govt. of India loans upto 31st July, 1992.

9.0 Financial Performance

The gross turnover for the year 1993-94 is budgetted at Rs. 2762.69 crores as against the actuals of Rs. 1184 crores in 1992-93 indicating a growth of 133%. Details are geven below:

(Rs. Crores)

	1992-93 Actuals	1993-94 Budget	1993-94 Apr-Sept.
Turnover	1189.84	2762.69	872.98
Gross Margin	(-)30.65	488.31	51.95
Interest	197.57	400.54	193.08
Cash Profit/Loss	(-)228.22	87.77	(-) 141.13
Depreciation	340.07	464.46	232.26
Net Profit/Loss	(-)568.29	(-) 376.69	(-) 373.39

10.0 MARKETING

Visakhapatnam Steel Plant has its own marketing set up to sell its products. Currently, 25 outlets are in operation at Agra, Ahmedabad, Bangalore, Bombay, Bhubaneswar, Calcutta, Chandigarh, Cochin, Coimbatore, Delhi, Faridabad, Guwahati, Ghaziabad, Hyderabad, Indore, Kanpur, Madras, Nagpur, Patna, Pune, Raipur, Jaipur, Jallandhar, Batala and Visakhapatnam. At Bombay, Madras and Hyderabad, VSP has set up its own stockyards and at 22 other places Consignment Agency arrangements are functioning. VSP's share has been steadily increasing in the domestic market with the broad banding of its products and appointment of stockists to reach the products in the hinterland.

11.0 EXPORTS

Besides competing in a big way in the indigenous market, Visakhapatnam Steel Plant has made continued presence in the export market, a strategy to maintain its quality edge in the domestic market also. During 1993-94, 5.28 lakh tonnes of iron and steel products valued at Rs.305 crores were exported in the period April -Sept,93 Export target for 1993-94 has been set at 1.30 Mt of iron and steel products valued at Rs.850 crores.

12.0 ENERGY CONSERVATION

Energy Management is a major thrust area in Visakhapatnam Steel Plant. A number of energy conservation measures have been adopted at VSP, as a result of which, the energy consumption has been brought down by 16.6%.

The energy consumption as well as the power consumption per tonne of crude steel for 1992-93 and 1993-94 (Apr-Sept) are indicated below:

	1992-93 Actual	1993-94 (Apr - Sept.) Plan	Actual	% improvement over previous year
Overall Specific Energy Consumption (GCals/TLS)	10.149	8.39	8.46	16.6
Specific Power Consumption (KWH/TLS)	1332.3	684	1204	9.6

The measures adopted for reducing energy consumption during 1993-94 are as follows:

— Commissioning of Gas Mixing Station No.1 and supplying mixed gas to Battery No.2. This has resulted in the increased availability of coke oven gas to Power Plant and reduction in Boiler Coal consumption.

— Commissioning of Gas Recovery Plant of SMS. LD Gas generated at SMS is being recovered and used in Rolling Mills reheating furnace.

Commissioning of Gas Expansion Turbine No.2 utilising high top pressure of BF-2.

13.0 SAFETY

"Occupation Safety and Health" was given utmost priority to ensure the safety and health of employees. Intensive safety training is being imparted to employees as well as contractor's workers to inculcate safe working habits and generate a conducive atmosphere for safe working. Accidents rate during 1993 for the period upto September 93 has registered a reduction of 45% compared to the levels of 1992. VSP was awarded the JCSSI Award of Ispat Suraksha Puraskaar for maximum reduction of acidents in coke and iron zones among all the steel plants in India for the year 1992. VSP has also taken up internal safety audit for the first time in the Steel Plants of the country which has resulted in the

reduction of accidents and improving safety awareness in the employees.

14.0 HUMAN RESOURCE MANAGEMENT

HRD has always been given a major priority at RINL. Some of the 'thrust areas' within HRD as identified while conducting "The HRD Thrust Areas Survey 93" are given below:

1) Upgradation of skills: During the period April-Sept. '93, 208 technical and skills training programmes covering 3206 employees focusing on electrical safety, Special Refresher Courses for Steel Melt Shop Personnel, use of PLCs etc were held. Further, 16 Management Development Programmes were held covering 453 employees. The focus of Management Development Workshops was on 'Internal Customers' Satisfaction/Improving Inter departmental Relations', 'Export Management' etc.
2) Standard Operating & Maintenance Practices:Standard Operating Practices for several units have been prepared and implemented.
3) Organisational Climate: A number of measures like formation of Quality Circles, introduction of Suggestion Scheme, Group Reward Scheme, better grievance handling methods, revision of appraisal system have been taken up for improving the organisational climate. Besides conducting the managerial opinion survey, ground work for launching a massive employee satisfaction survey covering four thousand employees has been taken up.
4) Culture Building: Specific thrust is being given to redirect the organisational culture to an entrepreneural one. Towards this end, one workshop on 'Business Culture' was held and a few more are planned.

15.0 INDUSTRIAL RELATIONS

For furthering the cordial industrial relations atmosphere, 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, bi-partite 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.

16.0 WELFARE OF SCs/STs AND MINORITIES

Manpower and Recruitment: As on 30.9.93 out of the total manpower of 17,549, there are 2742 employees belonging to Scheduled Castes (15.62%) and 881 employees belonging to Scheduled Tribes (5.02%). Gronpwise details are given in the following table:

MANPOWER OF VISAKHAPATNAM STEEL PLANT UPTO SEPTEMBER, 1993

Group	No. of total employees	No. of SC employees	% of SC employees	No. of ST employees	% of ST employees
A	2301	266	11.56	70	3.04
B	581	55	9.47	4	0.69
C	12035	1956	16.25	577	4.79
D (excluding Safai Karamchari)	2567	441	17.18	228	8.88
D (Safai Karamchari)	66	24	36.36	2	3.03
Total	17550	2742	15.62	881	5.02

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 Executive 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 highest marks in the 10th class examination, amongst students belonging to the SC/ST community, based on the results of the final examination.

19.0 ANCILLARY DEVELOPMENT

During 1992-93, letters of intent have been issued to 18 new parties. So far 73 local entrepreneurs have been issued letters of intent for ancillary units out of which 24 are upstream and 49 are downstream.

9 upstream and 12 downstream units have already been commissioned.

VSP placed orders worth approx. Rs.10 crores on the ancillaries and local industries during 1992-93, which is 39% of the total orders placed on the SSIs throughout the country. For the period April-Sept. '93, orders of around Rs. 13 crores were placed on the ancillaries and local industries, which is about 58% of the total orders placed on SSIs thoughout the country.

17.0 PERIPHERAL DEVELOPMENT

VSP has undergone various Social Welfare and peripheral development of activities for maintaining a harmonious and congenial atmosphere in the surrounding area. As part of its peripheral development activities, VSP has constructed community centres in the rehabilitation colonies, participating in the literacy, family welfare and vaccination programmes in and around the steel plant. Further, speical 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 benefit of human welfare all around it.

3. Kudremukh Iron Ore Company Limited

1. GENERAL

1.1 The Kudremukh Iron Ore Company Limited (KIOCL), a wholly owned Government 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 Concentrate 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 Government 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 Government 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 furnance 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

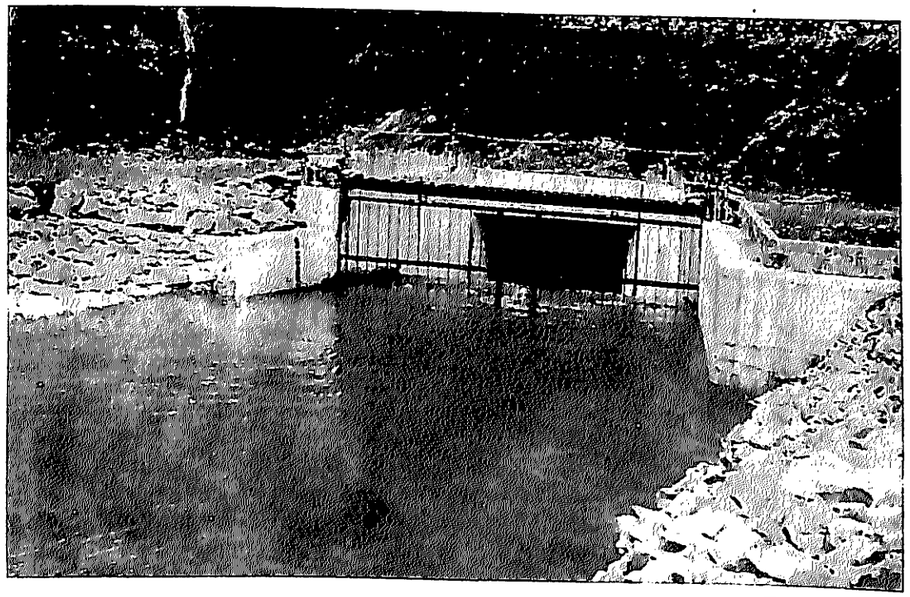
2.1 A target of 6.2 million tonnes and 2.15 million tonnes has been set for production of iron ore concentrate and iron ore pellets respectively during the year 1993-94. As against a target of 3.50 million tonnes of iron ore concentrate fixed for the period April to October 1993, the actual production was 3.37 million tonnes which represents 96% target fulfilment. The production of pellets during the period April to October 1993 was targetted at 1.2 million tonnes and the actual production during this period was 1.24 million tonnes reflecting 104% target fulfilment.

2.2 The performance of KIOCL in 1992-93 was seriously affected on account of loss of production time of two months owing to the damage to the diversion channel of Lakhya Dam, reduced off-take by traditional buyers and almost no off-take by the domestic buyers apart from interruptions/restrictions in power supply imposed by the State Electricity Board resulting in frequent stoppage in production. The performance of KIOCL during the year 1993-94 is expected to be better than last year and according to the trend of performance so far, it is expected that it will be in a position to attain the physical and financial performance targets set for 1993-94.

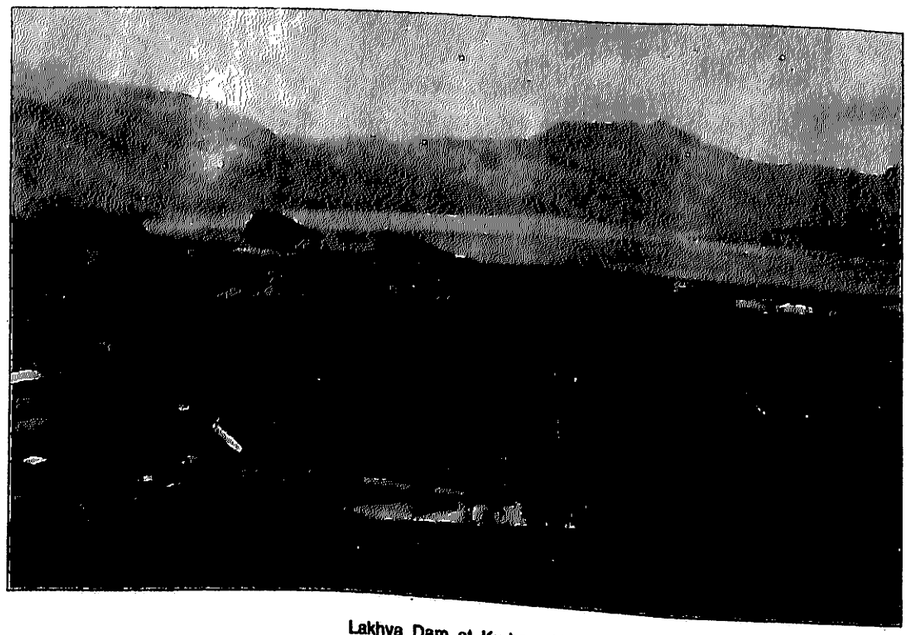
3. EXPORTS

3.1 During the year 1992-93 the total shipments of iron ore concentrate and pellets was 4.73 million tonnes which was lower than the previous year's, performance because of low production and reduced off-take by traditional buyers. However, KIOCL had embarked upon a vigorous marketing strategy to find new markets and it was able to find new markets in China and Taiwan for its pellets . This trend has been maintained during the year 1993-94 also and sales turnover during the period April 1993 to October 1993 was Rs. 240.15 crores which is more than the sales target for the period.

3.2 For the year 1993-94 KIOCL has planned a sales turnover of Rs. 388 crores on a planned export of 4.05 million tonnes of Concentrate and 2.15 million tonnes of pellets which is expected to be attained.



Lakhya Tunnel Spillway at Kudremukh



Lakhya Dam at Kudremukh

3.3 The export earnings during the last 5 years from 1988-89 and upto October, 1993 are detailed below:

(Rs. in lakhs)

Year	Concentrate	Pellets	Total
1	2	3	4
1992-93	18551	12839	31390
1991-92	18882	20399	39281
1990-91	11257	11641	22898
1989-90	7685	9755	17440
1988-89	5337	6302	11639
1993-94 (Upto October' 93)	12038	11977	24015

4. FINANCIAL PERFORMANCE

An overview of the financial performance of KIOCL during the year 1993-94 upto September, 1993 together with the actuals for the previous three years, is indicated below:—

(Rs. in lakhs)

Particulars	1993-94 (upto Sept. 93)	1992-93	1991-92	1990-91
1	2	3	4	5
Total value of sales	20931	31390	39281	22898
Gross margin	6382	10366	14623	8903
Total profit on account of operations of the year	4848	10015	14027	6305
Inventories (excluding finished stock)	9149	9595	9415	8275

5. MANPOWER POSITION

As on 30th September 1993, the total number of employess in KIOCL were as follows:—

Group	Total No. of Employees including SC, ST as on 30th September, 1993	SC in position	ST in position
1	2	3	4
'A'	463	38	13
'B'	194	12	02
'C'	1595	212	34
'D'	202	45	25
'D' (Sweeper)	45	38	4
Total	2499	345	78

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. PROGRESSIVE USE OF OFFICIAL LANGUAGE

The Company follows the directives issued by the Govt. of India regarding progressive use of Hindi for official proposes. Hindi teaching programmes for the employees are a part of 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.

4. Manganese Ore (India) Limited

NAGPUR

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 31.3.1993, the Govt. of India held 82.11% shares in MOIL with State Govts. of Maharashtra & Madhya Pradesh, having 9.02% and 8.87% respectively.

2. 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. 15.225 crores as on 30th September 1993.

4. PERFORMANCE:

4.1 Operating and Financial Results:

The physical and financial performance of the company during 1992-93 and projections for 1993-94 are given below:—

	1992-93 (Actuals)	1993-94 (Projections)
1. *Production (lakh tonnes)	6.710	7.043
2. Turnover (Rs. crores)	74.38	91.63
3. Profit before Tax (Rs. crores)	23.49	21.32

(*) Includes 300 & 350 tonnes of EMD for 1992-93 & 1993-94 respectively.

Turnover and Profit during 1992-93 were the highest ever achieved by the company since its inception.

4.2 PRODUCTIVITY:

The productivity (output per manshift in tonnes) reached an all time high of 0.275 during 1992-93. The productivity in 1991-92 was 0.261.

4.3 CONSERVATION OF ENERGY:

Consistent with the National Policy to conserve energy and also to contain the cost of production, the company has embarked upon an economy drive in this sphere. The consumption of power which stood at 14.49 KWH per tonne of out-put in 1991-92, has been further brought down to 14.45 KWH per tone in 1992-93.

4.4 REPAYMENT OF GOVERNMENT LOANS:

The Company repaid to Government of India Rs. 62.32 lakhs towrds plan loans and Rs. 125.65 lakhs as interest (including Rs. 55.22 lakhs towards arrears) as per approved repayment schedules for 1992-93. In 1993-94 the company proposes to repay plan loans to the tune of Rs. 62.32 lakhs and also pay a sum of Rs. 122 lakhs as interest (including arrears of Rs. 55 lakhs), as per approved plan.

5. PROGRESS OF CAPITAL SCHEMES/ IMPLEMENTATION OF PROJECTS:

— The project of sinking of fill pass & Ventilation Shaft at Ukwa Mine has since been completed.

— The preparatory work relating to Deepening of Holmes Shaft Phase II at Balaghat Mine and work relating to sinking of a Vertical Shaft at Beldongri Mine has been completed.

— The work relating to Sinking of Underground Incline at Gumgaon Mine is in progress and expected to be completed by end of 1993-94.

— The deepening of Underground Incline at Chikla Mine has been also completed.

— The company has commissioned the Electrolytic Manganese Dioxide Plant (EMD) of 700 tonnes per annum capacity. The quality of the EMD has been stabilised. There is good demand for the product amongst dry cell manufacturers.

6. RESEARCH & DEVELOPMENT:

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

i) Beneficiation 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.

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 on experimental basis, Efferts are also being made to develop process 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 beneficiation 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 & 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 act 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 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 8th Plan.

10. PROGRESSIVE USE/AWARDS FOR IMPLEMENTATION OF HINDI:

10.1 In order to ensure progressive use of Hindi and implementation of 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.

10.3 The Company retained the prestigeous "Rajbhasha Chal Vaijayanti" trophy awarded by the Ministry of Steel, Government of India for its outstanding performance (Best prize) during the period 1989-90 to 1991-92. The company has also been awarded Indira Gandhi Rajbhasha Puraskar (second prize) for 1990-91 by the Government of India.

11. SOCIAL COMMITMENT:

MOIL had 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 building to impart education to tribal children etc. as part of their ongoing efforts to promote social welfare.

12. PERSONNEL:

The composition of the work force of the company as on September 1993 was as under:—

Group	SC	ST	Others	Total
A	21	4	190	215
B	11	11	154	176
C	353	467	1191	2011
D	1312	2026	3496	6834
Total	1697	2508	5031	9236

Out of the total number of 9236 employees, 1599 are women.

5. Bharat Refractories Limited

1.0 GENERAL

1.1 Bharat Refractories Limited (BRL) was incorporated in the Public Sector as a subsidiary company of Bokaro Steel Limited on July 22, 1974 with only one unit located at Bhandaridah. In the

wake of restructuring of the Iron & Steel Industry, on May 1, 1978, two other Plants namely, (i) Ranchi Road Refractories Plant (RRRP) at Ramgarh and (ii) Bhilai Refractories Plant (BRP), in Madhya pradesh were brought under the control of Bharat Refractories Limited (BRL).

India Firebricks & Insulation Company Limited (IFICO) situated at Ramgarh, a subsidiary of Steel Authority of India Limited (SAIL), was also transferred as a susbidiary company of Bharat Refractories Limited with effect from May 1, 1978. The Company is engaged in the manufacture and supply of refractories mainly to the Steel Plants under SAIL.

2.0 CAPITAL STRUCTURE

3.1 The authorised share capital of the Company is Rs. 50 crores against which the paid up capital as on 31st March'93 was Rs. 47.93 crores. Share money pending allotment as on that date was Rs. 60 lakh. The total outstanding loan together with interest accrued thereon as on 31.3.93 amounts to Rs. 115 crores. The authorised share capital of subsidiary company, IFICO is Rs. 10 crores and the paid-up capital as on 31st March'93 was Rs. 6.48 crores. The loan together with interest accrued as on 31.3.93 amounted to Rs. 13.51 crores.

3.0 PRODUCTION & SALES PERFORMANCE

3.1 the production and sales performance of the different units of the Company as well as subsidiary company, IFICO Ltd. during 1992-93 and 1993-94 (Upto September, 1993) was as follows:—

Production in MT
Sales Rs. in crores

Name of Unit	1992-93		1993-94 (April-Sept.'93)	
	Production	Sales	Production	Sales
BHRP	25349	18.51	11888	9.41
RRRP	7799	17.20	3282	4.48
BRP	33703	30.85	13202	14.03
IFICO	27100	24.69	12146	8.06
TOTAL	93951	91.25	40518	35.98

3.2 During 1992-93, the Company, including subsidiary, IFICO, achieved the highest ever production of 93951 tonne valued at Rs. 106.43 crores, the previous best being 85,887 tonne valued at Rs. 97.17 crores attained during 1991-92. During 1992-93 the Company, as a whole, achieved a growth of 9% in physical terms and 34% in terms of value of production over 1991-92.

4.0 SALES TURNOVER

4.1 During 1992-93, the Company, including susbidiary company, sold 77,474 tonne of refractories valued at Rs. 91.25 crores as compared to 84,209 tonne valued at Rs. 80.55 crores during the previous year. Due to strict inventory control by consumer steel plants, the off-take of refractory materials was very adversely affected, which resulted in huge build-up of stock of finished products at the various units of the company.

5.0 FINANCIAL PERFORMANCE

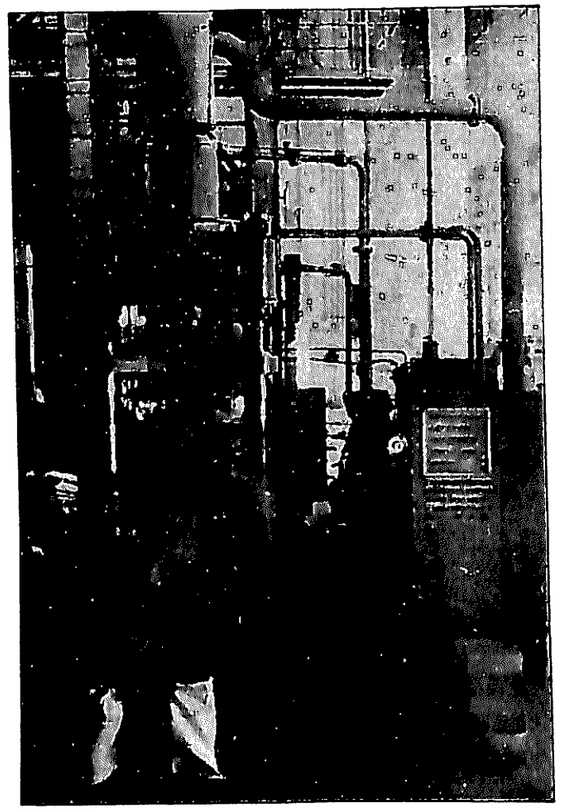
5.1 During 1992-93, the company, including its subsidiary Company earned a gross margin of Rs. 11.29 crores as against the gross margin of Rs. 1.15 crores achieved during 1991-92. After providing for interest of Rs. 9.48 crores, the Company earned a cash profit of Rs. 1.82 crores for the first time since inception. However, after providing for depreciation of Rs. 4.44 crores, the Company incurred a net loss of Rs. 2.62 crores during 1992-93, as against net loss of Rs. 11.45 crores incurred during 1991-92.

6.0 CONSTRAINTS FOR SUSTENANCE OF PERFORMANCE

6.1 The Company is operating in an extremely competitive market and is mainly dependent on the integrated Steel Plants under SAIL for orders. After chalking out the best ever performance in 1992-93, since formation, the Company was suddenly confronted with a very tough market situation as a result of recession in demend and subdued off-take of finished goods by the customers. Accordingly, while huge build-up of inventory created serious liquidity problems on the one hand, shortage of adequate orders for some of the major items of product-mix proved to be the main bottleneck in sustaining the tempo of production during the first half of the current financial year. The Company is, however, making all out efforts to overcome this by launching aggressive marketing.

7.0 TECHNOLOGY UPGRADATION/QUALITY IMPROVEMENT

7.1 The Company has been taking effective steps in the field of technology upgradation and diversification to meet the emerging requirement of the Steel Industry. While products manufactured with technology from Kawasaki Refrectories Co. Ltd., Japan (a subsidiary of Kawasaki Steel Corporation), such as Magnesia-Carbon bricks, Gunning Repair Materials Slide Gate refractories and Cast Mix for Steel Ladles are extensively used by the steel Plants, the in-house R & D efforts made by the Company



Heavy Duty Hydraulic Press at Ranchi Road Refractory Plant

led to development of products like B.F. Cast House Masses, Chemically Bonded High Alumina Tundish Nozzles for mini-steel plants, Low Creep Alumina-Chrome refractories and Coating Mass for Inner Nozzles, most of the are import substitution. Apart from undertaking quality upgradation of products, a tie-up with RDCIS, SAIL for development of new products is in the offing.

The Company is also making due thrust for ensuring quality of its products. Such efforts led to attaining a record life of 528 heats in the 130 T Converter of Bhilai Steel Plant, lined with BPR's 600 mm MCB in April, 1993.

8.0 Energy Conservation

8.1 Various energy conservation measures have been taken at the units of the Company during 1992-93. As a result there has been a saving of 785642 kwh electricity, about 866.23 KL of Furnace Oil and about 2299.39 tonne of Coke leading to a saving of about Rs. 27.24 lakh.

9.0 Human Resource Development

9.1 the Company is laying greater emphasis for development of its human resources so as to ensure increased organisation effectiveness in terms of productivity, quality, profitability and better customer orientation. Accordingly, an Annual Training and Development Plan for the employees of the Company has been finalised. 110 executives and 227 non-executives were trained during 1992-93 through in-house programmes and programmes conducted by external institutions. In order to have first hand knowledge of application of Company's products in the Steel Plants, educational tours for employees of different units have also been arranged.

10.0 INDUSTRIAL RELATIONS

10.1 The industrial relations climate in the Company and subsidiary are generally cordial and harmonious.

11.0 SAFETY MEASURES

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

12.0 MANPOWER

12.1 The manpower position as on 31st March 93 is as follows:—

Classification	No. of Employees	Men	Women	SC	ST	PH	EX-servicemen
Bharat Refractories Limited							
Group 'A'	218	215	3	6	4	1	3
Group 'B'	99	97	2	4	1	—	1
Group 'C'	1856	1791	65	207	222	3	39
Group 'D'	892	842	50	146	210	13	23
Total	3065	2945	120	363	437	17	66
IFICO Limited							
Group 'A'	64	64	—	—	1	—	—
Group 'B'	60	60	—	1	1	—	—
Group 'C'	571	571		21	67	6	—
Group 'D'	308	264	44	22	62	3	16
Total	1003	959	44	44	131	9	16

13.0 CONTRACT LABOUR

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

14.0 IMPLEMENTATION OF OFFICIAL LANGUAGE

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

14.2 the Company has been awarded the 'Indira Gandhi Rajbhasha Shield' for best performance in implementation of Hindi in the entire 'A' region. The Company has also bagged the 'Rajbhasha Shield' from the Ministry of Steel for the best work in Hindi.

15.0 Future Planning and Activities

15.1 BRL/IFICO is facing strong competition from Private Sector company. However they are switching over to the production of specialised type of Refractories as per the future requirement of Steel Plant.

15.2 Since the Company has been incurring losses a reference has been made to BIFR for its revival. IDBI has been appointed as an operating agency to prepare a revival plant which will be considered by BIFR.

6. NATIONAL MINERAL DEVELOPMENT CORPORATION LIMITED

1. GENERAL

Incorporated on November 15, 1958 the National Mineral Development Corporation Limited is a wholly-owned undertaking of the Government of India is 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 Domimalai (Karnataka). The Diamond Mines is situated at Panna (Madhya Pradesh).

2. IRON ORE

2.1 PRODUCTION

In 1992-93, NMDC produced 12.2 million tonnes of iron ore. During the period April 1993 to September 1993, 5.3 million tonnes of iron ore has been produced.

2.2 EXPORTS

Exports of iron ore produced by NMDC is canalised through the Mineral and Metals Trading Corporation (MMTC). Most of the iron ore is exported to Japan, South Korea and China. In 1992-93, NMDC exported 6.5 million tonnes of iron ore valued at Rs. 409 crores approximately. Exports of iron ore between April 1993 and September 1993 were 3.8 million tonnes for a value of Rs. 233.18 crores.

2.3 DOMESTIC SALE

In 1992-93, NMDC's sales of iron ore to domestic units were around 4.8 million tonnes. Between April 1993 and September 1993 sale of iron ore to domestic consumers was 1.9 million tonnes.

3. DIAMONDS

In 1992-93, 18183 carats of diamonds were produced. Between April 1993 and September 1993 the production was 8710 carats.

4. FINANCE

The authorised share capital of the company is Rs. 150 crores. The paid up equity share capital as on 31.3.1993 was Rs. 132.16 crores and it is the same as on 30.9.93. Government of India loans outstanding as on 31.3.93 were Rs. 22.59 crores and as on 30.9.93 it was to Rs. 21.12 crores.

5. DISINVESTMENT OF SHARES OF NMDC

The Government of India has dis-invested shares of NMDC for the first time. A total of 21.30 lakhs shares representing 1.61% of the paid-up capital have been dis-invested. The dis-investment fetched the Government an average price of Rs. 83.52 per share and maximum price of Rs. 100/- per share against the face value of Rs. 10/- per share.

6. OPERATING RESULTS

In 1992-93, the company recorded a profit of Rs. 116.30 crores (before tax). The company declared a dividend of 20% totalling Rs. 26.43 crores. The profit till September 30, 1993 is Rs. 34.22 crores. (provisional).

7. MANPOWER POSITION

As on September 30, 1993 the manpower position in different units of the company is as follows:

Group	Total No. of Regular Employees on 30.9.93	No. of S/C Employees out of col. 2	No. of women employees out of col. 2	
(1)	(2)	(3)	(4)	(5)
A	751	47	5	18
B	1065	75	28	53
C	3167	475	614	134
D (Excl. Sweepers)	1803	397	438	169
D (Sweepers)	131	99	5	42
Total	6917	1093	1090	416

8. 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.

9 WELFARE OF THE WEAKER SECTIONS

The total number of employees in NMDC as on 30.9.1993 was 6917 out of which 1093 persons belong to Scheduled Castes and 1090 persons belong to Scheduled Tribes.

The Group-wise distribution of SC/ST employees is indicated below:

Group	Total No. of Employees as on 30.9.1993	Scheduled Castes	Schduled Tribes
A	751	47	5
B	1065	75	28
C	3167	475	614
D (Excl Sweepers)	1803	397	438
E (Sweepers)	131	99	5
total	6917	1093	1090

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 service 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 entertainments are 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 had been helping the villages around the Projects by providing hand pumps, digging wells for providing drinking water, mobile dispensary facilities construction of approach roads to their villages etc.

10. Progressive use of Official Language

N.M.D.C. has received the following RAJBHASA Awards in the year 1992-93 and 1993-94 for excellent performance in the use of Hindi amongst the Offices/ Undertakings under the Ministry of Steel.

1. Indira Gandhi Raj Bhasha Shield for 1990-91 as First Prize for the Excellent Performance amongst all undertaking in the use of Hindi in "C" region. This Shield was presented by the Department of Official Languages, Ministry of Home Affairs, Government of India.

2. Raj Bhasha Shield for 1990-91 as first Prize for the Excellent Performance of Official Language implementation amongst all the offices undertakings under the Ministry of Steel. This shield was presented by the Ministry of Steel, Government of India.

3. Raj Bhasha Trophy for 1989-90 as Third Prize for the Excellent Performance of Official Language implementation amongst the offices/ undertakings under the Ministry of Steel. This Trophy was presented by the Ministry of Steel, Government of India.

4. Donimalai Iron Ore Project was given Official Languages Prize as First Prize for promotion and implementation of Hindi as Official Language in South Zone (Andhra Pradesh & Karnataka). This Prize was awarded by the Department of Official Languages, Ministry of Home Affairs, Government of India.

11. Memorandum of Understandings

In 1993-94 also NMDC entered into a Memorandum of Understanding with Government of India, under which it has committed to produce 110 lakh tonnes of iron ore, 17500 carats of diamonds and to earn a net profit (before tax) of Rs. 48.20 crores. NMDC's performance ratings against MoU targets for the years 1991-92 and 1992-93 were "EXCELLENT."

12. 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 Chowgle Pvt. & 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 1992-93, the Company produced 5.46 lakh tonnes of pellets and despatched 5.53 lakh tonnes of pellets inspite of the world wide recessionary trends in the iron and steel industry. The Company earned a total income of Rs. 4,767.13 lakh which includes miscellaneous receipts of Rs. 16.58 lakhs. After adjusting the operating expediture of Rs. 3,943.60 lakhs, interest of Rs. 727.99 lakhs and depreciation of Rs. 665.11 lakhs, the Company incurred a loss of Rs. 494.34 lakhs during the year 1992-93 as against Rs. 961.03 lakhs in the previous year after providing for prior period adjustments. The accumulated losses thus carried to the Balance Sheet stood at Rs. 6,064.16 lakhs as on 31st March, 1993 as against Rs. 5,569.82 lakhs as on 31st March, 1992.

13. J&K Mineral Development Corporation Limited

J&K Meneral 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 in J&KMDC, the remaining 26% is owned by J&K Minerals Limited, a State Government Public Sector Undertaking. The Panthal 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 Government of India during November 1992 and was scheduled to be completed in 30 months.

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

Metal Scrap Trade Corporation Ltd.

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 decana lised and put under OGL w.e.f. August, 1991. The Corporation's status is now the same as other importers. The company also undertakes disposal of ferrous and miscellaneous scrap arisings from integrated steel plant under SAIL and disposal of scrap surplus stores from other public sector undertakings and Govt. Departments.

ACTIVITIES :

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

(a) **Foreign Trade**

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

(b) **Domestic Trade**

This Division is responsible for disposal of ferrous and miscellaneious 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 and System Design.

OBJECTIVES :

(a) **Short-term Objectives—**

(1) To undertake import of scrap/substitutes at competitive price and to distribute them efficiently and equitably to the users.

(2) 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 sectors.

(3) 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.

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

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

(b) **Long-term Objectives—**

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

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

FOREIGN TRADE:

(a) **Market Scenario—**

During the year 1992-93, MSTC faced greater competition from various private sector organisations which started importing melting scrap for use by the secondary steel industry. MSTC responded by making necessary changes in strategies of purchase and market policies as well as procedures. The company managed to retain its position as the single largest importer of steel melting scrap with a 26% market share. A fresh agreement was entered into with the Czech Govt. agency, M/s Transakta and MSTC signed an MOU with one of the premier foreign suppliers for additional supply of melting scrap for the year 1993-94.

(b) **Constraints for 1993-94—**

Since June, 1993 the international prices of scrap have increased sharply. The customs duty has also risen from 10% to 12.5%. These factors along with shortage of power and general demand recession have adversely affected the production of electric arc furnace units, many of 50% which are reported to be closed.

DOMESTIC TRADE:

The sluggishness in demand and low market prices put immense constraints on disposal of scrap and surplus arisings from domestic sources. During the year the Committee on Public Undertakings (COPU) reviewed the operations of MSTC and directed that additional emphasis should be given to increasing domestic trade. An action plan has been prepared for implementing the recommendations of COPU. The Domestic Trade Division has been reorganised and strengthened and additional attention is being given to increasing the volume of domestic trade operations.

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 & 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 reporting to CMD. Besides, the company has opened branch offices at Madras, Vizag, and Bhopal and Officies at Rourkela and Durgapur Steel Plants.

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

FUTURE PLANNING AND ACTIVITIES:

The company has 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, financial services in trading rading, etc. as well as diversification in the long run into areas of manufacture relating to the iron & steel industry.

The company has also formulated micro objectives of performance which have been approved by the Govt. These details not only the long term objectives of the company but also strategies to meet its commitments to customers, Govt. and the nation at large.

MOU WITH GOVERNMENT

During the year 1992-93 the company has been awarded a composite MOU score of 1.38 which is equivalent to a near excellent rating.

PHYSICAL AND FINANCIAL PERFORMANCE

The physical and financial performance for the year 1993-94 (provisional) upto September, 1993 is given below:—

	1991-92	1992-93	1993-94 (upto Sept. 1993 Provisional)
I. Financial Results (Rs. in crores)			
(a) Turnover	130.84	289.43	78.02
(b) Operating Profit (before interest, depreciation and other provisions)	7.87	10.97	3.53
(c) Interest and Depreciation	0.64	1.59	0.36
(d) Profit before Tax	6.86	7.61	2.17
II. Physical Performance			
(a) Foreign Trade Carbon Steel Melting Scrap ('000 MT)	285	682	166
(b) Domestic Trade Despatches of Ferrous Scrap arising 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).	208	210	71.13

During the year 1992 the company declared a dividend of 30% on the paid-up capital against 40% in the earlier year.

EMPLOYMENT STATISTICS

The employment statistics of the company including SC/ST as on 1st September, 1993 are given below:

(a) Gereral	Executive	Non-Executives	Total
(i) Head Office: Calcutta	61	103	164
(ii) Regional Office:			
(a) Calcutta (ER)	9	18	27
(b) New Delhi (NR)	13	12	25
(c) Bombay (WR)	9	14	23
(d) Bangalore (SR)	6	9	15

(a) Gereral	Executive	Non-Executives	Total
(iii) Branch Office:			
(a) Madras	5	2	7
(b) Vizag	4	2	6
(c) Durgapur	2	—	2
(d) Rourkela	1	1	2
	110	161	271

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

Group	Total	SC	ST	Physically handdicapped	Ex-Servicemen
A	110	10	1	Nil	1
B	19	05	—	1	—
C	110	21	6	2	3
D	32	10	2	1	—
	271	46	9	4	4

Male/Female

	Executives	Non-executives	Total
Male	99	137	236
Female	11	24	35
	110	161	271

8. Ferri Scrao Nigam Limited

INTRODUCTION:

Ferro Scrap Nigam Limited (FSNAL) 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.

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 & Steel sections and also the Rolling Mills.

ORGANISATIONAL STRUCTURE:

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

PHYSICAL AND FINANCIAL PERFORMANCE:

Physical Performance

The production performance of FSNL for the last two years and the projected performance for the year 1992-93 is given below:—

ITEM	1991-92	1992-93	1993-94 (Prov.)
Recovery of Scrap (Lakhs Metric Tonnes)	9.80	10.42	10.60
Market Value of Production (Rs. in Crores)	431.20	474.00	476.00

Financial Performance:

(Unit Rs. in lakhs)

ITEM	1991-92	1992-93	1993-94 (Prov.)
1. Total Turnover i.e. service charges realised including misc. income etc.	3827.74	5197.79	5560.59
2. Gross Margin before interests and depreciation	1881.18	2184.38*	2607.00
3. Interest and Depreciation	543.76	687.71	1057.00
4. Profit before tax	1337.42	1496.67	1550.00

SALE REALIZATION:

Sales realisation per metric tonne for the last two years and estimated sales realization per metric tonne for the years 1992-93 and 1993-94 are indicated below:

1991-92	1992-93	1993-94 (Proj)	1994-95 (Proj)
Rs. 379.09	Rs. 480.70	Rs. 507.90	Rs. 517.50

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 furnances, 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 hydralic baling press for processing sheet trimmings, turnings and borings.

9. Metallurgical & Engineering Consultants (India) Limited (Mecon)

1.0 BACKGROUND

1.1 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. MECON has entered into a number of areas and services as detailed below:

(i) Planning, analysis and preparation of reports for projects.

(ii) Basic and detailed engineering of projects including infrastructural facilities.

(iii) Project and Construction Management.

(iv) Procurement and Contract Management.

(v) Assistance in erection, commissioning and post commissioning services.

(vi) Design and supply of equipment and systems for Coke Oven, Coke Dry Cooling Plant, Coal Based and other Chemical Plants, Pig Iron Plants, Blast Furnance Plant and Equipment including their modernisation/reconstruction etc.

2.0 CAPITAL STRUCTURE

2.1 The authorised capital of the Company is Rs. 4 crores. The issued, subscribed and fully paid up equity share capital is Rs. 2.02 crores.

3.0 FINANCIAL PERFORMANCE

3.1 The turnover of the Company during 1992-93 was Rs. 114.00 crores against Rs. 117.76 crores during 1991-92. The net profit for the year was Rs. 8.29 crores as against Rs. 8.20 crores during 1991-92. A sum of Rs. 0.81 crores has been declared as dividend during 1992-93, representing the highestever dividend i.e. 40% of paid up capital. the estimated turnover for the year 1993-94 is Rs. 133.00 crores and the net profit is estimated to be Rs. 8.50 crores.

4.0 PRESENT MAJOR ASSIGNMENTS

4.1 Consultancy, Detailed Engineering & Project Monitoring Services

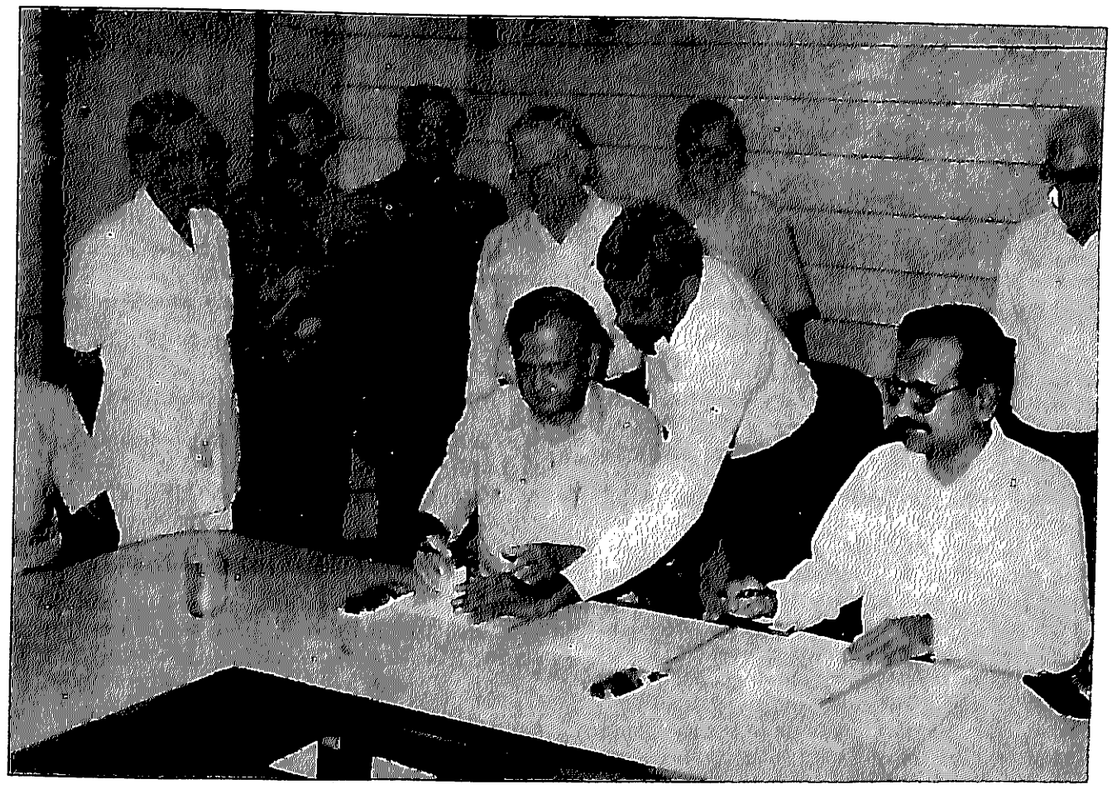
(i) Consultancy, detailed engineering and site supervision services for the modernisation of Bokaro Steel Plant.

(ii) The modernisation of Durgapur Steel Plant in rendering services as prime consultant besides providing project and construction management services.

(iii) Design and engineering services for Coke Oven Battery No. 10 for Bhilai Steel Plant.

(iv) Consultancy, detailed engineering services for the Mini Blast Furnance of M/s. Usha Ispat Limited at Redi.

(v) Consultancy and engineering services for the steel strip project of Steel Co., Gujrat.



Signing of MOU for 1993-94 between Ministry of Steel and MECON

(vi) Consultancy, detailed engineering as well as design and inspection services for Integrated Steel Limited Project coming up at Wardha.

(vii) Construction engineering services for the EAF, CCP and HSM packages of Essar Steel.

(viii) Consultancy, detailed engineering, project management and construction supervision services for New Bank Note Presses at Mysore and Salboni.

(ix) Focus on energy, oil and natural gas and petro-chemicals.

4.2 EQUIPMENT AND SYSTEM DESIGN

(i) Design, supply, erection and commissioning of electrolytic cleaning line for Tinplate Company of India Limited.

(ii) Design, supply, erection and commissioning of Sulphuric Acid Plant at Bokaro Steel Plant.

(iii) Commissioning of the rectification stream of 30,000 t/yr Benzol Plant at Visakhapatnam Steel Plant (VSP) using hydro-refining process.

(iv) Execution of the continuous Casting package-II as a part of Rourkela Steel Plant Modernisation.

(v) Planning to set up plants based on second hand equipment available abroad given thrust to refurbishing engineering and modernisation of old equipments purchased by entrepreneurs.

5.0 OVERSEAS OPERATION

5.1 MECON has established itself as a reputed consultancy organisation in International field also. The major international assisgnments of MECON are as follows:

(i) MOCON, in association with Pan African Consultancy Services (PACS) is rendering project management and technical services for setting up of a 1.3 MT per year BF-BOF based Integrated Steel Plant at Ajaokuta in Nigeria.

(ii) MECON has taken up globalisation as a major thrust area for overseas business development and has established Overseas Offices at Dubai, UAE and Dusseldorf, Germany.

(iii) MECON has been entrusted the work of detailed engineering, consultacny and site supervision services for a Copper Extrusion and Wire Rod Plant in Oman as well as Cold Rolling Mill Complex in Indonesia.

(iv) MECON has also undertaken Feasibility Studies for a 40,000 tonnes per year Steel Plant complex in Oman and 500,000 tonnes/yr Steel Plant in the UAE.

(v) MECON, is carrying out, design & engineering services for clients in the USA and Germany. Besides above, MECON has received other assignments for study reprots and basic engineering.

(vi) MECON, has submitted a large number of offers to Overseas clients and some of them are expected to result into job.

(vii) MECON, has also entered into MOU with various firms from the Middle East and Europe for collaboraltion/joint working on projects of mutual interest.

6.0 TECHNOLOGICAL DEVELOPMENT

6.1 The Company is continuously striving towards tehcnology development through inhouse as well as with cooperation/collaboration arrangements with outside organisations.

6.2 In the area of software development MECON has developed software packages like 'VIRWAR', RCMEC and is also developing Expert System for continous casting plant.

7.0 RESEARCH & DEVELOPMENT

7.1 During 1992-93, MECON adopted a 5-year market oriented Corporate R & D Plan that projects as increase in R & D investment during the course of next 5 years from 0.58 of turnover to 1.5% of turnover. Seven R & D projects have been identified for completion during 1993-94. Two of these involve actual installation and use during operation of steel plants units-an off—line software for optmizing operation of cold rolling mills in steel plants is already in regular use at Hero Cycles Ltd., and a laser spotting system for accurate alignment of coke oven pusher cars with the oven doors is to be installed at Rourkela Steel Plant. Hydraulic automatic guage control system developed by MECON for control of strip thickness in cold rolling mills to close tolerances is also now ready for commercial marketing. The R&D Plan also places emphasis on attaining technological self reliance, fostering and accelerating development and implementation of indigenous technology in iron steel, high tech system and non-conventional and renewable energy sources.

8.0 MANPOWER POSITON

8.1 The total number of employees in the Company as on 31st October, 1993 is 3778, out of which 283 belong to Scheduled Caste and 395 to Scheduled Tribes. The break-up group-wise is given below:

Category A	2638
Category B	277
Category C	725
Category D	138

9.0 INDUSTRIAL RELATIONS AND WORKER'S PARTICIPATION

9.1 The Company is maintaining cordial industrial relations, owing much to the positive consultative approach shown by the MECON Executive Association and MECON Employees' Union. Joint Consultative fora 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.

10.0 COST REDUCTION MEASURES

10.1 The control over expenditure incurred by Head Office and various Regional/site offices is being exercised through budgetary ceiling in the form of budget allotment for each individual account heads.

11.0 SOCIAL WELFARE

11.1 As in 1992-93, this year also, a number of activities have been undertaken for upliftment of the community surrounding MECON township and the MECON adopted village, as a part of social responsibility. Some of which are:

1. Community education Programme.
2. Community afforestration programme.
3. Facilitating the availability of drinking water.
4. Repair and development of approach roads of the surrounding areas.
5. Arranging health awareness programmes, school health programmes and Medical Camps in rural areas.
6. Development of approach roads, check dam, community hall, Indira Awas and Bee keeping programmes, etc. in the adopted village of MECON.

12.0 MEASURES FOR IMPROVEMENT

12.1 To ensure its continued growth and maintaining its leading role in Engineering & Consultancy in the metallurgical and other industries in the country, certain steps have been taken which are indicated below:

—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.

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

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

—Vendor development for improved quality assurance.

—Co-operation with Engineering & Consultancy Organisations for joint development efforts.

—Management by policy evolution through participation by employees.

—Project-by-project Quality improvement efforts.

13.0 Official Language Policy

MECON has been awarded Second prize for best use of Hindi in the organisation. The Company continues to strive hard for further progressive use of Hindi by organising workshops, training programmes, seminars, etc. Bangalore and Bokaro offices have also got recognition from TOLIC for implementation of Hindi in their offices, and they were awarded prizes.

10. Sponge Iron India Limited

1.0 INTRODUCTION

1.1 The Demonstration Sponge Iron Plant of the Company of 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 ore from Bayyaram, A.N Puram and Veldurthi Regions of Andhra Pradesh, 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 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 6 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.

2.0 FINANCE

The authorised share capital of the Company stood at Rs. 30.00 crore on 31.3.1993; paid up capital was Rs. 26.83 crore. Shares amounting to Rs. 26.00 crore are held by the Government of India, the balance of Rs. 0.83 crore being shares of the Government of Andhra Pradesh.

3.0 PRODUCTION

3.1 The Production and Financial Performance of the Company during the last two years, together with figures as per Revised Estimates for 1993-94, is furnished in the table below:

TABLE

	1991-92	1992-93	1993-94 (MOU targets) (As per RE)
Production (t)	48,095	49,110	51,000
Capacity utilisation (%)	80	82	85
Sales (t)	44,486	51,091	49,250
Sales Turnover (Rs. in lakhs)	2081	2130	2407
Generation of Internal Resources (Rs. in lakhs)	630	496	(–) 173
Net Profit (Rs. in lakhs)	286	291	(–) 549

*(includes material transfer to Pig Iron Plant)

3.2 As against the target of 29,500 t upto October, 1993 fixed, production of 26,250 t was achieved representing 90% achievement of target. The quality of coal supplied by Singareni Collieries continues to be poor even worse than last year, fixed carbon content after dropping to as low as 37% against requirement of 45% (minimum). The ash content has also gone up to an average 37-38% as against the specified maximum limit of 25%. These two factors contributed to both higher consumption of coal as well as lower capacity utilisation. Accordingly the annual production is expected to be somewhat lower than original target of 51,000 t and is now expected to be around 46,000 t.

SALES AND PROFITABILITY

Against a target of 30,000 t fixed upto October, 1993, actual despatches were 25,050 t representing 84% achievement against target. It is now estimated that 46,000 t (including material transfer to Pig Iron Plant) would probably be achieved during the full year, as against an originally planned target of 51,000 t. This is due to lower production and also depressed market conditions in the face of easy availability of cheap imported scrap and demand recession in steel industry.

Operations upto the end of October, 1993 have resulted in an estimated net loss of Rs. 199 lakhs as against the budgeted figure of Rs. 158 lakhs.

5.0 COST REDUCTION

5.1 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.

5.2 A separate project has been 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 as dependance on external power would be less thus effecting saving in costs.

6.0 EFFORTS MADE TOWARDS INDIGENISATION

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 crore. Besides 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.

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. The division has also developed expertise for agglomerating sponge iron fines into high density briquettes which have received ready acceptance by users. During the year, the following items so far imported have been indigenised;

a) Instrumentation Equipment for weigh feeders

b) Coal Injectors

c) Control Panel Indicators

This has resulted in timely availability of these spares at lower cost.

7.0 MANPOWER

The total number of employees of the Company as on 30.9.1993 is furnished below indicating separately persons belonging to Scheduled Castes, Scheduled Tribes, Ex-Servicemen, Physically Handicapped and Women.

Sl. No.	Groups	Total No. of Employees	SC	ST	Ex-Servicemen	PHC	Women
1.	Group A	120	14	—	—	—	—
2.	Group B	84	16	4	1	—	6
3.	Group C	253	41	24	3	4	15
4.	Group D (Excluding Sweepers)	153	25	27	1	6	6
5.	Group D1 (Excluding Sweepers)	11	8	1	—	—	9
	Total	621	104	56	5	10	36

8.0 EMPLOYEES' PARTICIPATION IN MANAGEMENT

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 finding solutions internally.

9.0 PROGRESSIVE USE OF OFFICIAL LANGUAGE

From April, 1993 to September, 1993 all the documents which were required to be released in bilingual form in accordance with the Section 3(3) of Official Languages Act, 1963, were released in bilingual form. "Hindi Day" was celebrated on 14th September, 1993. Elocution, Essay writing and Dictation competitions were conducted in this connection and prizes were awarded to the winners. During the period noting and drafting scheme has been introduced.

Two employees passed he Pragya examination for acquiring working knowledge of Hindi and were sanctioned incentive increments. A one day "Hindi Workshop" was organised on 20th November, 1992 in three sessions and 20 employees were trained. Guest speakers delivered lectures on (1) the official language policy of the Union (2) Hindi Vyakaran and Lipi, (3) Difficulties encountered by non-Hindi speaking people and its solution while doing work in Hindi. Books for the Prayag examination were also distributed among the participants for their use. One typist has completed Hindi Type-Writing Training and two Stenos and two P. As, are undergoing training in Hindi Stenography and Hindi Typewriting. Examination on "Learn one word per day" in Hindi scheme was conducted on 25.11.1992 and successful employees were presented with cash awards. An amount of Rs. 100/- is being sanctioned every month to stenos and typists for doing work in Hindi in adition to their own regular work.

10.0 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.

A Power Plant based on waste gas heat recovery Power Plant has been established to utilise the heat from the hot waste gases to generate power. Pollution levels are within the norms prescribed by A.P. Pollution Control Board.

11.0 WASTELAND DEVELOPMENT

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

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 years 1992-93 and 1993-94 upto October, 1993, 1675 trees were planted. A programme has recently been drawn for planting an additional 10,000 trees in a phased manner.

12.0 ENGINEERING AND CONSULTANCY

12.1 ENGINEERING

A separate Engineering and Projects Division has been operating in the Company since 1981 for undertaking Design and Engineering work for commercial Sponge Iron Plants. The Division has successfully handled the Engineering work for the Expansion Unit and Briquetting Plant. The Division has also completed the engineering work relating to 60,000 tpa Sponge Iron Plant. An MoU has also been signed with M/s. RPG Industries for setting up two kilns of 60,000 tpa each with the engineering and know-how developed by SIIL, in the joint sector.

As a result of the efforts made by this Division the foreign exchange content was brought down from Rs. 2.20 crores originally envisaged to Rs. 0.80 crore in respect of the Expansion Unit. Similarly, the foreign exchange content in respect of Briquetting Plant was also kept at the minimum by restricting the import of machinery only to the extent of Briquetting Press, dozing and feeding systems. Besides, constant efforts are being made to indigenise critical spares, thereby reducing dependance on imports and saving valuable foreign exchange.

12.2 CONSULTANCY SERVICES

The sponge iron plant of M/s. Hindustan Electro Graphites Limited which has been commissioned with the Engineering Assistance of M/s. Sponge Iron India Limited has been functioning satisfactorily operating at more or less at 100% 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.

11. Neelachal Ispat Nigam Limited

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 techno-economic 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.

12. Vijaynagar Steel Limited

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.

13. Hinustan Steel Works Construction Limited (HSCL)

1.0 BACKGROUND OF THE COMPANY FORMATION:

1.1 The Company was incorporated in 1964 with the primary object of creating a public sector construction organisation so as to have a well equipped construction base in the Public Sector with necessary expertise for setting up of integrated steel plants in the country.

The Company started its operations in 1965 at Bokaro with landscaping and soil investigation activities for Bokaro Steel Limited.

2.0 PROFILE AND AREAS OF ACTIVITIES:

2.1 Starting with a strength of 95 employees and a turnover of Rs. 5 crores, the company is now working at an annual turnover of Rs. 300 crores. Since inception the Company has turned out over Rs. 3000 crores worth of work in steel and other sectors. The Company in its passage of over two decades has within its ambit a wide range of specialised activities in steel sector, all major capital repairing works pertaining to coke ovans batteries & blast furnaces, power sector, dam construction, bridges, coal handling plants, underground communication and transport system, industrial and township complexes etc. involving high degree of planning, co-ordination and sophisticated construction techniques.

HSCL is operating mainly in Steel Plants having its permanent establishment in almost all the integrated steel plants.

MANPOWER POSITION:

Manpower position of the Company as on 1.8.93 and the representation of ST, Female, Ex-servicemen and physically handicapped employees are given below:

Group	Total strength	SC/ST	%	Female Employees	Ex-Servicemen	Physically Handicapped employees
A	1805	98	5.42	9	5	2
B	533	72	13.5	11	3	3
C	14677	4926	33.56	691	185	36
D	1143	230	20.12	617	1	7
Total	18158	5326	29.33	1328	194	48

As compared to the total strength of 18,661 during 1991-92, there is a reduction of about 503 employees in the company which includes seperation due to retirement, resignation, death, termination and Voluntary Retirement etc. The company has been able to reduce 3957 employees through Voluntary Retirement Schemes as on 1.8.93.

3.0 FINANCIAL RESULTS:

3.1 The authorised and paid-up capital as on 30.9.93 was Rs. 20 crores. The total amount of loans from Government outstanding at the end of March, 1993 was Rs. 220.77 crores.

4.0 FINANCIAL RESULTS:

4.1 The company has achieved a turnover of Rs. 303.06 crores during 1992-93. The company incurred a total loss of Rs. 75.74 crores for 92-93 which included an interest on Government loan of Rs. 60.26 crores. The actual loss incurred for works in India before interest was Rs. 15 crores only.

For the year 1993-94 company has a target to achieve a turnover of Rs. 335 crores. During April-September, 1993 a turnover of Rs. 121 crores has been achieved as compared to Rs. 105 crores achieved during corresponding period in the previous year.

5.0 CONTRACT LABOUR POSITON:

6.1 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.

6.0 SAFETY MEASURES:

6.1 Safety code formulated by HSCL is implemented vigorously. For this purpose Safety Organisations are, functioning in all the major units. The contractors/labour engaged at various sites are also educated on safety measures alongwith HSCL employees. For hazardous jobs safety appliances are made available. Periodical seminars are also conducted to aprise the personnel with latest safety measures.

7.0 WORKERS PARTICIPATION IN MANAGEMENT:

7.1 The Company has joint council at Unit level for major units at B.S. City and Bhilai and Shop Councils at Shop level for participation in economy, cost reduction, safety and quality improvement.

7.2 HSCL has an Apex Joint Forum which comprises of the National Level Trade Unions. From the inception of the formation of Apex Level Joint Forum Body in 1981, meetings have been regularly held.

8.0 WELFARE PLAN FOR SC/ST

8.1 a) Schools have been provided with assistance of the Management in the areas where SC/ ST employees mostly reside.

b) Assistance is given for supply of drinking water.

c) Plots are allocated to workers for making hutments in the land allotted at sites of clients with free electricity, water supply and sanitation arrangements etc.

d) Children of SC/ST employees get due preference in the matter of schooling at Projects where short term construction works is to be undertaken.

e) A Central Welfare Fund Scheme is also being operated for HSCL's employees w.e.f. 1.4.87. This scheme is aimed at providing immediate financial assistance to the dependents of employees in the event of death while in service of the company. The contributions to this fund are voluntary.

9. MEASURES TOWARDS IMPROVEMENT:

9.1 The viability of the company has been affected by the surplus manpower, slackness in the growth of the steel sector and losses incurred by the company in Libyan Works. Steps are being taken improve the viability of the company. The company has introduced economy measures for reducing overhead expenditure. The company has also been implementing Voluntary Retirement Scheme, with a view to reducing surplus manpower.

10. IMPLEMENTATION OF OFFICIAL LANGUAGE

10.1 Efforts have been made to encourage use of Hindi in the official work of the Company as required under provisions of the Official Language Act and Rules and progress made in this regard has been regularly reviewed in the quarterly meetings held in the Corporate Office as well as in the Zonal Offices of HSCL. Not only all the letters received in Hindi have been replied in Hindi but also as many as 1397 letters were issued in Hindi to the Central and State Government Offices located in "A" region in 1992-93. Almost all the circulars, tender notices, press releases, appeals and general notices were issued bilingually. Besides organising in-house Hindi workshops in the Corporate Office to impart training in Hindi noting and drafting, employees were also nominated to attend Hindi classes of Probodh, Praveen and Pragya and also Hindi Typing and Stenography conducted by the Department of Official Language at nearby training centres.

10.2 In addition to celebrating Hindi Day and Week both at Corporate and Zonal Offices, various Hindi competitions like debate, translation, noting, drafting, writing technical and administrative terms etc. were held and attractive prizes were awarded to the winners. Incentive Schemes like cash award and personal pay have gone a longway in cultivating interest and enthusiasm amongst the non Hindi Speaking employees to learn Hindi. Company has been actively participating in the activities of the Calcutta Town Official Language Implementation Committee engaged in the furtherence of progressive use of Hindi in the region.

14. Bird Group of Companies

A) 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) Burrakar 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 Ltd. are non-operational.

B) PERFORMANCE OF THE COMPANIES:

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.

6

Private Sector

The Tata Iron & Steel Company Limited

The Tata Iron & Steel Co. Ltd., (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 in 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 × 30 MW Power Plant, etc.

Tisco is now poised to complete its Phase III Modernisation Programme by the middle of 1994 which would increase 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 Over Battery;
- 500 tpd Oxygen Plant;
- Lime Calcining Plant;
- Captive Power Generation Plant (Total 97.5MW;
- 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. The major facilities in the Hot Strip Mill have been commissioned and the mill is under a series of hot trials to cover the entire produce spectrum. One of the two Slab Casters was commissioned in Oct, 93. The new LD Shop will be commissioned by Sept, 94.

2) Production:

Production in the first 8 months of the year was:

	Apr-Nov, 93	Apr-Nov, 92
Hot Metal	1,689,765	1,583,898
Crude Steel	1,606,604	1,620,884
Works saleable Steel	1,360,026	1,377,188
Semis%	57.31	58.33

The hot metal production during Apr-Nov this year was higher by 105867 t compared to the same period last year. The saleable steel production was lower primarily due to lower proportion of semis.

The productivity of the Blast furnaces have continued to be outstanding and it is expected that the best ever output of hot metal will be achieved.

(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 larger extent.

The Energy Optimising Furnace (EOF) of 80t capacity installed at SMS.3 was recommissioned during July, 93 and has produced 40,047 t during July-Nov, 93. Attempts are continuing to achieve the rated capacity.

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

4) Energy Conservation:

The Plant Specific Energy Rate for the first half of the year 93-94 was 9.530 G Cal/t of crude steel as against 9.393 G Cal/t for the same period in the previous year, i.e., an increase of 1.15%. The main contributing factors for the increase in the Plant Specific Energy Rate were:

i) Higher iron/steel ratio (lower scrap consumption);

ii) Higher coal injection rate;

iii) Higher in-plant power generation and power rate

iv) Lower percentage of semis.

However, the following factors had favourable effect on the Plant Specific Energy Rate:

i) Lower energy consumption rate at steel making, primary and finishing mill stages;

ii) Lower rate of Petro Fuel consumption;

iii) Improved boiler efficiency;

iv) Higher availability of by-product fuels;

v) Lower coke rate.

5) Safety:

During the first 6 months of 93-94 there were 117 accidents in Tisco as against 45 during the same period last year. This increase is mainly due to a change in the reporting system widening the scope of accidents reported. Agrico Plant of Tata Steel achieved 12 million accident free manhours at a stretch on 3rd Dec, 93, Merchant Mill crossed 10 million accident free manhours on 16th July 93, and Coke Ovens achieved 9 million accident free manhours on 8th June, 93. Besides this many other departments have reported multi million accident free manhours.

Safety awareness programmes have been intensified with specific focus on safety. Job safety training for workers and supervisors towards awareness of standard operating procedures has been continuing. Safety training in the area of gas exposure has been given special emphasis too.

Secondary Steel Sector

During 1993-94 there have been no major policy changes in the steel sector. The Iron & Steel Industry has already been delicensed and decontrolled. Presently the secondary steel sector is producing over 3 million tonnes of crude steel and production of crude steel is expected to increase to over 7.75 million tonnes by the end of the 8th Plan Period and over 11 million tonnes by the turn of the century. However, the performance of the secondary steel sector has been adversely affected due to various factors such as demand recession, shortage of power and increase in input costs particularly rise in international scrap prices. The production in 1993-94 is expected to decline as compared to the production in 1992-93. Production may improve when the demand picks up again.

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

Electric ARC Furnace Industry

At present 178 number of Electric Furnace units have been commissioned. Out of this, 176 number of Electric Arc Furnace units hold Industrial Licence with a capacity of 7.2 million tonnes and the balance 2 units have filed IEMs with SIA, Ministry of Industry and also commenced production.

Production of ingots/concast billets by EAF units, which are reporting their production to the Office of the Development Commissioner for Iron & Steel, during the last three years and for April—July, 1993 is given bellow:

(In '000 tonnes)

Category	1990-91	1991-92	1992-93 (Prov.)	1993-94 (Prov.) (April to July 93)
Mild Steel	2363.0	1672.0	1498.7	303.2
Medium/High Carbon Steel	371.6	341.2	293.1	75.4
Alloy Steel	598.8	516.1	585.0	157.1
Stainless Steel	176.0	196.7	152.1	44.0
Total Reported	3509.4	2726.0	2528.9	579.7

The above figures do not include production of steel by casting units registered with DGTD.

2. Steel Re-rolling industry

There are about 1010 units holding industrial licence with a total capacity of 20.73 million tonnes. Out of these, 83 units with a capacity of 3.7 million tonnes are having captive steel making furnaces.

Production of the re-roiling units during the last 3 years and for April-July, 1993 is as follows:

(In '000 tonnes)

Category	1990-91	1991-92	1992-93 (Prov.)	1993-94 (Prov.) (April to July 93)
Bars/Rods (Incl. Squares)	2191.7	2059.6	1791.1	411.5
Wire Rods	634.5	608.8	529.8	130.1
Structural	743.8	692.4	813.8	206.0
Hoops	1.2	0.3	1.7	—
Special Sections	111.7	100.0	120.9	27.9
Slabs/Plates	41.2	44.7	18.6	0.5
Total Reported	3724.1	3505.8	3275.9	776.0

3. Steel Wire Drawing Industry

There are 76 units holding industrial licence with a total capacity of 0.9 million tonnes.

Production of steel wire drawing units during the last three years and for April-July, 1993 is as under:

(In '000 tonnes)

Category	1990-91	1991-92	1992-93 (Prov.)	1993-94 (Prov.) (April to July 93)
Mild Steel	193.6	221.4	136.2	31.1
Medium/High Carbon	163.0	142.6	128.0	33.2
Alloy Steels	9.9	16.6	11.0	1.9
Stainless Steel	2.3	2.2	4.0	0.3
Total Reported	368.8	382.8	279.2	66.5

4. Cold Rolled Steel Sheets/Strips Manufacturing Industry:

There are 50 units holding licence for a total capacity of 1.72 million tonnes which have commissioned their plants.

The production of units for last 3 years and for April-July, 1993 is as follows:

(In '000 tonnes)

Category	1990-91	1991-92	1992-93 (Prov.)	1993-94 (Prov.) (April to July 93)
Mild Steel	547.5	636.7	752.4	209.5
Medium Carbon Steel	13.2	15.6	12.1	4.0
High Carbon Steel	6.8	5.8	6.3	1.3
Alloy Steels	0.4	1.7	4.0	0.6
Stainless Steel	6.0	6.8	7.6	1.8
Total Reported	573.9	666.6	782.4	217.2

5. Hot Rolled Steel Sheets/Strips Units

In the secondary sector there are 6 units holding industrial licence for a total capacity of 0.3 million tonnes which have commissioned their plants. 4 units holding licence for a total capacity of 0.17 million tonnes are yet to commission their plants.

The total production of hot rolled steel strips units during the last 3 years and for April-July, 1993 is as follows:

(In '000 tonnes)

Category	1990-91	1991-92	1992-93 (Prov.)	1993-94 (Prov.) (April to July 93)
Hot Rolled Steel Sheets/Strips	45.3	74.6	71.7	18.6

6. GP/GC/Galvalume/Galfan/PVC/Vinyle Coated Sheets/Strips:

9 Units holding licence for manufacturing 0.36 million tonnes of GP/GC Sheets have been commissioned. In addition to this, 2 units with a total capcity of 0.1 million tonnes have set up Colour Coating Lines. But they are yet to start commercial production. In addition, 5 units holding licence for manufacturing 0.18 million tonnes of GP/GC/Coated Sheets are yet to be commissioned.

Production of GP/GC sheets during the last three years and for April-July, 1993 is as follows:

(In '000 tonnes)

Category	1990-91	1991-92	1992-93 (Prov.)	1993-94 (Prov.) (April to July 93)
GP/GC Sheets/ Strips	219.0	180.1	226.8	72.5

'G' Blast Furnace

7. Tin Plate Industry

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

Production of electrolytic tinplate of the two units in the private sector during the last 3 years and April-July, 1993 is as follows:

(In '000 tonnes)

Category	1990-91	1991-92	1992-93 (Prov.)	1993-94 (Prov.) (April to July 93)
Oil Can size	46.0	20.1	32.1	9.2
Non Oil Can size	15.4	12.8	13.5	5.3
Total Reported	61.4	32.9	45.6	14.5

PIG IRON INDUSTRY

Pig Iron is one of the basic raw materils required by the foundry & engineering industries for manufacture of various products. Presently, the main source of pig iron are the integrated steel plants which, however, have to divert a part of their hot metal production for manufacture of pig iron. The domestic production of pig iron has however not kept pace with its demand. As a result, there is a general shortage of 3 to 4 lakh tonnes per year, which is turn has adversely affacted the growth of the engineering sector. Efforts are therefore being made to create pig iron manufacturing facilities in the secondary sector.

2. During 1992-93, against the assessed demand of 21 lakh tonnes, the domestic production of pig iron was approximately 18.40 lakh tonnes, of which 16.80 lakh tonnes was contributed by the main producers and 1.60 lakh tonnes from secondary producers.

3. During 1993-94, against an estimated demand of approximately 22 lakh tonnes, the domestic production of pig iron is likely to be about 18.90 lakh tonnes, of which 15.40 lakh tonnes is expected to be contributed by the main producers and 3.50 lakh tonnes from the secondary producers.

4. Considerable interest is now being shown by the private sector in setting up pig iron units. The All India Financial Institutions have already sanctioned assistance to 13 pig iron units in the private sector with a proposed capacity of 16.95 lakh tonnes per annum and assistance to another unit for a capacity of 2.50 lakh tonnes is being sanctioned, as per details given below:

	Name of the Unit	Location	Capacity (lakh tonne)
1.	Mid-West Iron & Steel Co. Ltd.	A.P.	0.75
2.	Tata Metaliks Ltd.	W.B.	0.90
3.	Kirloskar Ferrous Industries Limited	Karnataka	1.20
4.	Sathavahana Ispat Ltd.	A.P.	1.20
5.	Unimetal Ispat Ltd.	Karnataka	0.75
6.	Sesa Goa Ltd.	Goa	0.75
7.	Nova Dhatu Udyog Ltd.	Goa	0.85
8.	Jindal Strips Ltd.	M.P.	2.00
9.	Suryavanshi Steel & Alloys Ltd.	A.P.	1.30
10.	Usha Ispat Ltd.	Maharashtra	1.90
11.	Nagpur Alloy Castings Ltd. (formerly NECO Industries Limited)	Madhya Pradesh	3.36
12.	Lanco Ferro Ltd.	Andhra Pradesh	0.90
13.	Usha Martin Industries Ltd.	Bihar	1.09
14.	Asian Mineral Industries Ltd. (Partly sanctioned)	Andhra Pradesh	2.50
		Total . :	19.45

5. The pig iron units of M/s Sesa Goa Ltd., M/s Usha Ispat Ltd. and M/s Mid-West Iron and Steel Ltd. have already gone into production.

6. Coke is an essential raw material required for pig iron production. Government 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, manufacture 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.

SPONGE IRON

Manufacture of sponge iron was taken out of the purview of the licensing provisions of the Industries (Development & Regulation) Act in 1985. While there were only two private units in production during 1988-89, the number of such units increased to ten in 1992-93. The total installed capacity of sponge iron units is currently around 25 lakh tonnes per annum. Some more capacity is expected to become

operational in the near future. The production of sponge iron from 1988-89 onwards is given below:—

(In lakh tonnes)

1988-89	1989-90	1990-91	1991-92	1992-93	1993-94 (April-December)
1.94	3.18	8.30	12.8	15.59	16.06 (Provisional)

FERRO ALLOYS

Ferro Alloys are essential for the production of alloy and special steels. Under the new Industrial Policy announced in July, 91 ferro alloy industry has been delicensed. This will lead to dispersal of manu facturing facilities of ferro alloys across the country which will make it easier availability for local consumers.

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

1991-92	5.3 lakh tonnes
1992-93	5.8 lakh tonnes

(Source: Indian Ferro Alloy Producers' Association, Bombay)

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 thies constraints, exports has shown a rising trend as may be seen from the details of exports. Export of ferro alloys during the last 2 years has been as follows:

	Qty. (in tonnes)	Value (in crores)
1991-92	124,934	172.85
1992-93	150,884	256.04

(Source : IFAPA)

Pan view of Bhandaridah Refractories Plant of B.R.L.

7

RESEARCH AND DEVELOPMENT

1.0 IRON AND STEEL MISSION:

1.1 The Science Advisory Committee (SAC) attached to the Ministry of Steel has been reconstituted during the year for continued guidance to the research and development activities in the iron and steel sector.

1.2 Against the approved outlay of Rs. 60 crores for the 8th Plan period, no new R&D projects could be taken up for study during the year for want of actual availability of funds.

2.0 Other R&D activities:

Both Public & Private Sector undertakings under the administrative control of Ministry of Steel continued their R&D activities during the year. The concentration however, was more towards activities aimed for solution of plant specific problems to improve upon quality, diversification of product-mix, optimum utilisation of raw materials, reduction of energy consumption and full utilisation of all the technological facilities installed either from domestic or from foreign sources.

2.1 R&D Centre for Iron and Steel, SAIL, Ranchi.

2.1.1 OBJECTIVE/THRUST OF R&D

The main thrust of R&D revolved around:

i) imporvement in productivity, yield and quality.
ii) energy conservation and cost reduction.
iii) development of new technologies/processes.
iv) development of new products.
v) improvement in quality of life and environment in iron and steel plants.
vi) Persuation of R&D programmes to help SAIL steel plants to become internationally competitive.

2.1.2 HIGHLIGHTS OF MAJOR ACHIEVEMENTS IN R&D

A. **New technologies/processes:**

— Developed and implemented computer model on coke oven scheduling at RSP coke oven no. 3, for optimum/improved utilisation of coke ovens.

— Commissioned SAIL combined blowing in converter no. 4 at RSP.

— Developed substitution of imported cold rolling oil to increase rolling rate, at RSP.

— Developed 92% Silica ($Si\ O_2$) based exothermic hot repair mass for the coke ovens at BSP, resulting in annual savings of Rs. 0.33 crores.

— Developed technology for production of extra hard pitch for aluminium/electrode industry.

B. **Productivity improvement:**

— Increased the productivity of BF-6 at BSP to a level of 1.41 t/m^3 for 24 hours through R&D efforts, such as oxygen enrichment, hot blast temperature and steam injections.

—Improvement in steel making and casting technologies of wheel steel at DSP.

—Increase of rolling rate and yield by 16% and 1% respectively, by optimising the concast bloom size & roll pass design in the rail mill at BSP.

—Developed production of napthalene at IISCO on regular basis.

C. **Reduction in consumption norms and improvement in yield and quality.**

—Reduced aluminium consumption in killing of steel from 1.7kg/tls to 0.5 kg/tls by adopting modified deoxidation practice.

—Implemented the water fogging system at DSP coal wagon tippling area to reduce the coal dust in the working environment.

—Developed a method for improvement in the recovery of acid and metal value from waste pickle, Pilot plant trials are planned at SSP

—Modified heating practice for 90 UTS rails resulting in increase in yield of quality rails as per relevant standards.

D. **Energy conservation:**

—Modified slides in reheating furnace of Hot Strip Mill of BSL resulting in savings of fuel consumption by 10%

—Modified ladle heating systems at BSP, RSP and BSL, resulting in decrease of the ladle heating time and energy consumption.

—Reduced the reheating temperature of slabs resulting in savings of thermal energy by 5.6% at BSP.

E. **Development of new products:**

—High strength crane wheels

—High chronium grate bars for sinter machine.

—S.G. iron bearing for skin pass mill,

—Thin gauge Jackal Plates

—As TMA-204 Grade B Plates.

—IRS M-41 Cold roll sheets.

2.1.3 **Status of project monitoring:**

— No. of projects planned (92-93) 173
— No. of projects completed (92-93) 154
— No. of projects planned (93-94) 133
— Benefits realised due to completed projects (92-93) Rs. 43.7 crores
— Estimated benefits due to projects being persued in 1993-94 Rs. 108 crores

2.1.4 **R&D Expenditure**

Year	Expenditure (Rs. In crores)	R&D Expenditure as % of sail turn over
1991-92	39.0	0.42
1992-93	39.4	0.39
1993-94 (estimated)	51.0	0.39

2.2 **Tata Iron and Steel Company Limited**

2.2.1 **Objective/thrust of R&D**

TISCO's R&D division has attempted to fulfil the objectives of:—

a) Making Tata Steel a profitable producer of clean steel
b) Optimum utilisation of resources
c) Development of new products and processes
d) Achievement of increased self reliance
e) Ensuring high level of customer satisfaction.

2.2.2 **Highlights of major achievements in R&D**

A. **OPTIMUM UTILISATION OF RESOURCES**

—Optimisation of process parameters for sinter plant resulting in enhanced productivity by 10%

—Trial replacement of Dolomite by Dunite in sinter making resulting in enhancement of Blast Furnace Productivity by 4.5% reduction in coke rate by 21 kg/thm and decrease in coke breeze consumption by 8 kg/tonne. These have resulted in expected savings of Rs. 12 crores per year.

—Experimentation of different grades of domestic non coking coal and identification of the right quality of coal for coal injection in BF, resulting in optimum utilisation of indigenous non coking and reduced coke rate.

—Optimisation of operational parameters of Stamp Charging resulting in elimination of prime coking coal and light diesel oil as well as reduction in coke rate.

—Application of Ceramic Paper (5 mm) in ladle lining at the L.D shop resulting in an appreciable reduction in heat losses through the dolomite lining.

—Imprevement in tar fuel burner for open hearth furnance which has brought in a savings of about Rs.1 crore per year.

B. **Production of clean steel**

Several improvements in the steel melting practice have been brought in through R&D efforts resulting in an appreciable improvements in cleanliness of steel. Some of such strategic steels produced with high level of cleanliness are crank shaft quality steel, cold heading quality steel, the ball bearing quality steel etc.

C. **Modelling for improved performance:**

— Modelling of heat transfer in the mould on billet coaster in the LD-CC area to identify cause of low casting speed and to augment the cooling capability.
— Modelling of heat transfer in the water cooled elements in EOF. Furnace.
— Physical and mathematical model studies to identify the cause of tuyer wear in EOF.
— Study of BF hearth wear
— Study of heat transfer characteristics in the wire rod controlled cooling process for predicting microstructure and ultimate mechanical properties.

D. **Waste utilisation and Environment Management:**

— Utilisation of BF blue dust as an alternative to magnesite as a heavy medium in coal washeries, with atleast 40% cost advantage.
— Utilisation of LD sludge for manufacture of sinter.
— Utilisation of LD slag as soil conditioner.

Ecology and Afforestation at Kudremukh

E. **Development/production of special/new grades of steel**

— Production of corrosion resistant reinforced steel bars suitable for normal industrial atmospheres as well as agressive atmosphere and under marine atmosphere.

— Development of corrosion resistant special structural steel without nickel and low carbon equivalent high strength steels for better maleability.

— Production of high quality cold heading quality steel (SAE 15 B 25), Ball bearing steel (SAE 52100), Wear resistance steel (TISCRAL-200), High Toughness Low Temperature Steel (TISTOUCH), Silicon free with Silicon Electrical Steel, Nickel free heat resistant steel etc.

2.2.3 **Project Monitoring in 1992-93.**

No. of projects taken up	75
No. of projects completed	57
% completed projects	76

2.2.4 **R&D expenditure**

Year	Expenditure	% of total turnover
1991-92	Rs. 8.08	0.30
1992-93	Rs. 7.27	0.24

3.1 M/s. Kudremukh Iron Ore Company Limited

3.1.1 **Objective/thrust of R&D**

The major thrust of various R&D measures was aimed at improvement in quality and productivity of iron ore concentrates and pellets as well as countering the deteriorating quality run of mine ore.

3.1.2 **Highlights of major achievement in the R&D**

The major achievement of M/s. KIOCL in the R&D area are as under:—

— Mineralogical studies for iron ore and reclassification of the ore deposits into three types. Aim is to develop a suitable flowsheet for increased productivity and better quality of finished product.

— Trials on optimum blast technology at mines for improved blasting and for economising the use of explosives.

— Development/installation of suitable flotation system in one of the mill line in the concentrator to effect better quality and recovery of the concentrates.

— Preliminary laboratory tests to study column flotation as an alternative to conventional flotation. A commercial scale column installed, for scaling up based on laboratory results.

— Study on high gradient magnetic separators as an alternative to flotation.

— Development of a flotex density classifier unit. Equipment for further tests under installation.

— Optimisation of tertiary magnetic separators to improve the overall quality of the final concentrates.

— Trials on various benficiation processes for better recovery of iron values from the tailings. Furher studies are planned.

— Laboratory studies on heating of the iron ore slurry for reduction in moisture content of the filter cake to achieve optimum balling properties in pellet making.

— Use of coal and coke as additives in pelletising as a measure to reduce fuel consumption.

— Laboratory and short plant trials on use of dolomite in pellet making to improve metallurgical properties of the pellet.

— Laboratory scale trials on use of organic binder in pelletising to contain addition of extra silica in the pellet from the additives.

3.1.3 **R&D Expenditure**

Year	Expenditure on R&D (Rs. Lakhs)	R&D Expenditure as % of turnover
1992-93	25	0.08%
1993-94 (April-Sept)	285	1.36%

4.1 Bharat Refractories Limited

4.1.1 **Objectives/Thrust of R&D**

The main thrust of R&D was on the development of new products suiting to the requirement of changing demand pattern of consuming industries, particularly the steel sector and to update process technology for quality improvement of existing products.

4.1.2 **Highlights of major R&D achievements**

— Development of 70% alumina bricks and high alumina castables for improved life and reduction in cost.

— Development of MCB bricks as per SAIL's specifications and development of KORF bricks and ramming mass for improved life and reduction in cost.

— Development of ramming mass for EAF resulting in reduction in cost and energy consumption.

— Development of bottom jointing mass, tundish coating mass, syphone hole mass, LD tap hole mass, coating mass for inner nozzle of SG system leading to improved life and reduction in cost and energy consumption.

— Development of low cement castables, tar magnetic mass under import substitution efforts.

— Quality upgradation of blast furnace through mix and mudgun mass.

4.1.3 **R&D Expenditure**

The expenditure incurred on R&D during 1992-93 is as under:—

S. No.	Unit	Amount	%age of total turnover
1.	Bharat Refractories Limited	Rs. 22.41 lakhs	0.54%
2.	India Firebricks & Insulated Co. Ltd. (Subsidiary Company)	Rs. 6.90 lakhs	0.28%

4.1.4 **Status of Project implementation/monitoring during 1992-93**

No. of projects taken up	:	16
No. of projects completed	:	12 (75%)
No. of projects implemented	:	7(71%)

5.1 M/s. National Mineral Development Corporation Limited

5.1.1 **Objectives/thrust of R&D**

The major thrust of R&L at NMDC was directed towards the following:—

— Development of new/value added products

— Utilisation of waste material

— Quality upgradation

5.1.2 **Highlights of major achievements in R&D**

The major achievement of M/s. NMDC in the area of research and development are as under:—

— Developmental work on blue dust, which lead to the production of 990 tonnes of different grades of ferric oxide during 1992-93 and 450 tonnes during April-September, 1993. Exports of this product have lead to the tune of US $ 68,944.

— Studies for production of pigment grade ferric oxide.

— Laboratory scale studies through hydro-metallurgical solvent extraction technique for production of soft ferrite grade ferric oxide.

— Study of physical, chemical and metallurgical characteristics of the iron ore from Bailadila, Bellary-Hospet and Baramada sector to establish the suitability of iron ore lumps for production of sponge iron.

— Pilot plant study on iron ore samples from Donimalai to improve physical, chemicaland metallurgical characteristics of iron ore lump from donimalai.

— Study on Kimberlite tuff to generate design data in connection with the expansion programme of diamond project at Panna.

— Studies on Beach sand samples from east and west coast of India to recover valuable minerals like ilmenite, rutile, zircon, garnet and monazite.

— Flowability characteristics studies of iron ore samples for designing material flow systems for the new mines at Bailadila - 10/11A & 11B Deposits.

5.1.3 **R&D Expenditure**

The R&D expenditure of M/s. NMDC are as under:—

Year	Expenditure on R&D activities (Rs. in lakhs)	R&D expenditure as percentage of sales turnover during the year.
1992-93	387.16 lakhs	1.5%
1993-94 (upto Sept '93)	90.55	0.53%

5.1.4 Approximately 15% of revenue expenditure in 1992-93 and 12.45% in 1993-94 (upto Sept '93) have been earned by R&D, by taking up sponsored works.

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

6.1.1 **Objectives/thrust of R & D**

The thrust of R & D studies MOIL was on improvement in mining methods and upgradation of quality of manganese ore

6.1.2 **Highlights of R & D activities:**

Some of the important areas of research and development studies undertaken by the company are as under:—

— Beneficiation of medium and low grades ores as well as medium grade dioxide ores to battery grade.

A view of the Hot Strip Mill

A view of the Hot Strip Mill

— Use of cable bolting and steel roof supports in the underground mines.

— Improvement in mining methods.

— Diamond drilling to locate new manganese bearings areas and to establish the existence of further reserves in existing areas.

— Optimisation of process parameters for electrolytic mignese dioxide plant.

7.0 Visakhapatnam Steel Plant

7.1.1 The main thrust of Visakhapatnam Steel Plant in the area of R & D was on the process improvement and product development.

7.1.2 The major achievements of Visakhapatnam Steel Plant are:

i) Increase in the converter lining life from 110-120 heats to more than 300 heats.

ii) Reduction in generation of lime fines of the calcined lime.

iii) Analysis of tube leakage of converter hood to reduce its failures.

iv) Recommending measures for effectively containing certain pollutant levels.

v) Reduction in the ash content of pitch from a level 0.4 to 0.12%.

vi) Development of high softening point pitch 150° to 180°C for production of BF tap hole mass.

8

Management Information System

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.

The computer centre in the Ministry of Steel, which has been established as a central facility is equipped with One Super-AT (386 based) compatible with 8 MB main memory, 300 MB hard disk alongwith 16 dumb terminals, 4 no. of IBM PC XTs/ PC ATs and NICNET connection through Modem.

The super-AT is connected to NIC Super computer & Electronic Mail Package available on the Super-Computer. 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 function such as Word Processing, data entry etc.

The E-MAIL facility of NICNET is being used for transferring and getting information between SAIL and Ministry of Steel. Word processing facility for generating reports and letters is being extensively used on day to day basis.

Training programmes are periodically conducted by NIC for various levels of state in the Department to get them acquainted with the usage of computers in the area like word processing, data entry operation, data processing techniques.

9

ORGANISATIONAL STRUCTURE

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

9.2 The Ministry of Steel is responsible for the planning and development of 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 allotted to the Ministry are at Annexure-I. There are 18 public sector undertakings under the administrative control of the Ministry of Steel. The details are at Annexure-II.

9.3 The Ministry of Steel has a Secretary, 4 Joint Secretaries, 4 Directors, 2 Deputy Secretaries, 5 Under Secretaries and other lower level officers and staff. The Ministry has a common Finanacial Adviser of the status of Additional Secretary and a common Chief Controller of Accounts with the Ministry of Mines. A Technical Wing consisting of an Industrial Adviser, 3 Development Officers and 2 Assistant Development Officers assists and advises the Ministry on technical matters. The size of the secretariat is very small with a total strength of only 268 personnel. The classification/category-wise details are at Annexure-III. An officer at the level of Director has been designated to function as the Director (Public & Staff Grievances).

9.4 The Ministry has an attached office, viz., Office of the Development Commissioner for Iron & 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 headquarters. The Office of DCI&S has, at present, 6 Regional Offices located at Bombay, Calcutta, Delhi, Hyderabad, Kanpur and Madras.

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, distriubution, 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, limestone, sillimanite, 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 specificially alloted to any other Department; and
10. All attached or subordinate offfices or other organisations concerned with any of the subjects specified in this list.

List of Public Sector Undertaking under the Ministry of Steel

Annexure-II

1. Steel Authority of India Limited, Ispat Bhawan, Lodhi Road, New Delhi-110003.
2. Rashtriya Ispat Nigam Limited, Project Office 'A' Block, Visakhapatnam-751007.
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 Quarter No. 56, Bokaro Steel City-827001.
6. Kudremukh Iron Ore Co. Ltd., 11 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-500028.
10. Neelachal Ispat Nigam Limited, IPICOL HOUSE (4th Floor), Bhubaneswar-751007.
11. Metal Scrap trade Corporation 225 F, Acharya Jagdish Bose Road, Calcutta-700020.
12. Vijaynagar Steel Limited, Blue Cross Chambers, III Floor 'B' Wing, Infantry Road, Bangalore-500001.
13. Ferro Scrap Nigam Limited, Building No. 54 Old Admn. Office Complex, Bhilai-490001.
14. India Fire Bricks and Insulation Company Limited Rly. Station Ranchi Road, P.O. Marar-820177, District, Hazaribagh, Bihar.
15. Indian Iron and Steel Company Limited, Burnpur-713325.
16. IISCO Ujjain Pipe and Foundary Ltd., Calcutta.
17. J & K Mineral Development Corporation, Srinagar.
18. Visvevaraya Iron and Steel Limited, Bhadravati.

ANNEXURE-III

STATEMENT SHOWING THE NUMBER OF EMPLOYEES, NUMBER OF SC/ST/PH/EX-SERVICE MEN MEN AND WOMEN AS ON 31-12-1992 IN RESPECT OF THE MINISTRY OF STEEL (SECTT.)

Classification of Post	No. of employees in position	Men	Women	SC	ST	Physically Handi-capped	Ex-service men
Group 'A'	26	24	02	03	01	—	—
Group 'B'	74	66	08	11	03	—	—
Group 'C'	95	66	29	22	07	01	—
Group 'D'	73	70	03	30	09	—	01
	268	226	42	66	20	01	01

10

WELFARE OF THE WEAKER SECTIONS

A Cell under the charge of a Liaison officer functions for monitering the Government policy relating to reservations for and representation of Scheduled Castes and Scheduled Tribes in the Ministry of Steel, its 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.

2. The actual record of performance of some of the major PSUs in respect of representation of SCs/ STs during 1993-94 is indicated below:—

(i) 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 1993-94, an amount of Rs. 2.97 crores was sent on this account.

The following table shows the total number of employees and number of SC & ST persons among them as on 1.1.1993:

	Total	SC		ST	
		No.	%age	No.	%age
Group 'A'	21527	1163	5.40	438	2.03
Group 'B'	34437	1751	5.10	1348	3.91
Groups 'C' (Excl. Safai Karamchari)	167521	22343	13.34	18220	10.88
Groups 'C' (Safai Karamchari only)	3999	3417	85.45	226	5.05

(ii) Rashtriya Ispat Nigam Limited (RINL)-(Visakhapatnam Steel Plant)

The position in regard to the representation of SCs and STs in employment in VSP is highly satisfactory. As on 31.3.1993 out of the total man power of 17,454 employees, 2735 (15.67%) belong to SCs and 846 (4.85%) belong to STs. During the period 1.4.1992 to 31.3.1993, out of the net addition of 756 employees, 195 (25.79%) are from Scs and 67 (8.86%) from STs.

A special Recruitment Drive for filling up the backlog vacancies reserved for SCs & STs was also carried out during January to July, 1993.

In the company's townships at Visakhapatnam and Mines, SC and ST employees are provided reservation to the extent of 10% of houses in A and B types, LIG houses and executive flats and 5% in respect of C and D types and MIG houses.

VSP has also introduced an exclusive and special scheme for grant of Scholarships to the children of employees belonging to SCs & STs. In addition, the children of SC & ST employees have also access to the general scholarships scheme on the basis of merit and merit-cum-means.

In the name of Dr. B.R. Ambedker, under an Annual merit Award Scheme, a cash award is given to the students securing highest marks in the 10th Class Examination, amongst the students belonging to SC & ST Community.

(iii) Bharat Refractories Limited (BRL)

BRL is a multi-unit undertaking which is engaged in manufacture and marketing of refractory materials to various integrated steel plants of the country and certain other industries. BRL's manufacturing units located at Bhandaridah, Distt. Bokaro (Bihar) Ranchi Road (Marar), Distt. Hazaribagh (Bihar) and Bhilai, Distt. Durg (Madhya Pradesh) employ 3065 persons.

As on 31.3. 1993, out of 3065 employees in BRL and 1003 employees in India Fire Bricks & Insulation Co. (IFICO), a subsidiary of BRL, 407 persons belong to SCs and 568 persons belong to STs. 225 persons of minority communities also have been extended representation in the service of BRL and its subsidiary (IFICO). The following table brings out

position of representation of SC/ST in the services of BRL and IFICO:

	BRL			IFICO		
	Total	SC	ST	Total	SC	ST
Group 'A'	218	6	4	64	—	1
Group 'B'	99	4	1	60	1	1
Group 'C'	1856	207	222	571	21	67
Group 'D'	892	146	210	308	22	62

As a part of welfare measures for SC/ST and other weaker sections, BRL has also extended free educational facilities and medical facilities in company-run dispensaries to the population in near by villages adjacent to the manufacturing units of the Company. Family planning Camps, immunization programmes, providing drinking water wells etc. are also a part of BRL's on going measures.

(iv) National Mineral Development Corporation (NMDC):

The total number of employees in NMDC as on 30.9.1993 was 6.917, out of which 1093 persons belongs to SCs and 1090 persons belongs to STs. the group-wise distribution of SC/STs employees is indicated below:—

Group	Total no. of employees as on 30.9.93	Scheduled Castes		Scheduled Tribes	
		No.	%age	No.	%age
A	751	47	6.25	5	66
B	1065	75	7.04	28	2.62
C	3167	475	14.9	614	19.38
D (Excluding Sweepers)	1803	397	22.0	438	24.29
E(Sweepers)	131	99	75.5	5	3.81
TOTAL	6,917	1,093	15.8	1,090	15.75

NMDC gives facilities for promotion and education among the children of SCs and STs by offering a scholar-ship in Local Kendriya Vidyalayas and by providing free education facilities to the children of Tribals seeking admission in project schools.

A school exclusively for children of tribals is being run by NMDC at Bailadila 5 Project. All tribals residing in the project area are offered free medical facilities at the NMDC project hospitals. At Bailadila projects, NMDC has constructed two community centres. Weekly film shows and other entertainments are provided at these centres. A weekly market (Haat) is being organised in Kirundul and Bacheli where the Adivasis get an oppotunity to sell their products directly to consumers. NMDC has been helping the villages around the projects by providing hand pumps, digging wells for providing drinking water, mobile dispensary facilities, construction of approach roads to their villages etc.

(v) Hindustan Steelworks Construction Limited (HSCL):

This Company is engaged in civil construction work for integrated Steel Plants and certain other industries as a result of diversification. The following table indicates the total number of employees of HSCL and the number of SCs and STs among them as on 31.3.1993:—

GROUP/ CLASS	TOTAL NO OF EMPLOYEES	SCHEDULED CASTES	SCHEDULED TRIBES
Group 'A' (Class-I)	1832	86	12
Group 'B' (Class-II)	537	60	12
Group 'C' (Class-III)	14869	2360	2601
Group 'D' (Class-IV)	1143	201	33
TOTAL	18381	2707	2658

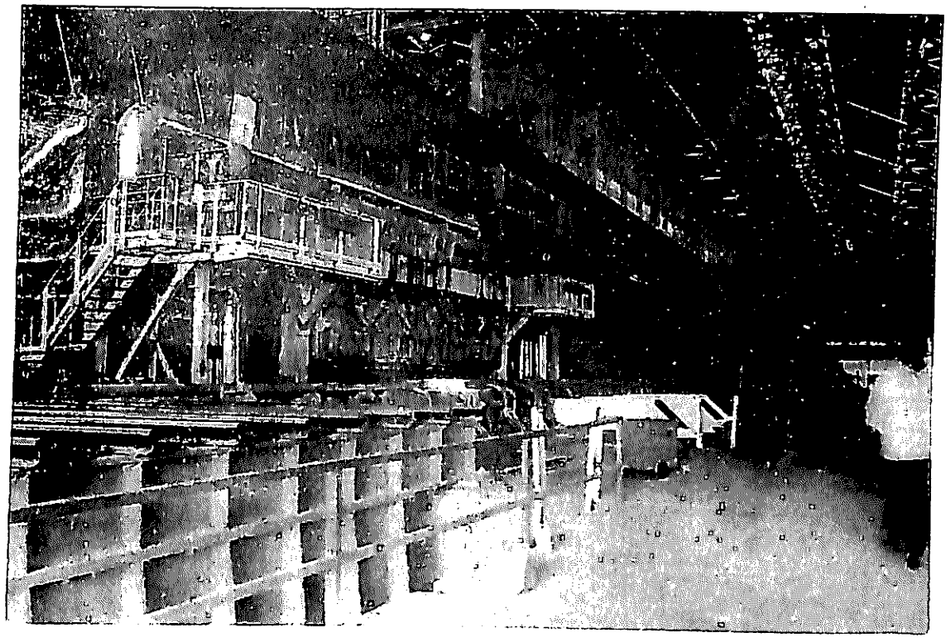
(vi) Metallurgical & Engineering Consultants (India) Ltd. (MECON)

MECON is engaged in providing consultancy, detailed engineering and technical services to iron and steel Industry. During 1992-93 and 1993-94 also, the Company has undertaken a number of measures to discharge social responsibilites. Some of these measures are indicated below:—

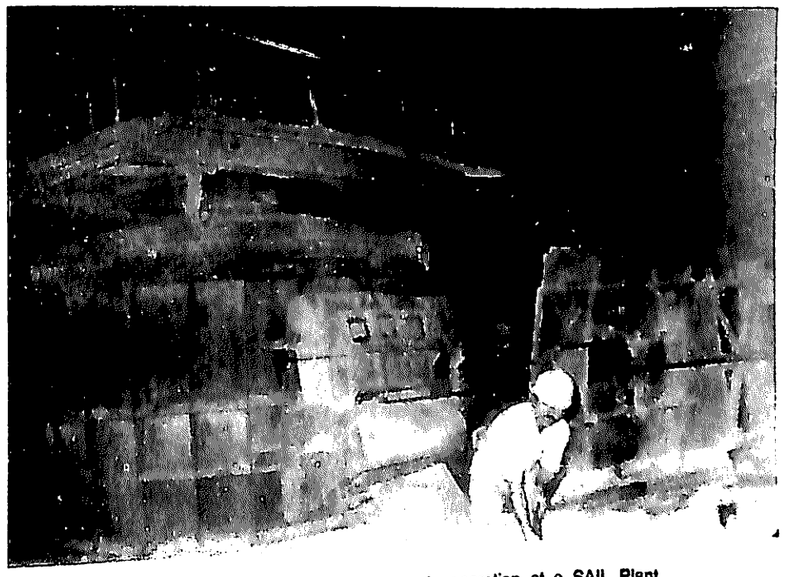
1. Community education programme.
2. Community afforestation programme.
3. Facilitating the availability of drinking water.
4. Repair and development of approach roads of the surrounding areas.
5. Arranging health awareness programmes, school health programme and Medical Camps in rural areas.
6. Development of approach roads, check dam, community Hall, Indira Awas and Bee keeping programmes, etc. in the adopted village of MECON.

The above measures of social responsibility undertaken by MECON are mostly aimed at benefitting the SCsSTs community living in the vicinity of MECON township and in the MECON adopted village.

The total no. of empleyees in the Company as on 31.10.1993 was 3778 out of which 283 belong to SCs and 395 belong to STs.



Hot Strip Mill at a steel plant



20 Tonne Electric Pig Iron Furnace in operation at a SAIL Plant

(vii) Kudremukh Iron Ore Company Limited (KIOCL):

The following table shows the representation of SCs and STs as against the total number of employees in different groups on rolls of the Company as on 31st March, 1993.

Group	No. of employees on rolls	SC	ST
A	429	32	7
B	204	12	2
C	1497	187	23
D	202	45	25
E (Sweepers)	45	38	4
Total	2377	314	61

(viii) Metal Scrap Trade Corporation (Ltd.) (MSTC):—

The employment statistics of the Company including SC & ST as on 1.9.1993 are given below:—

Scheduled persons. Group	Castes/ Tribes, Total	Ex-ser-vicemen SC	Physci-cally ST	handi-capped physi-cally handi-capped	Ex-Ser-vice men
A	110	10	1	—	1
B	19	5	—	1	—
C	110	21	6	2	3
D	32	10	2	1	—
	271	46	9	4	4

11

PROGRESSIVE USE OF HINDI

The Ministry continued its efforts for greater use of Hindi in official work during the year 1993-94 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.

1.2 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. Hindi Section consisting of an Assistant Director, a Senior Translator, three junior Translators and two LDCs assist in this work. There are 49 Devanagari Typewriters including 23 bilingual electronic Typewriters. Adequate reading material in hindi is available in the Ministry. A number of measures has 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.

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

2.1 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.

2.2 An inspection team of the Ministry oversees the status of implementation of the provisions 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 12 such inspections.

2.3 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. In each meeting representatives of two undertakings are also invited by turn and status of the progressive use of Hindi is reviewed.

2.4 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 Directores of Undertakings, eminent persons working for the propagation of Hindi are also its members. The meeting of this samiti was held on 28.7.93 under the Chairmanship of Steel Minister.

2.5 Rajbhasha Sheild Trophies

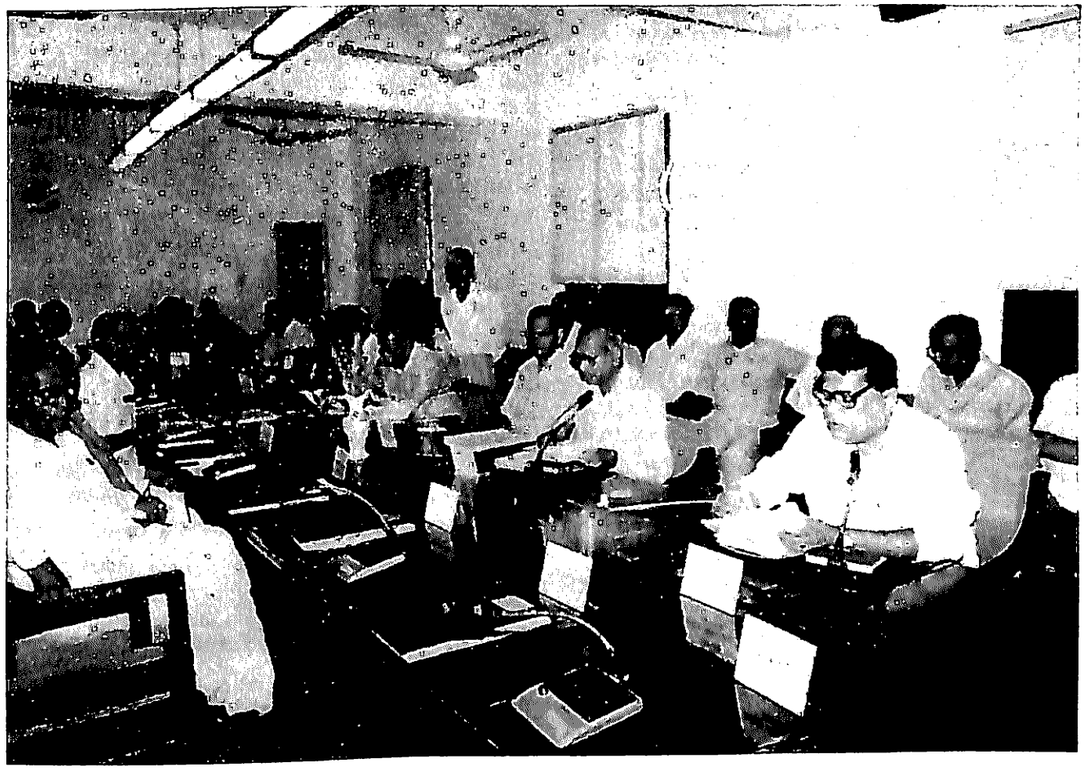
In order to encourage the use of Hindi in the Office and Undertakings under the administrative control of the Ministry of Steel, a Chal Vaijayanti, a Rajbhasha Sheild and two Trophies have been instituted. These awards are given each year to the office/Undertakings whose performance in this field is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

2.6 Implementation of Section 3(3) of the Official Language Act

In pursuance of Official Language Policy of Govt. almost all decuments covered under section 3(3) of the Official Language Act are prepared both in Hindi and English. In order to ensure issue of letters in Hindi to Central Government Offices located in Regions 'A', 'B' and 'C' "Checkpoints" have been identified in the Ministry.

2.7 Incentive Scheme for Original Work in Hindi

The cash incentive Scheme for Orignial work in Hindi introduced by the Department of Official Language 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.



Hindi Salahkar Samiti meeting in progress

2.8 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.

2.9 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 merits.

2.10 Hindi Week

In order to create interest in the use of Hindi in Official work among officers/employees of the Ministry, a "Hindi Week" was observed from 14.9.1993 to 21.9.1993. 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 week Hindi essay writing/Hindi typing/Hindi Stenography competitions were conducted and prizes awarded.

2.11 Hindi Work-shop

A Hindi workshop for the officers of the Ministry of Steel of the level of Under Secretaries and above was organised on the 14th September, 1993. The work-shop was inaugurated by the Secretary (Steel)

2.12 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 trainings is obligatory. The position regarding-training in Hindi/Hindi typing/Hindi Stenography in the Ministry is as under:

Training course	Nos. of trained person
1. Hindi Typing	4
2. Hindi Stenography	18
3. Hindi Training	
(i) Total No. of employees/Officers (Group A, B & C)	179
(ii) Total Nos. of employees/officers possesing working knowledge of Hindi.	170

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.

SAIL have initiated their own Hindi teaching programme through correspondence.

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

REPORT 1993-94

MINISTRY OF STEEL

E R R A T A

PAGE	Column	Para	Table No./ Line	In place of	Read as
2	1	1.6	3	held	hold
2	2	-	Table	April-December 1993 above Column 5	Shift above Column 6
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38	1	9	Heading	Mecon	MECON
38	2	4.1	Last Line	Steel Co	steelco
39	1	5.1	5	MGCUN	MECON
44	1	4.0	Heading	FINANCIAL	WORKING
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