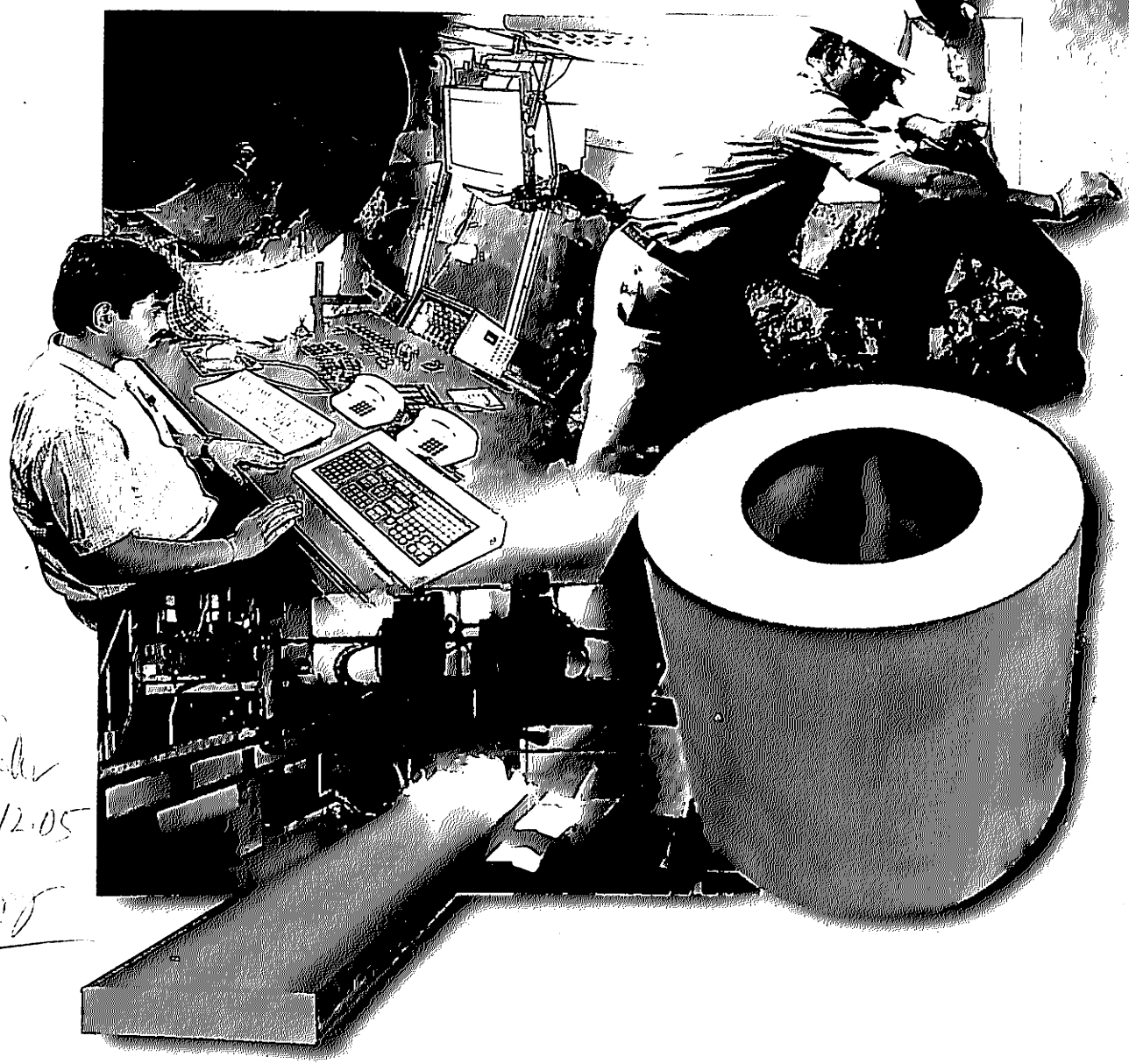
ANNUAL REPORT
2000-2001



MINISTRY OF STEEL

Ministry of Steel
Annual Report
2000-2001

CONTENTS

YEAR'S HIGHLIGHTS

- The Indian steel industry, recorded a production of 26.71 million tonnes of finished steel which was 12.13% more than the previous year.
- India continued to be the 10th largest Steel Producer in the world during 1999-2000.
- India exported about 3.34 Million Tonnes of Iron and Steel valued at over Rs.3500 crores during 1999-2000.
- India produced 5.18 million tonnes of sponge iron during the year 1999-2000 and continues to be the second largest producer of sponge iron in the world.
- SAIL recorded a turnover of Rs.16250 crores during 1999-2000.
- SAIL in its four Integrated Steel Plants achieved production of 10.94 Million Tonnes of Hot Metal, 9.79 Million Tonnes of Crude Steel and 9.53 Million Tonnes of Saleable Steel during 1999-2000
- SAIL exported 0.89 million tonnes (previous year 0.49 million tonnes) of Steel and Pig Iron recording a growth of 81% in exports. The company earned foreign exchange of Rs.886 crores during the year through exports and other activities.
- India exported 32.55 Million Tonnes of iron ore during 1999-2000 as against 31.02 million tonnes in 1998-99.
- NMDC produced 13.80 million tonnes of iron ore and exported 6.6 million tonnes of iron ore valued at Rs. 443 Crores in 1999-2000.
- KIOCL produced 5.7 Million Tonnes of concentrates and 3.28 Million Tonnes of pellets in 1999-2000. The company earned a net profit of Rs.66.33 crores during the year.
- Several PSUs under the Ministry continued to pay dividends during the year 1999-2000. These include NMDC, KIOCL, MOIL, MSTC etc.

YEAR AT A GLANCE

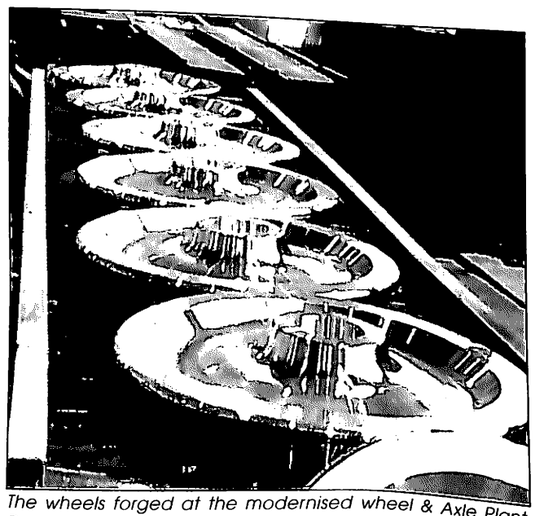
The year 1999-2000 saw the Indian steel industry attain an excellent growth rate of 12.1% as compared to the preceeding two consecutive years where the growth rate of finished steel was only 1.9% in 1998-99 and 2.8% in 1997-98.

Demand and availability of steel

The total projected demand for finished steel for 1999-2000 was 25.02 Million Tonnes and the production of steel from domestic sources was a record 26.71 million tonnes. The total availability of finished steel including imports was 28.52 million tonnes.

Production of steel

Total production of finished steel in 1999-2000 was 26.71 million tonnes. India continued to be the 10th largest steel producing country of the world. Main producers contributed 11.19 million tonnes (42%) and secondary producers 15.51 million tonnes (58%). The share of main and secondary producers in the total production of finished steel had remained more or less the same as in the previous year.



The wheels forged at the modernised wheel & Axle Plant, Durgapur

Exports of Iron and Steel

Indian Iron and Steel Sector continued to be one of the leading exporting sectors of the economy. The value of iron and steel exported grew by about Rs.1000 crores. During 1999-2000, India exported a record 3.34 million tonnes of iron and steel valued at over Rs.3,500 crores.

Steel Consumers' Council

The Steel Consumers' Council was constituted on 31.1.1986 under the Chairmanship of Minister of Steel and Mines, 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 Government in matters relating to availability of steel materials, quality and the market trend in the iron and steel industry in the country. The last meeting of the council was held at Bangalore on 07.07.2000.

Steel Industry

Production of steel by the public sector steel companies had shown further improvement over the previous year's performance.

STEEL AUTHORITY OF INDIA LIMITED (SAIL)

The production of Saleable Steel in the four integrated and Special Steel Plants of SAIL for 1999-2000 was 9.53 million tonnes as against 8.60 million tonnes in 1998-99. During the year, SAIL achieved a turnover of Rs.16250.16 crores (Previous year Rs.14993.85 crores). The post tax net loss stood at Rs.1720.02 crores against previous year's post tax net loss of Rs.1573.66 crores. SAIL recorded 81% growth in export of iron and steel during 1999-2000 and earned foreign exchange of Rs.886 crores.

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

During the year 1999-2000, the RINL produced 2.95 million tonnes of hot metal, 2.65 million tonnes of liquid steel and 2.09 million tonnes of saleable steel. Despite sluggishness in the market, during 1999-2000, VSP had improved its share in the domestic market and registered a sales turn over of Rs.2973 crores which is a 8% increase over the previous year. The company exported products worth Rs.295 crores during the year.

PRIVATE SECTOR
THE TATA IRON AND STEEL COMPANY LTD.

Tata Steel, after completion of four phases of modernisation at a cost of Rs. 7,000 crores approximately had achieved a production of 3.29 million tonnes of saleable steel and 3.43 million tonnes of crude steel, surpassing all previous records. The Company has now entered into Phase- V Modernisation Programme to modernize their thinking processes and to orient the human resource towards meeting the challenges and opportunities of the future through E-Commerce, creating knowledge management system and building a performance ethics.

Higher volume, richer product-mix and continuing control over cost contributed to a 10% increase in turn over from Rs. 6274.64 crores in 1998-99 to Rs. 6890.87 crores in 1999-2000 and a 50% increase in net profit from Rs. 282 crores in the previous year to Rs. 423 crores in 1999-2000.

With the commissioning of two more plants, viz., SISCOL in Salem & Mukand Limited in Hospet, the number of new/green field steel plants which have been fully commissioned, increases from 6 to 8 with a total capacity of approximately 4.2 MTPA. 4 additional projects have been partly commissioned involving a capacity of 2.9 MTPA.

Ministry of Steel had taken several measures to address the problems of the newly commissioned and up-coming projects. Towards this direction, the Ministry constituted a Project Co-ordination Group under the Chairmanship of Steel Minister, which met once during the year 1999-2000. The last meeting was held on 11th September, 2000.

Electric Arc Furnace

Presently, there are 41 Electric Arc Furnace based steel plants working in the country with an aggregate capacity of 6.4 million tonnes per annum. Several other units are reportedly closed. Various reasons such as rising cost of inputs, increasing electricity tariffs, shortage of power, resource crunch etc. are believed to be responsible for this, underscoring the forces of change sweeping the steel sector.

Production of Ingots/Concast Billets by EAF units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during 1999-2000 was estimated at 4.63 Million Tonnes as compared to 3.85 Million Tonnes during 1998-99.

Induction Furnace Industry

During 1999-2000, it is estimated that 687 units were in operation. The capacity utilisation of Induction Furnace units was only about 55%. The total production of the Induction Furnace units was estimated to be around 3.4 Million Tonnes.

Alloy & Stainless Steel

The Alloy/Stainless Steel industry contributes about 12.5% of the country's production of finished steel. During 1999-2000, the production of alloy/stainless steel was about 1.71 Million Tonnes as compared to 1.09 Million Tonnes during 1998-99.

Iron Ore

Production of iron ore (including concentrates) during the year 1999-2000 was 73.47 Million Tonnes against 72.23 Million Tonnes showing an increase of 1.7% over the previous year. State-wise production figures indicate that Madhya Pradesh was the chief iron ore producing State accounting for 25.2% of the total production during 1999-2000. The other States which contributed to the production of iron ore are as follows; Karnataka with 21%, Goa with 20%, Bihar 16% & Orissa 16%. The other major iron ore producing states include Andhra Pradesh, Maharashtra & Rajasthan.

The performance of the two public sector iron ore mining companies, viz., National Mineral Development Corporation (NMDC) & Kudremukh Iron Ore Company Ltd. (KIOCL) was as under : -

National Mineral Development Corporation

During the year 1999-2000, NMDC produced 13.80 Million Tonnes of iron ore and 40,230 carats of diamonds. NMDC exported 6.6 Million Tonnes of iron ore which included an export of 1.27 lakh tonnes of Direct Exports to Japan & China. The total value of the iron ore exported by NMDC was Rs.443 crores. For the year 1999-2000, the Company had paid a dividend of 25% on the paid up capital amounting to Rs.36.67 Crores to the Government. This was the 10th year in succession for payment of dividend to the Government.

Kudremukh Iron Ore Company Ltd.

During the year 1999-2000, KIOCL recorded a gross margin of Rs.121.38 crores and a net profit of Rs.66.33 crores. The company produced 5.75 Million Tonnes of iron ore concentrates and 3.29 Million Tonnes of iron ore pellets. The company also exported 6.054 Million Tonnes of iron ore comprising 2.82 Million Tonnes of concentrates and 3.24 Million Tonnes of pellets, valued at Rs.621 crores.

Sponge Iron Industry

India is the world's second largest producer of sponge iron in the world. The growth of sponge iron specifically during the last five years in terms of capacity and production has been substantial. The installed capacity of sponge iron increased from 1.52 million tonnes per annum in 1990-91 to 6.43 million tonnes per annum in 2000-01. The production has increased from 0.9 million tonnes in 1990-91 to 5.33 million tonnes in 1999-2000.

Pig Iron Industry

Total production of pig iron in the country during 1999-2000 was 3.18 million tonnes which was approximately 6% higher than the previous year's production of 2.99 million tonnes. The contribution of private/secondary sector units adopting 'mini blast furnace' route in the overall production of pig iron in the country continued to increase during the year from 55% in 1998-99 to 61% in 1999-2000. These units have also been significantly contributing to the availability of the special grade pig iron including low Sulphur and low Phosphorus varieties.

Ferro Alloy Industry

Ferro alloys are essential additives in steel making used for imparting desired properties to steel. The product mix of ferro alloy industry mainly consists of Ferro Manganese (Fe Mn), Ferro Silicon (Fe Si.) and Ferro Chrome (Fe Cr.) – called the Bulk ferro alloys. There are 35 large and medium size units (including four 100% EOUs) with an installed capacity of 1.3 million tonnes. The production of Ferro Alloys during 1999-2000 was about 6.81 lakh tonnes which was 1.7% less than the previous year.

Refractory Industry

Refractories are the primary materials used in the internal lining of industrial furnaces and ladles and are classified on the basis of chemical composition into Acid Refractories, Basic Refractories and Neutral Refractories. With the technological changes in the steel industry, the major thrust has been on economising on the use of the materials and improving technology in each area of operation/ process where refractories are being used. In general, it can be said that all these improvements have resulted in lowering specific consumption of refractories per tonne of steel. The production of Refractories during 1999-2000 was 7.04 lakh tonnes which was 2.2% higher than the previous year.

Research & Development

Both Public and Private Sector Iron and Steel Plants continued their Research and Development activities to solve their plant specific problems and also to develop new processes and products. The research areas cover mining and beneficiation of minerals, improvement of properties of coal, reduction in energy consumption, reduction of refractory consumption, improvement in productivity, utilization and treatment of wastes, control of pollution, improvement of quality, development of human resource etc.

In pursuance of the decision of the Government of India to supplement activities for Research and Development in the iron and steel sector, an Empowered Committee was constituted on 24.2.1998 by Ministry of Steel. The Committee approved 6 projects during 1999-2000 and 1 project during the period April-September 2000-01. The Committee, has, so far, approved 21 research projects from public sector and private sector steel plants, academic institutions and research laboratories. The total cost of the 21 projects approved is Rs.149.98 crore. Out of this, Rs.79.69 crore will be spent from Steel Development Fund (SDF).

Energy Conservation

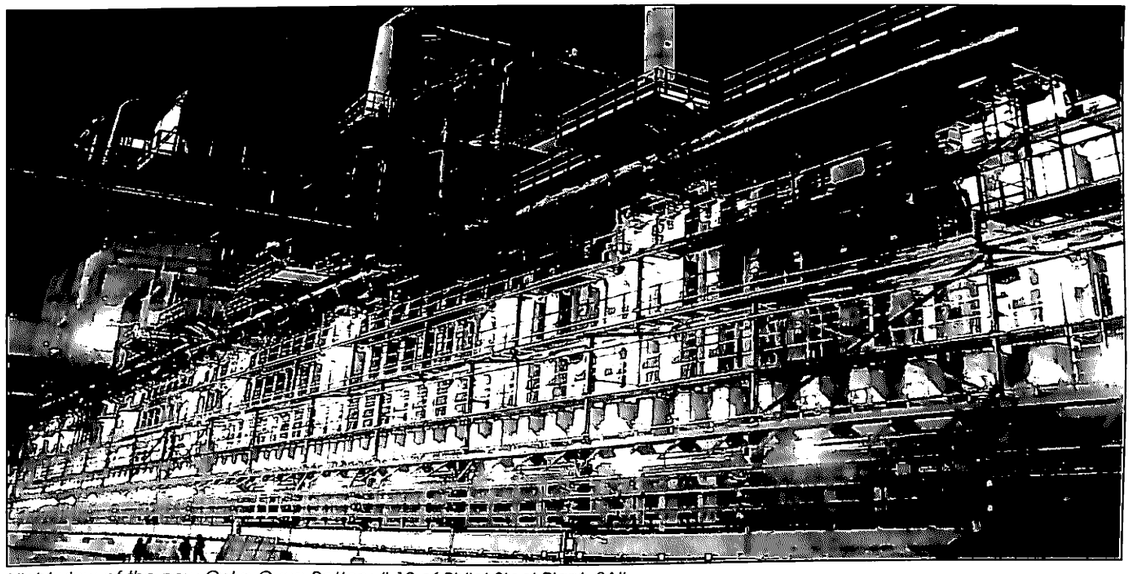
Iron and Steel Plants both in public and private sector continue to give a thrust to the reduction in consumption of energy. In SAIL plants, gaseous energy consumption as well as modification of wind boxes, introduction of electrically operated damper control system of ignition hood and other measures helped to reduce energy consumption at Rourkela Steel Plant. Introduction of Duel Fuel Burners in Rotary kilns at Bhilai resulted in saving of liquid fuel and elimination of pulverised coal firing and pollution, which resulted in energy conservation.

The private sector steel plants have also been undertaking several developmental measures for conserving energy. TISCO has installed Thermo Compressors at their coke plant in order to utilise exhaust steam so as to help reduce the steam consumption. They have also increased the LD Gas Recovery process in order to conserve energy.

Environment 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, wherever these have not so far been achieved. Environment Management Systems (EMS) of SAIL have been linked to ISO 14001. The following units in SAIL have already been accredited to ISO 14001.

- Salem Steel Plant
- Plate Mill, Bhilai Steel Plant
- Dalli Iron Ore Mines, Bhilai Steel Plant
- Silicon Steel Mill, Rourkela Steel Plant.



Night view of the new Coke Oven Battery # 10 of Bhilai Steel Plant, SAIL

Water conservation efforts led to significant improvement in lowering of specific water consumption from 10.76 cu.m/tcs in 1998-1999 to 7.91 cu.m/tcs.

In the private sector, TISCO has installed Dry Fog Dust Suppression System in Coal Circuit of Coke Plant # 1, Dust Suppression System at relocated site of WRP, Dust Suppression System (Chem Jet Spray) at Dust Catcher unloading station of 'D' & 'F' Blast Furnaces. Other private sector companies like Mukand Limited, Sun Flag Iron and Steel Company Limited, Lloyds Steel Industries Limited, Ispat Industries Limited and Essar Steel Limited are among some of the companies making efforts to keep the pollution levels within the prescribed acceptable limits.

Prime Minister's Trophy for Best Integrated Steel Plant

The Government had instituted in 1992-93 an award of Rs.1 crore and a Trophy to be presented to the best integrated steel plant in the country, every year, based on different performance parameters. The selection is made by an eminent panel of judges who evaluate each plant. The judges are drawn from amongst eminent technologists, economists, management experts, trade union leaders and administrators and is headed by the Secretary, Ministry of Steel. The Prime Minister awarded the PM's Trophy for 1997-98 to Bhilai Steel Plant of SAIL and for 1998-99 to Tata Iron & Steel Company, Jamshedpur in December 2000.

Prime Minister Trophy for 1997-98 to Bhilai Steel Plant of SAIL

Management Information System

In order to enable the Ministry of Steel to monitor the physical and financial performance of its PSUs as well as constantly make available data relating to production, consumption, exports, imports, prices of iron and steel, a computerised Management Information System (MIS) has been developed, with the assistance of National Informatics Centre (NIC). The MIS is also functional in the area of Accounts and Budget, O&M, Monitoring of Important References, Industrial Entrepreneur Memoranda System, Monthly D.O. and Monthly Summary on PSUs performance for Cabinet Secretariat, Personnel Information System, Public Grievances Monitoring. The MIS provides easy access to data required by the Ministry's staff and officers for day-to-day operations.

Prime Minister Trophy for 1998-1999 to Tata Iron & Steel Company, Jamshedpur

A Local Area Network (LAN) of about 75 nodes has been set up in the Ministry with the assistance of NIC. The LAN has been extensively used for sharing of files/documents, collecting information/material on annual reports from Sections/Desks as well as replies to Parliament Questions and their onward transmission through E-mail to Rajya Sabha and Lok Sabha on the very next day of the reply. Efforts have been initiated to set up a Ministry-wide Intranet by computerising Work-Flow applications at Section/Desk level and providing Web-enabled interfaces for monitoring various applications.

Welfare of Scheduled Castes/Scheduled Tribes

The Public Sector Undertakings under the administrative control of the Ministry of Steel continued their efforts for filling up the backlog vacancies in respect of Scheduled Castes Scheduled Tribes/Other Backward Classes. The Public Sector Undertakings have also continued the process of identifying and implementing programmes aimed at the upliftment of these communities in the peripheral areas around their area of operation.

Use of Hindi in Official Work

The progressive use of Hindi in the Ministry, its attached office and Public Sector Undertakings has been widely encouraged. PSUs were given incentives by awarding Chal Vaijayanti (Running Shield); Shields and Trophies. Under an incentive scheme cash prizes of Rs.15,000/- & Rs.10,000/- and Rs.7,500/- are awarded to the writers of original books in Hindi on steel and its allied subject.

The Hon'ble Steel Minister made an appeal on 14th September 2000 to all the officers and staff of the Ministry, its attached office and PSUs to increase usage of Hindi in their official work. A Hindi fortnight was also organised in the Ministry of Steel from 1 to 15th September 1999. It was also decided to celebrate Rajya Bhasha Swarn Jayanti Varsh from 14th September 1999 to 14th September 2000 during which period various programmes were organised.

CHAPTER-II

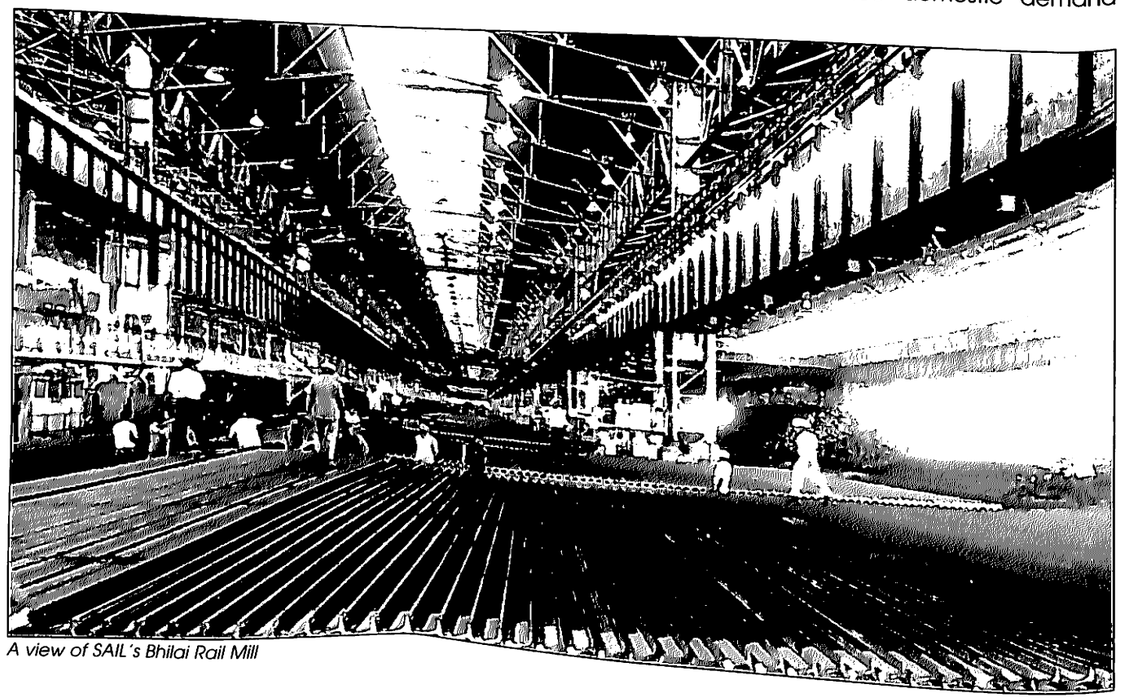
OVERVIEW OF IRON & STEEL INDUSTRY

Introduction

Steel is crucial to the development of any modern economy and is considered to be the backbone of the human civilisation. The level of per capita consumption of steel is treated as one of the important indicators of socio-economic development and living standard of the people in any country. It is a product of large and technologically complex industry having strong forward and backward linkages in terms of material flow and income generation. All major industrial economies are characterised by the existence of a strong steel industry and the growth of many of these economies has been largely shaped by the strength of their steel industries in their initial stages of development.

Historical Perspective

Only after liberalisation of steel sector, the exports of iron and steel have once again started increasing. Though the country's production of iron and steel is sufficient to meet the domestic demand, some quantity of steel however is always needed to be imported. The finished steel production in India has grown from a mere 1.1 million tonnes in 1951 to 26.71 million tonnes in 1999-2000 During the first two decades of planned economic development, i.e. 1950-60 and 1960-70 the average annual growth rate of steel production exceeded 8%. However, this growth rate could not be maintained in the decades to follow. During 1970-80, the growth rate in steel production came down to 5.7% per annum and picked up marginally to 6.4% per annum during 1980-90. Though India started steel production in 1911, steel exports from India began only in 1964. Exports in the first five years were mainly due to recession in the domestic iron and steel market. Once domestic demand revived, exports declined . India once again started exporting steel only in 1975 touching a figure of one million tonne of pig iron export and 1.4 million tonnes of steel export in 1976-77. Thereafter, exports again fell rapidly to meet rising domestic demand, especially those grades and qualities which are required in small quantities and therefore do not justify setting up of production capacities



A view of SAIL's Bhilai Rail Mill

The progress of the steel industry has a critical influence on the pace of India's development and as such great importance is attached to capacity expansion in line with expected demand at cost and prices, which make Indian Steel internationally competitive. The new economic policies being pursued by the Government have opened up new opportunities for the expansion of the steel industry. With a view to accelerating the growth of the steel sector, the Government has initiated a number of policy measures since 1991.

The important policy measures which have been taken for growth and development of the Indian Iron and steel sector are as under:-

- In the new Industrial Policy announced in July, 1991 Iron and Steel Industry, among others, was removed from the list of industries reserved for the public sector and also exempted from the provisions of compulsory licensing under the Industries (Development and Regulation) Act, 1951.
- With effect from 24.5.92 iron and steel industry was included in the list of 'high priority' industries for automatic approval for foreign equity investment upto 51% (now 74%).
- Price and distribution of steel were deregulated from January, 1992. At the same time, it was ensured that priority continued to be accorded for meeting the requirements of small scale industries, exporters of engineering goods and North Eastern Region, besides strategic sectors such as Defence and Railways.
- The import regime for iron and steel has undergone major liberalisation moving gradually from a controlled import by way of import licensing , foreign exchange release, canalisation and high import tariffs; to total freeing of iron and steel imports from licensing, canalisation and lowering of import duty levels. Export of iron and steel items was also freely allowed.
- Import duty on capital goods was reduced from 55% to 25%. Duties on raw materials for steel production were reduced. These measures reduced the capital costs and production costs of steel plants.
- Freight equalisation scheme was withdrawn in January, 1992 removing freight disadvantage to states located near steel plants. At the same time, it was ensured that far flung areas and distant states were protected by stipulating that beyond the freight ceiling distance, the main producers would continue to bear the freight charges.
- Levy on account of Steel Development Fund was discontinued from April'94 providing greater flexibility to main producers to respond to market forces.

The global production of crude steel increased by 1.5% to about 788 million tonnes in 1999. The world steel consumption has also increased by 1.4%, which is 9.5 million tonnes more than 1998. The international steel trade constitutes around 250 million tonnes or one-third of production.

World steel industry witnessed major ups and downs in the last two decades and especially over the past five years, the pattern of trade has been upset by two important developments. These are

the collapse of the Soviet Union and the severe financial crisis in most of South East Asian countries, including Korea and Japan.

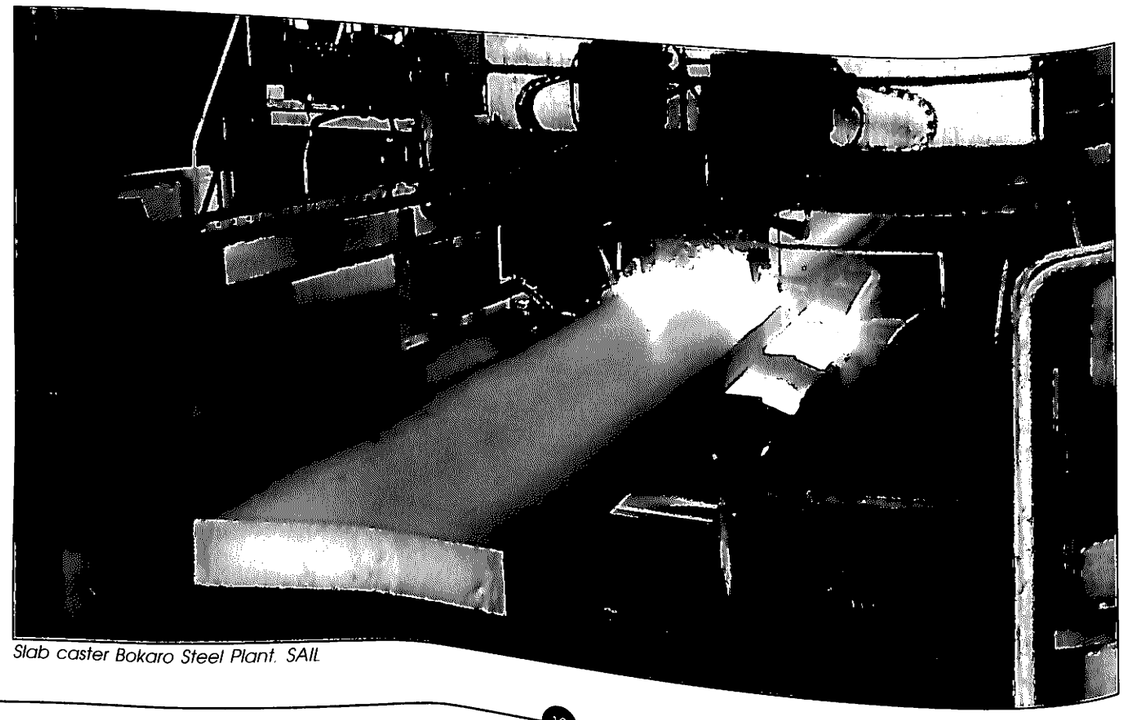
The Asian crisis and the collapse of USSR has transformed importers of steel into exporters. Till the recent financial crisis, the Asian countries were large importers of steel. In 1996, e.g. eight of the ten largest steel producing nations were in Asia and import by the region in the mid 1990s was around 80-90 million tonnes of finished and semi-finished steel per year which is equivalent to a third of total steel trade. After the Asian crisis, the region got transformed into a net exporter of steel.

Hence, the world steel industry is today being characterised by excess capacity and poor demand. This scenario led to undesirable impact on two fronts, firstly breeding protectionism within the developed countries, and secondly dumping of cheap imports. During this year Indian exports have been subjected to Anti-dumping /CVD investigations in EU, USA & Canada which eroded the export base to some extent.

It is in this global context that the Indian steel industry will have to cast its future role.

Finished carbon steel

Today, India is the 10th largest steel producing country in the world. This sector represents around Rs.90,000 crores of capital and directly provides employment to over 5 lakh of people . The Indian steel sector was the first core sector to be completely freed from the licensing regime and the pricing and distribution controls. This was done primarily because of the inherent strengths and capabilities demonstrated by the Indian iron and steel industry. During 1996-97, finished steel production shot up to a record 22.72 million tonnes with a growth rate of 6.2% while the finished steel production increased in 1997-98 & 1998-99 was only 2.8% and 1.9% respectively as compared to the 20% in 1995-96 and 6.2% in 1996-97. The growth rate in 1999-2000 has however, improved & stands at 12.1%.



Slab caster Bokaro Steel Plant, SAIL

The production of finished steel during April-Sept has been 14.65 million tonnes .

This fall in the growth rate of steel production has been brought about by several factors which inter-alia include, general slow down in the industrial production and construction activities in the country coupled with lack of growth in major steel consuming sectors. The total production of finished steel and the share of main and secondary producers during 90s and upto the present has been as follows:-

(Quantity in millon tonnes)

Year	Main Producers	Secondary Producers	Total
1991-92	7.96 (55%)	6.37 (45%)	14.33
1992-93	8.41 (55%)	6.79 (45%)	15.20
1993-94	8.77 (57.6%)	6.43 (42.4%)	15.20
1994-95	9.57 (53.8%)	8.25 (46.2%)	17.82
1995-96	10.59 (49.5%)	10.81 (50.5%)	21.40
1996-97	10..54 (46.4%)	12.18 (53.6%)	22.72
1997-98	10.44 (44.6%)	12.93 (55.4%)	23.37
1998-99	9.91 (41.6%)	13.91 (58.4%)	23.82
1999-2000	11.20(41.9%)	15.51(58.1%)	26.71
2000-2001 (Apr.-Sept.)	6.02 (41.0%)	8.63(59.0%)	14.65

(Figures in brackets indicate % age share)

The Economic reforms and the consequent liberalisation of the iron and steel sector which started in the early 1990s , brought about a sea change in the industry, particularly in the field of setting up of new /greenfield steel plants in the private sector.

All India Financial Institutions cleared 19 projects involving an annual capacity of about 13 million tonnes of saleable steel at an investment of Rs. 13,000 Crores. Out of these, 8 projects have already been commissioned with an annual capacity of 4.2 million tonnes. 4 more projects have been partially commissioned and are in trial production. Other projects are at various stages of implementation. Thus it will be seen that in the years to come, the percentage production of the private sector will be much larger than production of the public sector in the steel industry.

Pig Iron

Along with the production of steel, the production of pig iron in the country during the period 1991-92 to the present has also increased. The details are as under:-

(Quantity in million tonnes)

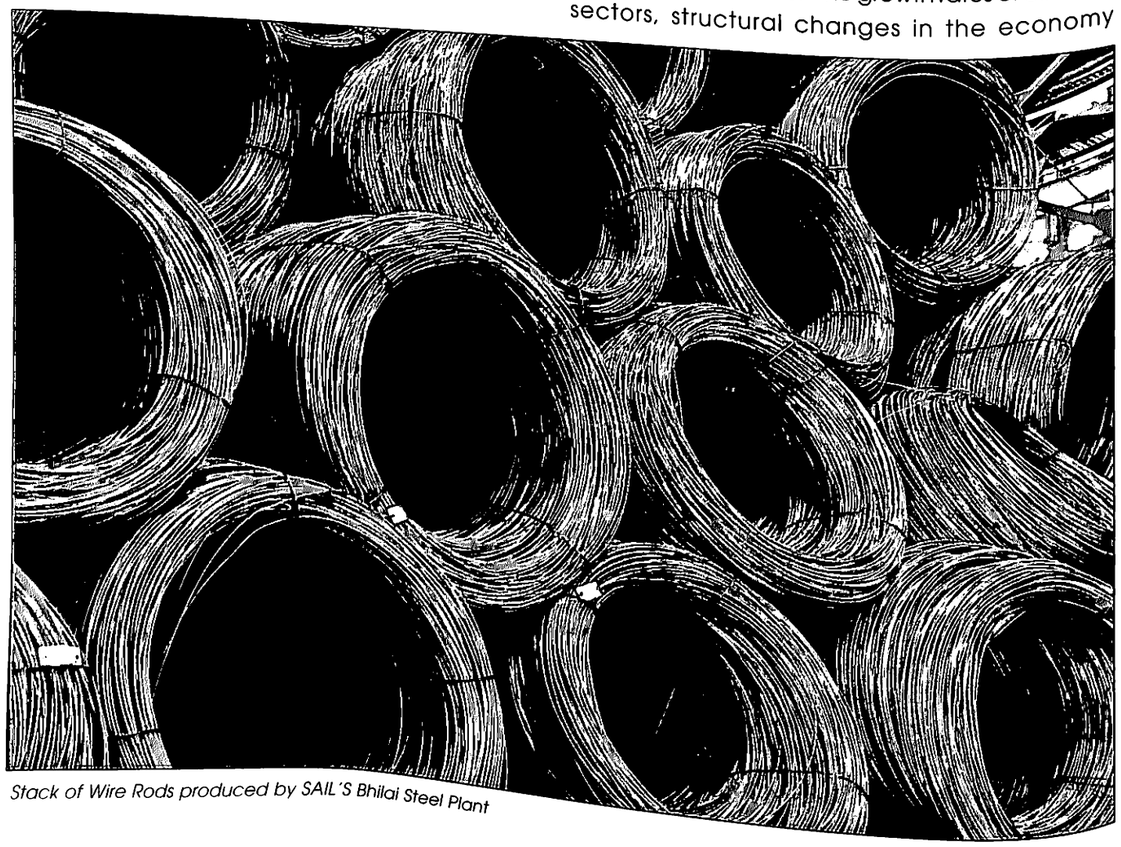
Year	Main	Secondary Producers	Total
1991-92	1.485	0.102	1.587
1992-93	1.679	0.165	1.844
1993-94	1.977	0.237	2.250
1994-95	2.005	0.780	2.785
1995-96	1.737	1.060	2.795
1996-97	1.733	1.557	3.290
1997-98	1.760	1.687	3.393
1998-99	1.354	1.644	2998
1999-2000	1.245	1.900	3.145
2000-01 (Apr. - Sept.)	0.449	1.068	1.517

Sponge Iron

During the early 90s, sponge iron industry had been specially promoted so as to provide an alternative to steel melting scrap which was increasingly becoming scarce. The production of sponge iron (Direct Reduced Iron - DRI) during the period 1991-92 to the present was as under :

(Quantity in million tonnes)

Year	Production	% Increase
1991-92	1.31	-
1992-93	1.44	9.9
1993-94	2.40	66.7
1994-95	3.39	41.3
1995-96	4.40	29.8
1996-97	5.01	13.8
1997-98	5.35	6.78
1998-99	5.16	(-)3.55
1999-2000	5.18	0.38
2000-2001 (April-Sept.)	2.75	3.75 (during the same period last year)



Stack of Wire Rods produced by SAIL 'S Bhilai Steel Plant

Today, India is the second largest producer of sponge iron in the world. The production of sponge iron in the country has also resulted in providing an alternative feed material to steel melting scrap which was hitherto imported in large quantities by the Electric Arc Furnace Unit and the Induction Furnace Unit. This has resulted in considerable saving in foreign exchange.

The long term projections of steel demand, which formed the basis of capacity planning, during second and third five year plans were based on an optimistic rise in per capita consumption of steel and high absorption of steel in the economy. This optimism was based on the growth rates of different sectors, structural changes in the economy and import substitution. The finished steel consumption which was only 18.66 million tonnes in 1994-95 has increased to 25.01 million tonnes in 1999-00.

India's per capita crude steel consumption as per the figures available for 1997 was only 22 kg., which is far below the level of other developed and developing countries- 395 kg, 289 kg and 84 kg in USA, the EU (15) and China respectively. The world average was around 126 kgs in 1997. With the ongoing economic liberalisation resulting in faster economic growth, the steel consumption is expected to increase rapidly.

Apparent consumption of steel is arrived at by subtracting export of steel from the total of domestic production and import of steel in the country. Change in stock is also adjusted in arriving at the consumption figures. It is also treated as the actual domestic demand of steel in the country. The year wise apparent consumption of finished steel since 1990-91 is given in the table below:-

(In million tonnes)

Year	Apparent Consumption
1990-91	14.37
1991-92	14.83 (3.2%)
1992-93	15.00 (1.2%)
1993-94	15.32 (2.0%)
1994-95	18.66 (21.8%)
1995-96	21.65 (16.0%)
1996-97	22.13 (2.27%)
1997-98	22.63 (2.28%)
1998-99	23.54 (4.02%)
1999-2000	25.01 (11.00%)
2000-01(Till Sept.)	13.47

(The figures in brackets indicate the percentage increase over the previous year /period)

The apparent consumption of steel did not show any substantive increase in 1998-99 mainly due to slowdown being faced by some of the steel using industries like automobile and engineering industries and construction. However 1999-2000 saw a 11% growth in apparent consumption. With the revival of the demand for automobile and engineering goods and general improvement in the economy, it is expected that consumption of steel will increase further

Long Term Demand and Supply Projections of Finished Steel

In order to have a long term perspective and planning, a Working Group for IX Five Year Plan was constituted for iron and steel sector under the aegis of Planning Commission. The Working Group deliberated upon all aspects including supply-demand projections for finished steel during the terminal years of VIIIth and IXth Five Year Plans i.e. 1996-97 and 2001-02, taking a GDP growth rate of 5% during the 8th plan and 6% thereafter and a GDP elasticity of demand for steel of 1.33 . The Working Group also suggested various strategies for an integrated and harmonious growth of the steel sector during IXth plan period and thereafter.

The Ministry of Steel (9th Plan Working Group) has estimated that the demand for finished steel (including demand for exports) in 2001-02 would touch 38.68 million tonnes. The domestic availability of finished steel from all sources for 1998-99 was about 22.75 million tonnes. It is expected that by 2001-02, it would be 38.01 million tonnes. The projected availability is almost adequate to meet the domestic demand and also export potential of 6 million tonnes as identified by the Working Group during 9th Five Year Plan period. The installed capacity is expected to reach 43.606 million tonnes by the end of the Ninth Five Year Plan. Similarly, by 2006-07 the demand for finished steel is estimated to be of the order of 48.80 million tonnes, whereas production in the country would be 57.80 million tonnes, providing adequate surplus for meeting the projected export potential of 9 million tonnes.

The major public sector integrated steel plants of SAIL including IISCO and RINL would be able to

contribute about 11.449 million tonnes and 2.41 million tonnes respectively. With TISCO's contribution of 3.1 million tonnes of finished steel, the integrated steel plants are expected to produce 16.959 million tonnes. The balance 21.053 million tonnes would be from secondary steel sector during 2001-02. In other words, the Secondary Sector is expected to contribute about 55.4 percent of the availability of finished steel in the country:

The Working Group has identified the following pattern of the investment during the Ninth Five Year Plan:

TABLE-II:2

(Rs. In crores)

Area	Public Sector	Private Sector	Total
Steel	16,202.00	31,658.00	47,860.00
Sponge Iron	000.00	635.00	635.00
Pig Iron	0.00	200.00	200.00
Raw Materials And Others	3,479.00	0.00	3,479.00
Total	91,681.00	32,493.00	52,174.00

It will be seen that out of the total estimation of investment of Rs.52,174.00 crores in iron and steel sector during IXth Plan period made by the Working Group, public sector's contribution was expected to account for about 38% and the balance 62% of the investment supposed to be coming from the private sector, but subsequently, the Planning Commission undertook a detailed and in-depth exercise to determine the exact investment, which the Public Sector Undertakings in the Steel Sector would be expected to make during the Plan period. The Planning Commission has finally approved a Plan Outlay of Rs.19,197.88 crores for PSUs for IXth Five Year Plan. Total approved outlay of Rs.19,197.88 crores for IX Five Year Plan for public sector undertakings includes a Budgetary Support of only Rs.90.00 crore, which constitutes only 0.47.%. The remaining investment proposed to be made by PSUs will be met from their internal accruals and extra budgetary resources.

In so far as private sector is concerned, as mentioned earlier, the All India Financial Institutions have cleared 19 medium/large projects involving an annual capacity of approximately 13 million tonnes of saleable steel and investment of over Rs.30,000 crores.

Ministry of Steel has formulated a well-knit scheme in consultation with Planning Commission for self-reliant and healthy growth of the steel sector keeping in view all gamut of growth perspective for this sector. This includes maintaining continuous growth coupled with projected investments both in public and private sectors as well as investment for raising technological and managerial skills, quick decision making for product planning , man-power deployment etc.

As a part of the economic liberalisation process, the Government of India, on 16th January, 1992 abolished the price regulation of the Joint Plant Committee (JPC) on iron and steel, which had been in existence since 1964. However, the requirements of Defence, Railways, Small Scale Industries Sector, exporters of engineering goods and the North Eastern Region continue to be met on priority at prices that are announced by the producers from time to time.

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 allocation. To meet the requirements of steel of Small Scale Industries, allocations are made by the Development Commissioner for Iron and Steel. This is in addition to the purchases made by Small Scale Units, which draw their materials directly from the main producers. The Development Commissioner also continues to issue Release Orders for supplies to exporters of engineering goods and make annual supply plans for the North Eastern Region. The requirements of Defence and Railways are met by the main producers directly on priority in accordance with the past procedures .

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

Pricing of Iron and Steel

The pricing mechanism of the Joint Plant Committee (JPC) operating from 1964 was abolished with effect from 16th January, 1992. Producers are now free to determine and announce their prices, which are now governed by market forces of demand and supply.

After deregulation, the main producers, i.e. Steel Authority of India Limited, Rashtriya Ispat Nigam Limited and TISCO are charging either the actual freight upto stockyard or freight element as it existed prior to deregulation (now Rs.1760/- per tonne in case of steel and Rs.1200/- per tonne in case of pig iron), whichever is lower. This has ensured that far flung areas and distant States are protected by stipulating that the main producers shall charge either actual freight or freight element existing prior to withdrawal of the scheme, whichever is less.

Policy frame work

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

With the liberalisation of India's trade policy and commencement of the export-import policy for 5 years (from 1.4.1997 to 31.3.2002), the policy for import and export of iron and steel materials has undergone sweeping changes. Import of all items of iron and steel is freely allowed.

Exports of all items of iron and steel are also freely allowed. Exports of high grade iron ore, chrome ore and manganese ore are made through designated canalising agencies subject to the ceilings imposed by the Government, in order to conserve high grade ores for domestic consumption and production of value added materials.

Consistent efforts are being made by the Ministry of Steel / Development Commissioner for Iron & Steel to ensure adequate supplies of domestic raw materials to meet requirements of engineering exporters.

Import of Steel

India had been annually importing about 10 to 15 lakh tonnes of steel. However, due to picking up of domestic demand, the import of saleable steel in 1994-95 increased to 1.93 million tonnes. The increase in import was mainly in hot rolled coils, cold rolled coils and semis. Import of saleable steel during 1998-99 was about 1.8 million tonnes which was about 9% more than import in 1997-98.

The total import of steel, pig iron and scrap during the last five years and value thereof are as under :

(Qty. in '000 tonnes) (Value in Rs. crore)

Category	1995-96		1996-97		1997-98		1998-99 (P.)		1999-2000(P.)	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
Saleable Steel	1834	3175	1797	3041	1815	2900	1652	2459	1803	2541
Pig Iron	8	6	15	12	2	3	2	2.07	3	3.08
Steel Scrap	974	618	1165	709	819	497	880	478	964	517

Export by Iron & Steel Sector

India has already registered its presence in the global market in the recent years. While India started steel production in the year 1911, steel exports from India started only in 1964. However, steel exports have been sporadic in the initial years. From 1964 to 1968 India exported a large quantity of steel mainly due to recession in the domestic iron and steel market. Subsequently, exports declined with revival of domestic demand. India once again started exporting steel from 1975, touching a record export of steel in 1976-77. In the year 1976-77, India exported 1 million tonne of pig iron and 1.4 million tonnes of steel. Thereafter, exports again declined only to pick up in 1991-92, when main producers exported 3.87 lakh tonnes valued at Rs. 283 crore.

As a result of various policy measures taken up by the Government like liberalisation of import-export policy, introduction of flexibility in the advance licensing scheme and convertibility of rupee on the capital account, the export of Iron & Steel (including Sponge Iron) showed a quantum jump to 2.92 million tonnes valued at Rs. 1978 crore in 1993-94. In 1995-96, the export was of the order of 2.79 million tonnes valued at Rs. 2,275 crore. The export of Iron & Steel during 1997-98 was 3.04 million tonnes valued at Rs. 2937 crore. During 1998-99, the export of iron and steel was 2.4 million tonnes valued at Rs. 2,509 crores, the decline is attributable to the global slow down in the steel sector.

The quantity and value of steel, pig iron and sponge iron exported from the year 1993-94 is as given in the table below.

Exports of Steel and Pig Iron and Steel

(Quantity in lakh tonnes)

Year	Saleable Steel		Pig Iron		Sponge Iron		Total Iron & Steel	
	Qty.	Value	Qty	Value	Qty.	Value	Qty.	Value
1993-94	16.01	1417	6.20	261	7.00	300	29.21	1978
1994-95	13.19	1238	4.67	200	6.66	280	24.52	1718
1995-96	15.02	1696	5.04	243	7.90	335	27.96	2275
1996-97	19.92	2039	4.06	192	3.80	165	27.08	2396
1997-98	18.78	2343	7.84	404	3.74	190	30.36	2937
1998-99	19.45	2293	2.76	131	1.69	85	23.9	2509
1999-2000	29.98	-	2.90		0.53		33. 4	

Average value of export

Pig Iron	US$ 120-130
Sponge Iron	US$ 105-110

Earlier, exports consisted mainly of plates, structurals, bars and rods, whereas now apart from semix, hot rolled coils, cold rolled coils, colour coated sheets, GP/ GC sheets, pig iron and sponge iron are also being exported. In future, it is expected that the exports of more value added items will increase.

The iron and steel sector has been experiencing a slow down in the last 3 years. The growth of the steel is dependent upon the growth of the economy in general and the growth of industrial production and infrastructure sectors in particular. The major reasons for the slow growth in the last few years include :-

a) Sluggish demand in the steel consuming sectors

Steel being the basic raw materials for the construction industry, the capital goods and engineering goods industry, as also the auto sector and white goods sector, its growth is dependent upon the demand for steel by these segments of the industry. Since no major infrastructure or construction projects have been implemented in the last few years, demand for steel has remained low. No major projects in the oil sector, power sector, fertiliser sector where intensity of steel consumption is high, have come up in the recent past.

b) Overall economic slow down in the country

All major core sectors of the economy have been facing an economic slow down. These include, power, coal, cement, industry, mining and steel. The slow down phenomenon is not restricted to the steel sector alone. Only when the overall economy of the country picks up, would the steel sector also show signs of revival.

c) Lack of investment by Government/ Private sector in major infrastructure projects

Due to budgetary constraints, no major construction activity in mega projects including fertiliser, power, coal, railway etc. have been planned by the Government. Despite liberalisation of the economy and relaxation in the investment norms, private sector investment is yet to materialise in the core sectors of the economy. This has also contributed in slowing down demand for steel.

d) Cost-escalation in the input materials for iron & Steel

Power tariff, freight rates, coal prices etc. have been under the administered price regime. These rates have been frequently enhanced, thereby contributing to the rise in input costs for steel making.

e) Continuous reduction in import duty on iron and steel.

After liberalisation import duty rates on iron and steel items have been gradually reduced over the years. This has opened up the domestic iron and steel sector to international competition. Due to rationalisation in the import duty structure in 1999-2000, the rates of basic custom duty has gone up. The table1 below indicates the extent of changes brought about in the customs duty of some of the items of steel since 1993-94.

(Table Import Duties % Ad valorem)

Item	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01
HR Coils	50	40	30	25	25	25	25	25
CR Coils	75	50	40	25	30	30	35	35
Plates	75	50	40	30	30	30	35	35
Bars/ Rods Structurals	85	50	40	30	30	30	35	35

f) Greater competition from imports

Due to the drastic reduction in import duties in iron and steel materials along with sharp fall in international prices, the imports of finished steel even in those sectors where adequate capacity exists have shown an increasing trend.

g) Dumping of finished steel in the country

Taking advantage of lower tariff regime and the unrestricted import of all iron and steel materials with the liberalisation of the EXIM policy, some countries are reportedly dumping their finished steel products in India.

h) Adverse conditions in export markets for iron and steel

Due to economic crisis, the South East Asian countries, the traditional market for Indian iron and steel exports has dried up. Countries, which were hitherto importing steel from India, have cut down on imports to conserve scarce resources and Indian exports have been forced to look for newer markets elsewhere in the globe. These countries particularly Indonesia, Malaysia & Korea in fact, have now become competitors to Indian exports in other global markets.

The Ministry of Steel has been making all out efforts to help the domestic steel sector to overcome the problems faced by the steel industry at present. These include :

a) Boosting demand in the steel consuming sectors

To boost the demand and consumption of steel an Institute for Steel Development and Growth (INSDAG) has been set up in Kolkata

with leading steel producers in the country as its members. The Development Commissioner for Iron & Steel (DCI&S) has launched a National Campaign for increasing the demand for steel, in non-traditional sectors, particularly in the construction, rural and agro-based industrial sector.

b) Duty on project imports

To enhance the consumption of steel in the country, the Finance Ministry has been urged to provide a level playing field to domestic steel producers for steel supply against International Competitive Bidding (ICB) under 'project imports' in the fertilizer, power, oil sectors by exempting them for excise and sales tax.

c) Reduction in Power & Rail Tariffs

The Ministry of Steel has been interacting with State Governments to provide power at reduced/ concessional tariffs especially to mini steel plants all over the country. Similarly, the freight rates adopted by the Railways have been rationalised after inter action with the Railway Board and freight cost on raw material transportation for steel producers is reduced.

d) Reduction in input costs

The Ministry of Steel has also been able to rationalise the classification of coking coal in consultation with the Coal Ministry so as to reduce the impact of royalty payable on this basic raw material. Import duties on several raw materials, such as, scrap, ships for breaking, coke, non-coking coal etc. used by the steel industry has been reduced steadily over the past 4-5 years.

e) Import Duty

In the last Budget, imports duties on finished steel items has been increased as a result of rationalisation of tax structure.

f) Excise Duty

The Finance Ministry was requested not to resort to further increase in Excise Duties on iron and steel materials, in the last few budgets. On the other hand, a case has been made to reduce the excise duty levels on all finished steel items, especially long products (which are consumed by the construction sector) by at least 10%, as the construction sector cannot avail of MODVAT benefit.

g) Strengthening of Anti Dumping mechanism

To check the increasing trend of cheap imports in certain categories of flat products especially from CIS and South East Asian countries, the Ministry of Steel has urged the Commerce Ministry and the Finance Ministry to strengthen anti dumping mechanism so that fast decision on dumping can be taken.

Future Prospects

With the onset of liberalisation, the steel industry has now to gear-up, not only to domestic competition, but also to global competition in terms of product range, quality and price. The growth of the steel sector is intricately linked with the growth of the Indian economy and especially the growth of the steel consuming sectors. India has become self-sufficient in iron and steel materials in the last 3-4 years. Exports are rising and imports are falling. Production and production capacities are increasing. This position needs to be further consolidated and issues affecting production and consumption need to be resolved on a continuous basis. At the same time, productivity of our steel plants must be maintained at levels close to international standards. The Ministry of Steel continues to play an active and major role in helping the steel industry to overcome bottlenecks in the growth of this sector. With these efforts, the IXth Plan projection for finished steel of 32 million tonnes for domestic consumption and 6 million tonnes of export can be achieved, as also the projections for availability of 3.75 million tonnes of pig iron and 6.18 million tonnes of sponge iron.

India is already recognized as a global player in the steel industry and this sector is poised to play a key role in the international steel scenario by the turn of the century.

Functions of the Office of Development Commissioner for Iron & Steel.

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

a) Collecting, processing and dissemination of basic information relating to the Iron & Steel industry and to act as the data bank of the Ministry of Steel.

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

c) Advice on matters relating to import and export policies of iron and steel.

d) Management of distribution of iron and steel materials to the designated priority sectors such as, Defence, Railways, State Small Industries Corporation, Engineering Goods, Exporters and the North Eastern States.

e) Allocation of materials to the State Small Scale Industry Corporations.

f) Allocation of materials to remote areas like North Eastern States.

g) Survey of various segments of Steel Industry.

h) 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 aimed at overall development of the sector.

i) Interface between the Government and different consumer groups to facilitate consumer-producer interaction.

j) Co-ordination for movement of raw materials to Steel Plants.

Steel Exporters Forum

The Ministry of Steel had set up a Steel Exporters Forum in February 1998 with a view to fulfil the long felt need of the producers and exporters of iron and steel to have a forum to resolve issues, problems, bottlenecks faced by them in exports. The Chairman of the Forum is the Development Commissioner for Iron & Steel and all major steel producers/associations are its members. Representatives of the Ministries of Finance, Railways and Surface Transport are also its members in addition to the Ministry of Steel.

Indian steel is currently exported to China, Japan, USA, Korea, Taiwan, Indonesia, Thailand, Malaysia, Italy, U.K., Germany, Canada, Spain, Australia etc.

The IXth Plan Working Group for Iron and Steel has estimated that India will have an export potential of 6 million tonnes of steel by 2001-2002 and 9 million tonnes by 2006-2007. The above projection for export has been made keeping in view the need for projecting export as a distinct market, which needs to be developed, after meeting the domestic requirements. The Steel Exporters Forum has emerged as a useful forum to help redess the problems/bottlenecks being faced by the exporters.

RAW MATERIALS

Iron Ore

Introduction

As per the Survey conducted by the Indian Bureau of Mines (IBM) in April, 1995. India had 10,052 Million tonnes of Recoverable reserves of Heamatite and 3,408 Million Tonnes of Magnetite. While Zone 'A' comprising of Bihar & Orissa is the largest Heamatite Ore bearing Zone in the Country with reserves of 5951 Million Tonnes consisting mainly of Medium Grade & Low Grade Ore (Iron content 65% and below), Madhya Pradesh has the largest quantity of High Grade Ore reserves (Iron content greater than 65%) in the country at 570 Million Tonnes. Karnataka has the highest reserves of Magnetite at 2784 Million tonnes followed by Andhra Pradesh and Goa.

The details of Recoverable reserves of Heamatite and Magnetite is as under :

Recoverable Reserve of Heamatite as on 01/4/95

Unit : Million tonnes

S. N	Zone/ State	high grade Ore (FE+65%)	Medium gradeore (FE-62-65%)	Low grade ore (FE below 62%)	Unclassified	Other/ Not known	Blue dust Black Iron	Total
1.	Zone'A'							
	Bihar	24	1594	844	144	-	51	2657
	Orissa	280	1916	737	350	-	11	3294
	Total	304	3510	1581	494	-	62	5951
2.	Zone 'B'							
	Madhya Pradesh	569.9	480.7	517	397.4	14.1	18.9	1998
	Maharashtra	7.3	128.7	46.8	32.2	12.0	-	227
	Total	577.2	609.4	563.8	429.6	26.1	18.9	2225
3.	Zone'C'							
	Karnataka	299.9	600.8	73.1	94.2	3.5	0.5	1072
	Total	299.9	600.8	73.1	94.2	3.5	0.5	1072
4.	Zone'D'							
	Goa Region	2.5	219.5	469.1	34.1	8.1	11.4	744.7
	Total	2.5	219.5	469.1	34.1	8.1	11.4	744.7
5	Zone 'E'							
	Andhra Pradesh	14.3	1.90	31.70	2.6	0.3	-	50.8
	Rajasthan	-	0.28	7.68	1.0	0.04	-	9
	Total	14.3	2.18	39.38	3.6	0.34	-	59.8
	Grand Total	**1197.9**	**4941.88**	**2726.38**	**1055.50**	**38.04**	**92.80**	**10052.5**

Recoverable Reserves of Magnetite (As on 1/4/95)

S. N.	State	Metallurgical grade	Coal washery grade	Foundry	Unclassified	Other/ Not known	Total
1.	Andhra Pradesh	37.87	-	-	380.0	-	417.87
2.	Bihar	-	4.9	-	0.21	0.08	5.22
3.	Goa	98.33	-	-	64.48	0.4	163.21
4.	Karnataka	1162.69	-	-	1615.77	5.4	2783.86
5.	Kerala	36.08	-	-	-	-	36.08
6.	Maharashtra	0.19	-	-	-	-	0.19
7.	Rajasthan	-	-	0.3	-	-	0.30
8.	Tamil Nadu	1.07	-	-	-	-	1.07
	Total India :	**1336.23**	**4.9**	**0.3**	**2060.46**	**5.88**	**3404.80**

Production

Production of iron ore (including concentrates) during the year 1999-2000 was 73.47 million tonnes as against 72.23 million tonnes in the previous year. State-Wise production figures indicate that Madhya Pradesh would continue to be the leading iron ore producing State accounting for 18.58 Million Tonnes (25.2%) of the total production during 1999-2000, followed by Karnataka, with 15.68 Million Tonnes (21.3%), Goa 15.0 Million Tonnes (20.4%), Orissa 11.92 Million Tonnes (16.22%), and Bihar 11.91 Million Tonnes (16.2%). The remaining production of about 0.37 Million Tonnes was from Andhra Pradesh, Maharashtra., Rajasthan and Haryana.

Despatches

Despatches of iron ore (including concentrates) for 1999-2000 are estimated at

Iron Ore Mining and transportation

71.1 million tonnes. The despatches of iron ore for internal consumption and exports would be 40.50 million tonnes and 30.6 million tonnes respectively.

Production and despatches of iron ore from 1994-95 to 2000-01 are given below :

Year/Period	Production		Total	Despatches	
	Qty (MT)	Value (Rs. in Crores)	(MT)	For Internal consumption	For Export (MT)
1995-96	67.4	1355.30	65.3	37.2	28.1
1996-97	68.2	1479.56	67.7	38.2	29.5
1997-98	75.7	1819.7	74.2	40.5	23.7
1998-99	72.2	1855.95	69.3	38.8	30.5
1999-2000(P)*	73.5	1965.29	71.1	40.5	30.6
2000-01 (E)	77.7	2076.59	76.4	45.7	30.7

*(P) Provisional

(E) Estimated (including the recorded figures from April-October 2000 and estimated for November 2000 to March 2001)

CHROMITE ORE

Reserve:

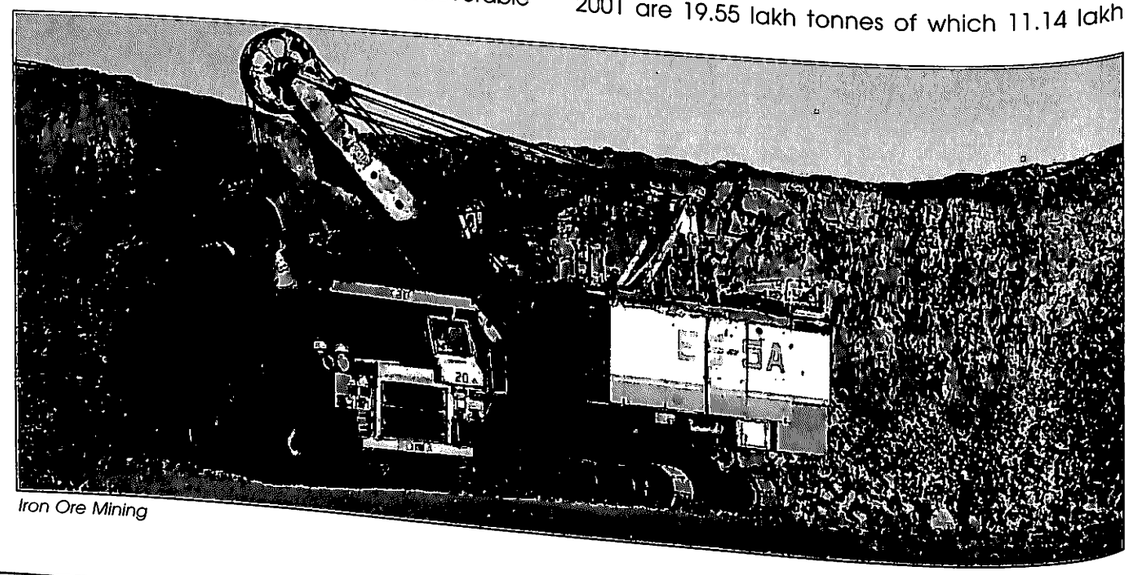
As per the latest inventory the total recoverable reserves of Chromite Ore are estimated at 88 million tonnes. Most of the reserves are confined only to Orissa.

Production:

Production of Chromite in 2000-2001 is estimated at 20.07 lakh tonnes as against 16.96 lakh tonnes in 1999-2000. Orissa continues to be the chief producing state accounting for 19.90 lakh tonnes (99%) of the total production

Despatches:

Estimated despatches of Chromite during 2000-2001 are 19.55 lakh tonnes of which 11.14 lakh tonnes (57%) would be for internal consumption and 8.41 lakh tonnes (43%) for export.



Iron Ore Mining

Production and despatches of chromite during the year 1995-96 to 2000-2001 are given below:-

Year/Period	Production		Despatches		
	Quantity ('000 t)	Value (Rs. crores)	Total ('000 t)	For Internal Consumption ('000 t)	For exports ('000 t)
1995-96	1700	356.82	1597	1121	476
1996-97	1456	289.47	1224	698	526
1997-98	1515	304.55	1343	936	407
1998-99	1418	282.34	1289	904	385
1999-2000(P)	1696	334.71	1562	886	676
2000-2001*(E)	2007	373.64	1955	1114	841

(P): Provisional (E): Estimated

* Estimated (comprise the recorded figures upto October, 2000 and estimated for November 2000 to March, 2001)

Source: Indian Bureau of Mines, Nagpur

Exports

Keeping in view the limited reserves of Chromite ore in the country, only certain grades of ore are allowed for export. Emphasis has been laid on export of beneficiated chromite concentrates. From the year 1997-98, a five year Export Policy has been decided upon the Government so as to enable the exporters to establish their presence in the international market. The maximum, ceilings for export of Chromite ore for 2000-2001 are as follows:-

Chromite Ore

Item	Ceilings in lakh tonnes)
(i) Low silica friable/fine chromite ore with chromium oxide not exceeding 52% & Silica exceeding 4%. And Chromite lumps containing Chromium Oxide not exceeding 40%	4.00
(ii) Beneficiated chromite concentrates (average feed grade to be less than 33 %)	No ceiling

Government has constituted an Expert Committee in December, 2000 under the Chairmanship of Dr.K.K. Chatterjee, Chief Mineral Economist, Indian Bureau of Mines, Nagpur to examine various aspects relating to exploration, production, domestic demand, stocks and prospects for export of chromite ore.

Reserve:

As per the latest inventory the recoverable reserves of Manganese ore are estimated at 167 million tonnes. The major reserves in the country are of blast furnace grade. The reserves of ferro-manganese grade are very limited to about 19.75% of the total reserves.

Production:

Production of Manganese ore during 2000-2001 is estimated at 1.58 million tonnes as against 1.57 million tonnes in 1999-2000. Orissa, Maharashtra, Madhya Pradesh and Karnataka are the principal producing states together accounting for 93% of the total production of Manganese ore in 2000-2001.

Despatches:

Estimated despatches of Manganese Ore during 2000-2001 are 1.5 million tonnes of which 1.29 million tonnes would be for internal consumption and 0.21 million tonnes for export.

Production and despatches of Managanese Ore during the year 1995-1996 to 2000-2001 are given below:-

Year/Period	Production		Despatches		
	Quantity ('000 t)	Value Total (Rs. crores)	For Internal ('000 t)	For Cosumption ('000 t)	exports ('000 t)
1995-96	1,837	159.88	1, 796	1,597	199
1996-97	1,871	176.07	1,800	1,551	249
1997-98	1,640	117.69	1,677	1,457	220
1998-99	1,538	173.83	1,461	1,259	202
1999-2000(P)	1,565	181.00	1,486	1,278	208
2000-2001*(E)	1,580	189.60	1,501	1,291	210

(P): Provisional (E): Estimated

*: Estimated (Comprise the recorded figures upto October, 2000 and estimated for November 2000 to March, 2001)

Source: Indian Bureau of Mines, Nagpur

Exports

Export policy of manganese ore is decided keeping in view the need for conserving high grade ores. Alongwith this, effort is also made to replace the export of ores with export of value added items.

For the year 2000-2001 the maximum ceiling of manganese ore allowed for export are as follows:

Manganese Ore

Item	Ceiling for 2000-2001 (in lakh tonnes)
1) Medium Grade Manganese Ore/blended ore containing 38% to 46% manganese and more than 0.15% Phos.	1.00
ii) Medium Grade Manganese ore/blended ore containing 38% to 46% manganese and more than 0.10% Phos.	0.50
iii) Low grade manganese ore/ blended ore containing less than 38% manganese	4.00
iv) Manganese ore fines below 12mm in size containing less than 44% manganese.	1.50

Introduction:

The Indian Ferro Alloy Industry is more than four decades old, and produces Bulk and noble Ferro Alloys. Although this Industry is not as old as the Steel Industry, its capacity has increased substantially.

India is bestowed with adequate resource of all basic raw materials required for production of Manganese, Silicon and Chrome Alloys. Most of the Ferro Alloy Units have been set up in the states of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Orissa and West Bengal, mainly due to availability and/or proximity of the raw materials.

Capacity and Performance of the Industry:

Ferro Alloys is a power Intensive industry. The total load of the Industry has grown almost 8 to 9 times from 130 MVA in the mid sixties to over 1000 MVA. The installed capacity of the Industry is now 1.5 million tonnes of Bulk and Noble Ferro Alloys. The capacity of Manganese Alloys is around 700,000 tonnes, Ferro Silicon 175,000 tonnes and Ferro Chrome/Charge Chrome about 600,000 tonnes and Noble Ferro Alloys viz., Ferro Molybdenum, Ferro Vanadium, Ferro Tungsten, Silico Magnesium Ferro Titanium, Ferro Vanadium, Ferro Tungsten, Silico Magnesium, Ferro Titanium, Ferro, Phosphorous, etc. around 20,000 tonnes. The capacity utilization ranges from 50 to 55% only. The production growth rate is negigible due to stagnation in the Steel demand and production in the country. Although the industry has adequate potential to step up its exports, and hence also its capacity utilization, it has been hindered by the prohibitive costs of power in the country.

The Ferro Alloy units have incorporated the latest technology in order to use non-metallurgical grade ores both lumps as well as fines, after necessary beneficiation and agglomeration.The Units have also incorporated effective pollution control measures, in the form of gas cleaning, deoxidizing and waste heat recovery.

Production of major bulk and noble ferro alloys during the last five years is given hereunder:

Year	Quantity (in lakh tonnes)
1994-95	7.16
1995-96	7.96
1996-97	6.94
1997-98	7.91
1998-99	7.24
1999-2000	7.29

* Source Indian Ferro Alloys Producers' Association, Mumbai

Export of Ferro Alloys:

Exports which were around 15% of the production when the liberalized policy was introduced in1991-92, are now around 35% of the total production. In terms of value, exports which were about Rs. 2500 million had crossed Rs. 5000 million in 1997-98. However, there was a slow down in the exports during 1999-2000, dropping to Rs. 3925 million, due to global recession in the steel industry.

The Industry has already established itself as a regular exporter of High Carbon Ferro Chrome/ Charge Chrome and Silico Manganese. It has potential to export Manganese Alloys, Ferro Silicon, Ferro Vanadium, Silico Magnasium, etc. The reputed exporters have obtained 9002 certification. Details of ferro alloys for last five years are given hereunder:

Year	Quantity (in lakh tonnes)	Value (Rs. in million)
1994-95	1.74	2573
1995-96	2.20	5000
1996-97	2.11	4079
1997-98	2.59	5045
1998-99	2.48	5190
1999-2000	2.06	3925

* Source: Indian Ferro Alloys Producers Association, Mumbai

Coal is a major raw material for the Iron & Steel Industry which consumes both Coking & Non-Coking coal.

Consumption of Coking Coal

During 1997-98 the consumption of coking coal in SAIL Steel Plants (including IISCO), TISCO and VSP was as under :

(in million tonnes)

	SAIL	TISCO	VSP
Indigenous Sources	7.085	2.324	0.67
Imports	6.133	0.942	2.39
Total	**13.218**	**3.266**	**3.06**

Consumption of Non-Coking Coal

During the year 1997-98 SAIL Steel Plants (including IISCO) consumed 4.562 million tonnes of non-coking coal from domestic sources which TISCO consumed 1.450 million tonnes of non-coking coal. During 1997-98, VSP consumed 1.39 million tonnes of non-coking coal.

Refractories are the primary materials used in the internal lining of industrial furnaces and are classified from the chemical composition angle into - Acid Refractories, Basic Refractories and Neutral Refractories. In steel industry refractories are used for lining of coke oven batteries, blast furnaces, steel production furnaces, reheating furnaces, electrical arc furnaces etc. With the technological changes in the steel industry, the major thrust has been on economising on the use of the materials and improving technology in each area of operation/process where refractories are being used. The gradual phasing out of open hearth furnaces, adoption of continuous casting route and modernisation of secondary steel making processes, have lessened the demand for conventional refractories and increased demand for high performance refractories. In general, it can be said that all these improvements have resulted in lowering specific consumption of refractories per tonne of steel.

Production of refractories during the year 1997-98 is given below:

Refractory Item	Production (M.T.)
Firebricks and Shapes	172193
High Alumina bricks and shapes	240138
Silica bricks and shapes	38471
Basic bricks and shapes	202106
Special Products	17427
Others	39075
Total :	**709410**

The import of refractory items in 1997-98 stood at 27804 tonnes while exports were of the order of 9770 tonnes. In value terms, export during 1997-98 was Rs.20 crores.

PUBLIC SECTOR

STEEL AUTHORITY OF INDIA LIMITED

(Excluding Subsidiaries)

General

Steel Authority of India Ltd. (SAIL) is a Company registered under the Indian Companies Act, 1956 and is an enterprise of the Government of India. It operates and manages five integrated steel plants at Bhilai (Chhatisgarh), Bokaro (Jharkhand), Durgapur (West Bengal), Rourkela (Orissa) and the Indian Iron and Steel Company Limited at Burnpur (West Bengal), which is a wholly owned subsidiary of SAIL.

SAIL also has four Special and Alloy Steels and Ferro-alloys units at Durgapur (West Bengal), Salem (Tamil Nadu), Chandrapur (Maharashtra) and Bhadravati (Karnataka). The plant at Chandrapur belongs to the Maharashtra Elektrosmelt Limited which is a subsidiary of SAIL. The IISCO-Ujjain Pipe and Foundry Company Ltd., a subsidiary of IISCO, which was manufacturing Cast Iron Spun Pipes at its works at Ujjain (Madhya Pradesh), is under liquidation. Besides, SAIL has seven central units viz. the Research and Development Centre for Iron and Steel (RDCIS), the Centre for Engineering and Technology (CET), the Management Training Institute (MTI) all located at Ranchi, Central Coal Supply Organisation located at Dhanbad, Raw Materials Division, Growth Division and Environment Management Division all located at Calcutta. SAIL Consultancy Division (SAILCON) functions from New Delhi. The marketing of products of SAIL plants is done through the Central Marketing Organisation (CMO), Calcutta which has a countrywide distribution network. As part of the business restructuring plan, two separate subsidiary companies were incorporated under the name of SAIL Power Supply Company Limited (SPSCL) and Bhilai Oxygen Limited (BOL) on 8th and 9th February, 1999 respectively.

Pipe produced by SAIL's Rourkela Steel Plant

Finance

The authorised capital of SAIL is Rs.5000 crores. The paid-up capital of the Company was Rs.4,130.40 crores as on 30th September, 2000 which was held to the extent of 85.82% by the Government of India and the balance 14.18% by the financial institutions/GDR-holders/banks/employees/individuals etc.

Turnover and Profit

The Company recorded the sales turnover of Rs.16250.16 crores in 1999-2000. The post-tax net loss for the year 1999-2000 was Rs.1720.02 crores. Due to loss, the Company had not declared a dividend for the year ended 31st March, 2000.

The Gross margin (profit before depreciation and interest) and net loss for the half year ended 30th September, 2000 was Rs.936.49 crores and Rs.520.11 crores respectively. The company recorded a sales turnover of Rs.7522.70 crores during the period.

The recessionary conditions in most of the steel consuming units continued, particularly during first half of the 1999-2000. The average price realisations remained unchanged with the domestic market prices improving by 3%, while export realisations declined. However, there has been indication of revival during the second half of fiscal 2000 with improvement in sales volume and realisations.

Making further strides in the area of cost reduction, SAIL effected savings of Rs.713 crore during 1999-2000 partly neutralising adverse market related factors and impact of input cost escalation. The cost reduction drive focussed upon improvement in techno-economic parameters through reduction in specific consumption of coal and other raw materials, improvement in yields, reduction in consumption of stores & spares, maximising utilisation of captive engineering shops. Savings also resulted from reduction in price of imported coking coal pursuant to negotiations with long-term suppliers of coal.

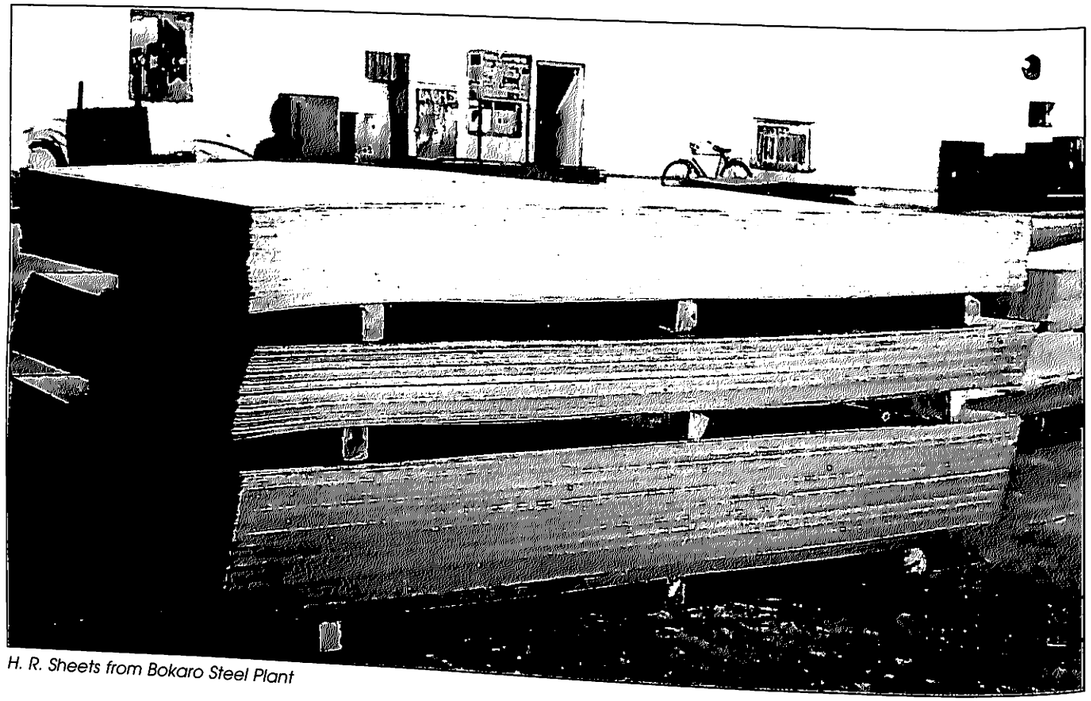
Capital Expenditure

The Company incurred capital expenditure of Rs.522.34 crores on Fixed Assets and Capital Work-in-progress in the year 1999-2000 and Rs.202 crores during the period April-September, 2000 which has primarily been financed through borrowings from external sources. Capital investment is being restricted to only on-going capital schemes and schemes relating to statutory requirements viz. safety, environment, etc.

Financial and Business Restructuring

With a view to overcome adverse business scenario and improve the competitive strength in a fiercely competitive market, SAIL formulated a financial and business restructuring plan which was approved by the Government in February, 2000. The financial restructuring will help the company in mitigation of financial risk by reducing debt-equity ratio and improvement in debt service capability. The business restructuring would provide long-term competitiveness and retain competitive edge of the company in its core business of steel making, by divesting the non-core assets of the company. The restructuring proposals envisage:

- Waiver of loans advanced to SAIL from Steel Development Fund (SDF) of Rs.5073 crore to be set off against write-down in the value of assets by Rs.3001 crore, write-off of loans and advances from SAIL to Indian Iron & Steel Company Limited (IISCO), a wholly-owned subsidiary company of SAIL, of Rs.1566 crore and write-back of Rs.506 crore representing interest written-off in the past in respect of loans to IISCO. Government of India loan together with interest accrued thereon amounting to Rs.380.17 crore to SAIL, which was further lent to IISCO was also waived. This has been made effective from 1st April 1999 and the accounting adjustments have been carried out during 1999-2000.
- Raising an amount of Rs.1500 crores by SAIL from the market to finance reduction in manpower through voluntary retirement scheme against



H. R. Sheets from Bokaro Steel Plant

Government guarantees with 50% interest subsidy for loans and interest thereon. Further, Government guarantee for loan and interest thereon of Rs.1500 crores to be raised by SAIL from the market primarily for meeting repayment obligation on past loans.

- Initiating the process of divestment of the following non-core assets while protecting the jobs of the existing employees:

(a) Power plants at Bokaro, Durgapur and Rourkela.

- 2x60 MW captive power plant-II at Rourkela Steel Plant and the Central Power Training Institute at Rourkela.
- 2x60 MW captive power plant-II at Durgapur Steel Plant
- 122 MW (2x55 MW plus 12 MW back pressure turbine) captive power plant-I, 3x60 MW captive power plant-II and steam generating capacity of 660 MT/hour at Bokaro Steel Plant.

(b) Oxygen Plant-2 of Bhilai Steel Plant

(c) Salem Steel Plant (SSP), Salem

(d) Alloy Steels Plant (ASP), Durgapur

(e) Visvesvaraya Iron and Steel Plant (VISL), Bhadravati

(f) Fertiliser Plant at Rourkela.

- Conversion of IISCO into a joint venture with SAIL holding minority shareholding.

SAIL has signed a Memorandum of Understanding with the Ministry of Steel in March, 2000 for implementation of the business restructuring plan with detailed milestones. Responsibilities have been assigned to senior executives for carrying the implementation forward and accomplishing the milestones within agreed timeframe. The process of divestment has already been initiated by appointing Financial Advisers/merchant bankers. The company has issued advertisement inviting Expression of Interest for divestment of identified units.

Production Performance

The four integrated steel plants of SAIL at Bhilai, Bokaro, Durgapur and Rourkela ended the year 1999-2000 with an output of 10.94 million tonnes of hot metal, 9.79 million tonnes of crude steel and 9.23 million tonnes of saleable steel. Alloy and Special Steel Plants produced 301 thousand tonnes of saleable steel.

The details of production plan and achievement for 4 integrated steel plants during 1999-2000 are as follows :

(In Million Tonnes)

Item	Target	Actual	Fulfillment (%)
Hot Metal	11.00	10.94	99
Crude Steel	9.94	9.79	98
Saleable Steel	9.50	9.53	100

(including Alloy and Special Steel Plants)

Production Performance: 2000-2001 (April-Sept 2000)

The details of production plan and achievement during 2000-2001 (April-September 2000) was as follows :-

(In Million Tonnes)

Item	Target	Actual	Fulfillment (%)
Hot Metal	5.87	5.73	98
Crude Steel	5.50	5.19	94
Saleable Steel	4.93	4.82	98

(including Alloy and Special Steel Plants)

The plant-wise production performance of saleable steel during April-September, 2000 is given hereunder:

'000_Tonnes

Plant	Target	Actual	Fulfillment(%)
Bhilai Steel Plant	1731	1719.4	99
Bokaro Steel Plant	1698	1641.7	97
DSP	714	703.3	99
RSP	654	615.3	94
(A) Total Four Plants	**4797**	**4679.7**	**98**
Alloy Steels Plant	44.9	38.1	85
Salem Steel Plant	57.6	61.9	107
Visvesvaraya Iron & Steel Plant	30.9	39.8	129
(B) Total Special Steel Plants	**133.4**	**139.8**	**104**
Total SAIL(A+B)	**4930.4**	**4819.5**	**98**

There was continued thrust during 1999-2000 on improvements in techno-economic parameters. Coke rate in Blast Furnaces was lowest ever at 564 kg. per tonne of hot metal in SAIL four plants.

Energy Conservation

The continued emphasis on energy conservation measures helped further in reducing energy consumption per tonne of crude steel for the 13th successive year and reached a level of 7.96 G.Cal/tcs during 1999-2000. During the period April-September, 2000 energy consumption was 7.93 G.Cal/tcs.

Captive Power Generation

Captive power generation in SAIL during 1999-2000 stood at an average of 454 MW. Captive power generation during April-September, 2000 stood at an average of about 472 MW as compared to 463 MW during April-Sept.99.

Sales and Marketing Performance

Marketing Strategies

During the year, the steel market generally

remained stagnant, with some improvement only in the later part of the year. In sluggish market conditions, the company adopted aggressive marketing strategies which included intensified customer contact and feed back system coupled with customer friendly order booking system and after-sales service. Customer satisfaction was further enhanced by undertaking a larger component of sales as direct despatches from plants.

As a part of SAIL's business restructuring, the product management group was reorganised into long products and flat products for greater thrust and focus on productwise marketing. Key Account Management process has been introduced in select branches in order to service the requirements of key customers in terms of quality, delivery, etc. and also to bring in new/ lost customers in a fiercely competitive market and increase market share. The process would be subsequently extended to other branches.

Sales

The company achieved sales of over 9.71 million tonnes (previous year 8.97 million tonnes) of saleable steel, recording a growth of 8.25% in the domestic and international markets during the year. The company exported 0.89 million tonnes (previous year 0.49 million tonnes) of steel and pig iron recording a growth of 81% in exports. The company earned foreign exchange of Rs.886.42 crores during the year through exports and other activities. As a result of imposition of anti-dumping and countervailing duties on import of plates from India in the important markets of USA, EU countries and Canada, exports to these major markets were restricted.

During the period April-September, 2000, the total sales of saleable steel was 4.18 Million Tonnes. In addition 0.14 Million Tonnes of pig iron was also marketed. The export during this period was 286.4 thousand tonnes and company could earn foreign exchange of about Rs. 307 crores through exports and other activities.

Capital Schemes

The modernisation schemes at Durgapur, Rourkela and Bokaro Steel Plants started yielding results during the year. The techno-economic parameters like energy consumption, coke rate, yield, etc. have shown significant improvements at Durgapur Steel Plant(DSP).

Reheating Furnace No.5 at Rourkela Steel Plant (RSP) was also commissioned in November, 1999 thereby completing the RSP modernisation. Significant improvement has been achieved in the quality of coke, sinter, hot metal and steel after modernisation. Special grades of steel like CRNO, API, Medium carbon, etc. have been made through Continuous Casting route. However, considering sluggish market of steel, the production of RSP was regulated and the plant was operated with 3 out of 4 Blast Furnaces.

At Bokaro Steel Plant (BSL), with the completion of Reheating Furnace No.3 and fourth Coiler in January, 2000, all the facilities under Modernisation have been completed. The quality of concast slabs is considerably better than the rolled slabs and has improved the quality parameters of the finished products from Hot Strip Mill. The Hot Rolled products of BSL are being well accepted in domestic and international market. BSL is now able to produce Corrosion Resistant steel sheets (SAILCOR) which were earlier produced at Alloy Steels Plant and rolled at BSL. The commercial production of SAILCOR sheets has helped in meeting orders from railways on a regular basis.

The installation of Sinter Plant-3 at Bhilai Steel Plant (BSP) is in an advanced stage of completion and is likely to be completed by March, 2001. On line ultrasonic testing machine and eddy current tester for rails have been installed. Also, Ladle Furnace & RH Degassing facilities at BSP have been installed and undergoing trial runs for improvement in Rail quality.

Raw Materials

The Company met entire requirement of its iron ore and half of fluxes requirements from captive sources. SAIL Captive Mines produced 18.58 Million Tonnes of Iron Ore Lumps and Fines during 1999-2000 and 9.45 Million Tonnes during the period April - September 2000. Fluxes production was 2.52 Million Tonnes in 1999-2000 and 1.38 Million Tonnes during the period April-September 2000.

In-house Enginering

Centre for Engineering & Technology (CET) has been providing its services in the areas of modernisation, technological upgradation and additions, modifications and replacement schemes to plants and units within SAIL and clients outside SAIL - both in India and abroad.

Most of the major projects completed during 1999-2000 were implemented with in-house consultancy services. Some of the ongoing projects being implemented with in-house consultancy are - Sinter Plant-3 (Raw Material Handling Package) of BSP; Rebuilding of Coke Oven Battery No.3 of BSL, introduction of Combined Blowing Technology in SMS-II at BSL; upgradation of BF No.3 of DSP etc.

Besides the above, CET has also done the consultancy of some of the projects under implementation for clients other than SAIL viz. Basic Engineering for Installation of Romelt Unit for National Mineral Development Corporation (NMDC), Installation of a Bar Mill for National Iron & Steel Company, Belur, installation of a Section Mill for M/s Mohkeen Felez Industrial Company, Tehran, Enlargement, Modification and Reconstruction of BF-3 of EISCO, Egypt, Dust Extraction for coal crushing plant at Al-Nasir Co., Egypt etc.

Human Resources Management Review

SAIL continued its efforts to maximise the contribution of the human resources in attainment of organisational goals. The thrust was on effective utilisation through concerted team working.

Manpower Utilisation

The manpower strength as on 31st March, 2000 was 159940 comprising of 16995 executives and 142945 non-executives. A Voluntary Retirement Scheme based on a system of deferred payment was introduced on 1st June, 1999 which remained in operation up to 31.10.1999. During this period 13,617 employees separated through Voluntary Retirement. The manpower strength as on 30.9.2000 was 158158 comprising of 17,075 executives and 1,41,083 non-executives.

Training

During the year training continued to play a vital role in the on-going process of change and development to meet the priorities of the company. The focus was on managerial competence building and skill development of our employees during the year. Out of 69164 employees trained during the year, around 54% of the training was in area of skill and efficiency enhancement. During April-September 2000, 37736 employees were trained.

Employees' Welfare

The welfare of employees remained a priority for the company during the year as has been throughout the past several years. The company continued to provide community support through various welfare measures including providing avenues for social and cultural activities, education for children, housing facilities, co-operative societies and extension of mediclaim schemes to retired employees. On this account, the Company spent an amount of Rs.439.29 crores during 1999-2000, and Rs. 232.45 crores during April-September, 2000.

Sports

Prioritised and focussed attention on Youth Sports have consolidated the system of precipitating new champions from SAIL Plants/Units regularly. SAIL Football topping "A" Division IFA League of Calcutta entered Super League to lock horns with Mohan Began, East Bengal and Tollygunge in year

2000 and SAIL Sponsored Indian National Football Club became Delhi Super League Champions in 1999. SAIL employees served the cause of Cricket, Hockey, Boxing, Athletics and Football deputed by National Federations and Boards. Nisha Millet sponsored by SAIL since 1996 became the first ever Indian Women to be eligible in Olympics - Sydney.

Industrial Relations

A conducive and congenial work environment was maintained through the support and cooperation of the trade unions and officers association.

Peripheral Development

SAIL has been playing an active role in undertaking various measures like providing drinking water facilities, health care programmes, educational facilities, recreational activities, etc. for the people living in areas near the steel plants/ mines. A sum of Rs. 120 lakhs was spent on peripheral development during 1999-2000.

Awards

A team of two employees from RSP, and one employee from VISL were selected for Prime Minister's Shram Vir Award. In addition one employee from VISL was selected for Shram Shri Award during the year.

Total Quality Process

SAIL Consultancy Division (SAILCON) continued to register growth in business in providing quality services in the domestic as well as in foreign markets. SAILCON secured orders worth Rs.5.9 crores, registering a growth of 50% over the last year. During the year, entries were made into the markets of Kingdom of Saudi Arabia and Qatar. The marketing efforts abroad were focussed in Africa and the Middle-East region. SAILCON has already carved out a niche for SAIL in Egypt and Saudi Arabia, where satisfied customers have complimented the quality services provided by SAILCON through repeat orders. SAILCON is putting efforts to obtain more orders in Egypt, Iran, Saudi Arabia, Sudan, Vietnam, Kazakastan, Bhutan and Bangladesh besides India.

SUBSIDIARIES

The Indian Iron and Steel Company Limited

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

Production Performance

Burnpur Works

During 1999-2000 the Steel Plant produced 730.6 thousand tonnes of Hot Metal, 377.5 thousand tonnes of Pig Iron, 290.3 thousand tonnes of Crude Steel and 249.8 thousand tonnes of Saleable Steel.

Production Performance (Burnpur): 1999-2000

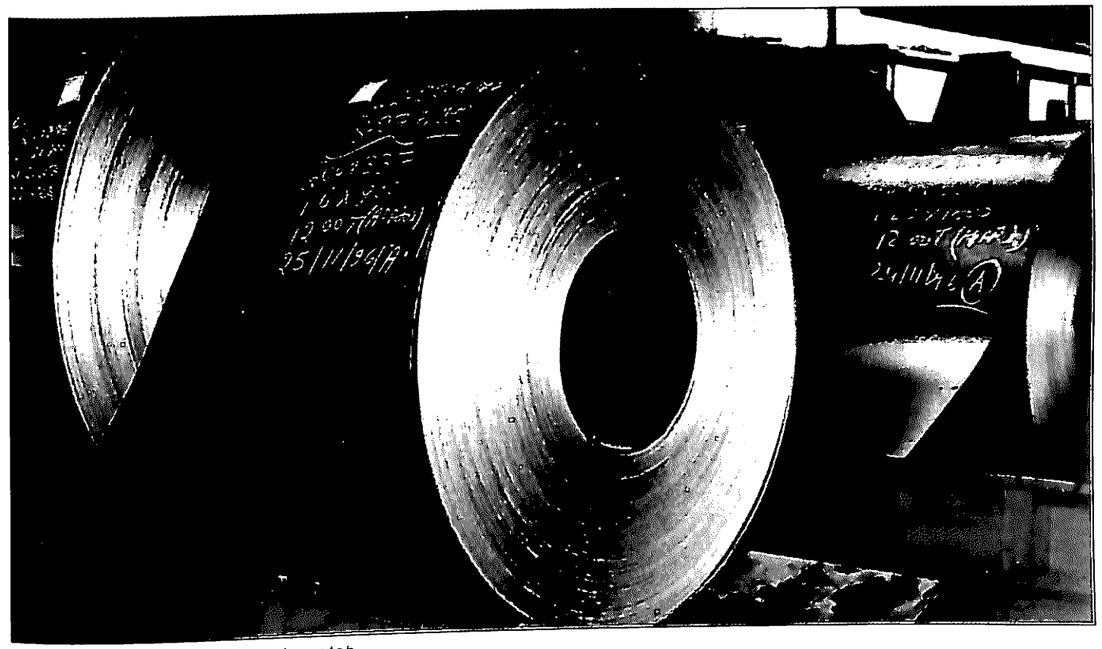
000/T

	Plan	Actual	Fulfillment(%)
Hot Metal	750	730.6	97
Crude Steel	300	290.3	97
Pig Iron	401	377.5	94
Saleable Steel	242	249.8	103

Production Performance(Burnpur)-April-September, 2000

000/T

	Plan	Actual	Fulfillment(%)
Hot Metal	375	341.4	91
Crude Steel	181	160.2	88
Pig Iron	170	151.4	89
Saleable Steel	145	135.0	93



SAIL's cold Rolled coil prior to despatch

Kulti Works

Total Castings output during 1999-2000 and April-September, 2000 was 19.4 thousand tonnes and 4.92 thousand tonnes respectively. Spun Pipes production was 32.8 thousand tonnes and 10.74 thousand tonnes during 1999-2000 and April-September, 2000 respectively.

Collieries

Total coal raisings from three Captive Collieries was 1033.6 thousand tonnes during 1999-2000 and 536.9 thousand tonnes during April-September' 2000..

Ores Mines

Iron Ore Lump production from captive ore mines was 1149.7 thousand tonnes during 1999-2000 and 602.2 thousand tonnes during April-September'2000.

Capital Schemes

Burnpur Works

During the year 1999-2000 the Company incurred capital expenditure of Rs. 16.48 crores on fixed assets on various capital schemes including additions, modifications and replacements. Financial constraints continued to affect the progress of work of ongoing schemes.

Kulti Works

A 6 T main frequency induction furnace has been installed at Kulti Works and is under commissioning. A chemical bonded continuous sand mixer plant at Kulti Works is under execution.

Financial Performance

During 1999-2000 the Company achieved a turnover of Rs.918.06 crores. The net loss for the year after charging depreciation (Rs.23.47 crores) and interest (Rs.12.27 crores) was Rs.210.38 crores. The major factors contributing to the losses were cost escalation of various inputs, lower volume of production and lower net sales realization due to sluggish market conditions. Company achieved sales turnover of Rs. 430.18 crores during April-September, 2000 and incurred net loss of Rs. 99.04 crores.

Based on financial restructuring of SAIL (Holding Company) as approved by Government of India, SAIL has waived w.e.f. 1st April, 1999 loans, interest on loans etc. amounting to Rs.1946.17 crores which were adjusted against infructuous capital WIP amounting to Rs.252.31 crores and balance amount was utilised to adjust accumulated loss to the extent of Rs.1693.86 crores. As on 31st March, 2000 the Authorised capital and paid-up capital of the Company remained at Rs.550 crores and Rs.387.67 crores respectively.

Sales & Marketing Performance

Domestic Sales

In the initial part of the financial year 1999-2000 the demand for steel continued to be subdued but towards the end of the financial year the trends were encouraging and the net sales realisation started improving. Sale of saleable steel was 245.2 thousand tonnes. Sale of Pig Iron was 332.2 thousand tonnes. Demand for Pig Iron showed improvement due to closure of some of the Units of the Secondary Producers resulting in reduction in availability. During April-September 2000, the sale of saleable steel and pig iron was 124.5 thousand tonnes and 129.3 thousand tonnes respectively.

Exports

5562 MT of steel material was exported to Nepal and Bangladesh and 7000 MT of Pig Iron was exported to Bangladesh.

Human Resources Development

The Company continued to give great importance to the development of its human resources to improve efficiency and productivity. The manpower strength as on 31st March, 2000 and 30th September 2000, was 24724 (comprising 1207 executives and 23517 non-executives) and 24,267 (comprising 1172 executives and 23095 non-executives) respectively. During 1999-2000, Rs. 5 Crores was received through Grant-in-Aids from National Renewal Fund for implementation of Voluntary Retirement Scheme in IISCO. The fund has been fully utilised. 332 Contract Labourers were separated through Voluntary separation scheme funded by the Company during the year 1999-2000. Total amount paid was Rs. 1.21 crores. Scheduled Caste and Scheduled Tribe employees were 10.31 per cent and 1.18 per cent respectively of the total manpower as on 31.3.2000.

Welfare Measures

Company undertook various welfare measure like maintenance of houses, education for children, medical facilities, socio-cultural activities and other facilities and spent Rs.38.01 crores during the year.

IISCO-Ujjain Pipe & Foundary Company Limited

IISCO-Ujjain Pipe & Foundary Company Limited, a wholly owned subsidiary of IISCO, is a sick company and its production has been suspended since 27th January, 1993. The Hon'ble High Court of Calcutta had considered the opinion of Board for Industrial and Financial Reconstruction (BIFR) for winding up of the Company and by its order dated 10.7.97 directed that the Company be wound up. The Official Liquidator attached to Hon'ble Calcutta High Court has taken over possession of the Company. However, vide its Order dated 29th April, 1999, Hon'ble High Court, recalled its earlier order of winding up and BIFR was directed to consider a fresh scheme of rehabilitation of IISCO Ujjain. An appeal has been filed by IISCO on 21.5.99 before Divisional Bench of Hon'ble High Court, against the aforesaid Order of 29.4.99. Present status is that IISCO Ujjain is still under Official Liquidator and the matter is pending before the Hon'ble Calcutta High Court.

Maharashtra Elektrosmelt Limited

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

Financial Performance

During 1999-2000, the Company achieved turnover of Rs.169.26 crores. Due to increase in power tariff, raw material cost and sluggish market conditions, the company ended with a net loss of Rs. 16.10 crores. The turnover and Net loss of the Company during April-September, 2000 was Rs. 84.59 crores and Rs. 10.40 crores respectively. The Authorised and Paid-Up Share Capital of the Company as on 31.3.2000 was Rs.30 crores and Rs.24 crores respectively. SAIL's holding is approx. 99 percent of the paid-up capital.

Production Performance

The production of all grades of Ferro Alloys during 1999-2000 was as under :

	1999-2000(Tonnes)
High Carbon Ferro Manganese	43077
Silico Manganese	41131

Production performance:

(Tonnes)

2000-2001 (Apr.-Sept.)	Plan	Actual	Fulfillment(%)
High Carbon Ferro Manganese	22850	25966	113.64
Silico Manganese	20810	17539	84.28

Sales & Marketing Performance

In order to meet the challenges arising out of the new economic policies and further liberalisation in import, measures were taken by the Company to find markets outside SAIL under the policy framed "Strategy for Managing Change". The sale of different grades of Ferro Alloys during the year was 87694 tonnes as compared to 83236 tonnes in the previous year. Though there was severe competition and excess supply in the Ferro Alloys market, continuous efforts were made by the Company to sell its products to various customers and also finding new customers for disposal of its products.

Human Resources Management Review

The manpower strength as on 31.3.2000 and 30.9.2000 were 961 (148 executives and 813 non-executives) and 956 (145 executives and 811 non-executives), respectively. The number of Scheduled Castes and Scheduled Tribes employees as on 31.3.2000 were 133 and 48 respectively. The industrial relations throughout the year remained normal. A total of 483 employees were trained during 1999-2000.

Total Quality and Industrial Safety

ISO-9000 Quality Assurance System certified by the third Party Accessor M/s. Lloyd's Register of Shipping, Mumbai was satisfactorily maintained for three years. It has been re-certified in August, 1999 for another three years upto 31st August, 2002 by the Certifying Body. The first surveillance audit after re-certification was also carried out by the third party Assessor in February, 2000 and the Company has got clearance for satisfactory maintenance of its Quality System. Operation of organisation in tune with Quality Assurance System has benefitted the Company for improvement in production process, waste management control and customer satisfaction to a great extent.

During the year under review in Industrial Safety the Company has been awarded the Prestigious National Safety Award from British Safety Council, London. SAIL Chairman's Silver Plaque for No Fatal Accident during the year 1998, Three Regional Safety Awards were received from Vidarbha Industrial Safety Committee for the year 1997-98 and National Safe Driving Award to 55 Drivers for the year 1998 from National Road Accident Prevention Society.

SAIL Power Supply Company Limited

The Company was incorporated with an objective to acquire, establish, operate and maintain generating stations and tie-lines, sub-station and main transmission lines concerned therewith and supply power to the steel plants of SAIL so as to maintain the status of captive power plants under the applicable government policy. The company was to take over assets covered under the Business Restructuring of SAIL relating to

power and steam generating facilities at Durgapur (CPP-II), Rourkela (CPP-II) and Bokaro (CPP-I & II alongwith steam generating facilities). Due to delay in the restructuring process, no asset has been transferred to the Company so far. As such, no commercial activity has been carried out by the company during the period. The company has, however, spent Rs.11,565/- on various miscellaneous matters. There being no income, loss for the period was also Rs.11,565/-. The activities for transfer of identified assets to the company are under way at SAIL.

Bhilai Oxygen Limited

The company was incorporated with an objective to acquire, promote, develop, establish, own, operate and maintain Oxygen plants of all types and capacities and manufacture, purchase and supply Oxygen, Nitrogen, Acetylene, Hydrogen and other industrial gases to the Steel Plants, other agencies and consumer etc. The Company was to take over assets covered under the Business Restructuring of SAIL relating to Oxygen Plant-II of Bhilai Steel Plant. Due to delay in the restructuring process, no asset has been transferred to the company so far. As such, no commercial activity has been carried out by the company during the period. The company has, however, spent Rs.11,810/- on various miscellaneous matters. There being no income, loss for the period was also Rs.11,810/-. The activities for transfer of identified assets to the Company are under way at SAIL.

Introduction

Visakhapatnam Steel Plant (VSP) is the first shore based Integrated Steel Plant located at Visakhapatnam in Andhra Pradesh. The plant was commissioned in August 1992 with a capacity to produce 3 million tonnes per anum of Liquid Steel. The Plant has been built to match international standards in design and engineering with the State-of-the Art Technology, incorporating extensive Energy Saving and Pollution Control Measures. VSP has an excellent layout, which can be expanded to over 10 mtpa capacity. Since its commissioning, within a short period of time, the plant achieved high levels of performance in production and technological norms. VSP has emerged as a good corporate citizen and has contributed its mite for the development of the region. Right from the year of its integrated operation, VSP established its presence both in the domestic and international markets with its superior quality of products. The plant has been awarded a certificate of ISO 9002, covering all the processes.

Financial Performance

The financial performance of VSP has not been satisfactory due to historical reasons and also due to sluggish market conditions in the domestic and international market. Inspite of cost cutting exercises and improved techno-parameters and stress on marketing, VSP registered a cash loss of Rs. 130 crores during the year 1999-2000. During April-September, 2000, VSP registered cash profit of Rs.29 crores (Provisional) against the target of Rs.45 crores.

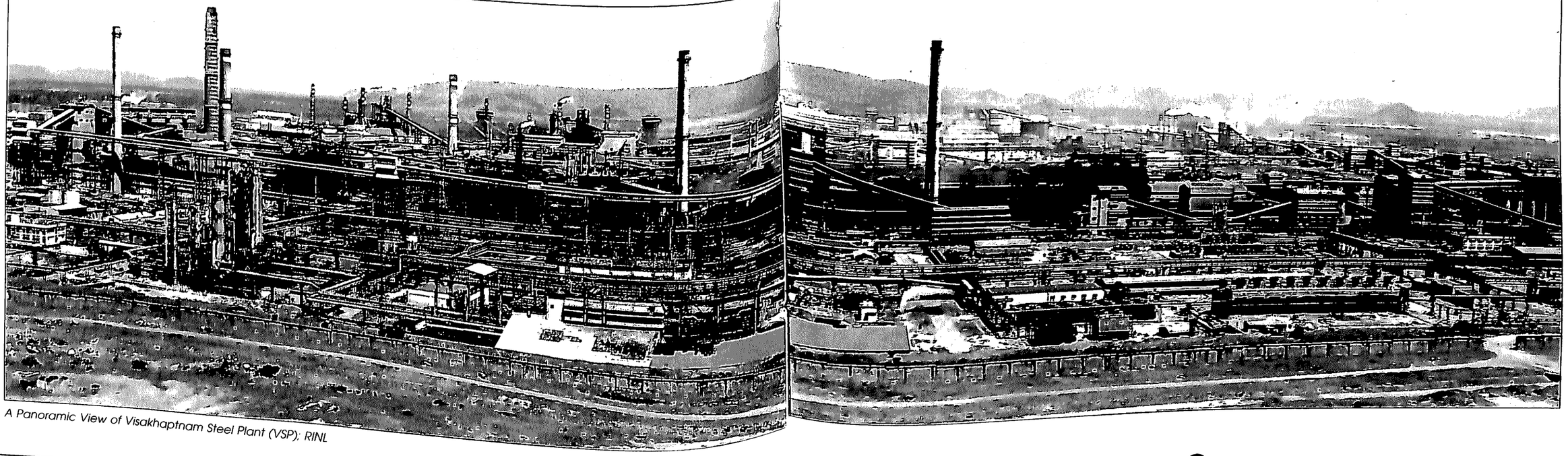
Energy Conservation

The energy consumption for the last two years is as shown under:

Unit: G.Cal. of Liquid Steel.

Year	Plan	Actual
1998-99	7.6	8.17
1999-2000	7.6	7.51
2000-2001 (Apr.-Sept)	7.6	7.49

Implementation of various Energy Conservation measures resulted in steady improvement in techno-economic indices as under:



A Panoramic View of Visakhaptnam Steel Plant (VSP); RINL

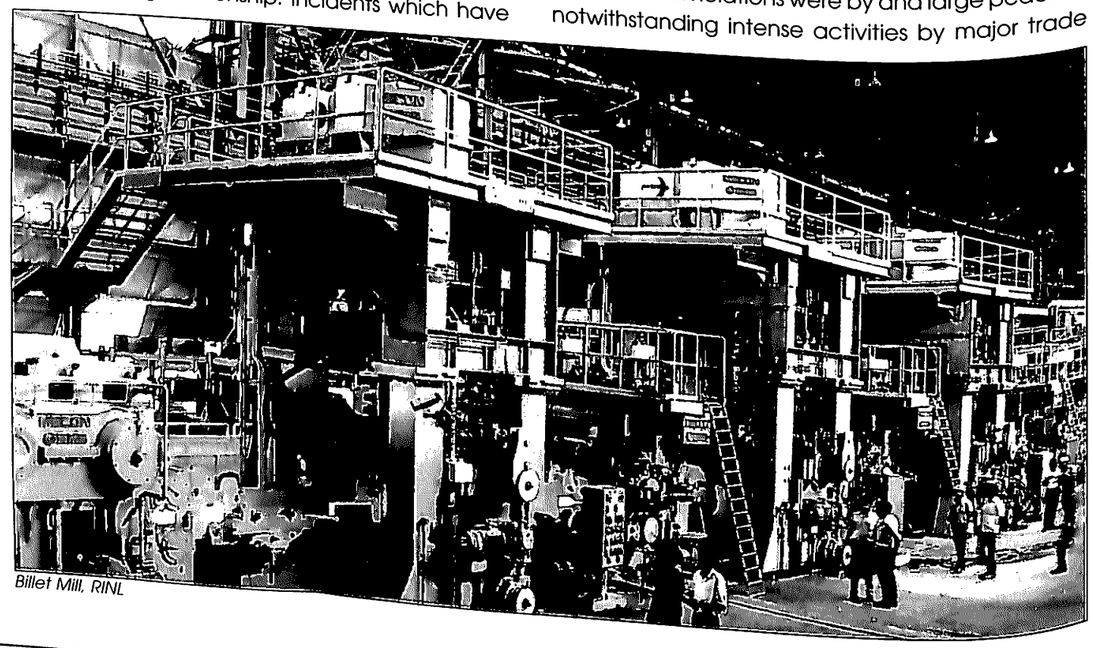
Item	1998-99	1999-2000	2000-01 (Apr-Sept)
Specific Heat Consumption (M Cal/ton)			
Sinter Plant	62	57	52
Billet Mill	578	520	515
Bar Mill	54	37	27
Wire Rod Mill	363	323	279

Industrial Relation

The overall industrial relations scenario remained peaceful throughout the year despite the environment being changed with intense union activities on the agenda of "Save VSP". There was no adverse impact on production. Consequently, the Labour Productivity stood at 192 tons / man year with an impressive upward trend and it was an all time record of 221 tons/man year during March, 2000.

Open interaction sessions on Man-Management with Line Managers and several rounds of discussions with the unions and Steel Executives Association were held to emphasis the need for a better working relationship. Incidents which have the potential for IR problems both of regular employees and the contract labour were defused by timely intervention of Personnel Department. To curtail absenteeism and ensure optimum availability of manpower on the shopfloor, a Daily Attendance Recording System (DARS) was introduced from 1.4.1999. Since then, the system has been working smoothly. The total man days lost during the period 1999-2000works out 13,447 days which was mainly on account of participation of non-executive employees in One Day Token strike on 2.2.2000.

During the period April-September, 2000, also Industrial Relations were by and large peaceful notwithstanding intense activities by major trade unions on the agenda of "Save VSP". During the first half of 2000-01, 10820 man days were lost mainly due to participation of Unions in a one day strike on 11.5.2000 in response to the nation-wide call given by CPSTU affiliated Unions.



Billet Mill, RINL

NATIONAL MINERAL DEVELOPMENT CORPORATION LIMITED (NMDC)

GENERAL

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

IRON ORE

PRODUCTION

During 1999-2000, NMDC produced 13.57 Million Tonnes of Iron Ore. During the year 2000-2001 (upto Sept.99), 6.77 million tonnes of iron ore has been produced.

EXPORTS

Exports of iron ore produced by NMDC is canalized through Minerals and Metals Trading Corporation (MMTC). Iron Ore export is mainly to Japan, South Korea and China. In 1999-2000 Export of Iron Ore stood at 6.6 Million Tonnes (including direct export of 0.1 million tonnes) valued at Rs. 442.75 Crores. In 2000-2001 (upto Sept.2000), NMDC exported 3.61 million tonnes (including direct export of 0.1 M.T) of iron ore valued at Rs.256.08 Crores approximately.

DOMESTIC SALES

During 1999-2000, Domestic Sales of Iron Ore was 8.55 Million Tonnes. In the year 2000-2001 (upto Sept.2000) sale of iron ore to domestic consumers was 4.43 million tonnes.

DIAMONDS

During 1999-2000, 40230 Carats of Diamonds were produced. In the year 2000-2001 (upto Sept.2000) the production was 19137 Carats.

FINANCE

The authorised share capital of the company is Rs.150 crores. The paid up equity share capital was Rs.132.16 crores. Government of India loans outstanding are Nil.

Financial Performance

The financial performance of the company for the year 1999-2000 and 2000-2001 (upto Sept.2000) are given below:-

(Rs. in crores)

Item	1999-2000	2000-2001 (upto Sept.2000)
Sales/Turnover	786.16	441.28
Gross Margin	241.15	150.24
Profit/loss before tax	207.72	133.07

Disinvestment Of Shares Of NMDC

The Government of India had disinvested shares of NMDC for the first time in the year 92-93. A total of 21.30 lakh shares representing 1.61% of the paid-up capital has been disinvested. 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. During the year 1997-98, 5,154 shares of Rs.10/- each have been disinvested in favour of the employees of the Corporation at the price of Rs.71/- per share. In the year 99-2000 & 2000-2001 (upto Sept.2000) no disinvestments of shares were done.

Operating Results

During 1999-2000, the company earned a profit (before Tax) of Rs.207.72 Crores and in the year 2000-2001 (upto Sept.2000) the Company earned a profit (before tax) of Rs. 133.07 crores.

Recognition/Awards In 2000-2001

Received Coal India Award for the Organisation from Indian Institution of Industrial Engineering on 29.09.2000. Shri P.R. Tripathi, CMD, NMDC received the prestigious Manager of the Year-2000 Award from Hyderabad Management Association on 24.06.2000. Bailadila-14/11C Project received Sitaram Rungta Memorial Social Awareness Award from Hon'ble Union Minister for Mines and Sports on 26.7.2000.

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 meeting of the Joint Councils takes place regularly and follow up action taken.

CAPITAL SCHEMES

A) Bailadila-10/11A

Govt. of India approved the scheme of developing deposit-10/11A with a estimated capital cost of Rs.430.50 crores including foreign exchange component of Rs.18.61 crores. Project Implementation has been taken up and Equipment required for construction and mine development which were ordered have arrived. These are deployed at Deposit-11A suitably for mine development work. M.P.Govt. while giving the final forest clearance stipulated in the letter that orders of Hon'ble Supreme Court have to be complied. As per the orders of Hon'ble Supreme Court dated 25.2.97, no tree can be cut in Bastar District even with the permission from Local authorities. In this aspect NMDC filed an interlocutory application in the Hon'ble Supreme Court. Finally, the Hon'ble Supreme Court has accorded permission for tree filling on 21.12.99 and thereafter the then MP State Forest Department has given clearance in 3rd week of February, 2000. Due to delay in getting the clearance from the Hon'ble Supreme Court, the project has been delayed. The construction is likely to be completed by July, 2002.

B) Ultra Pure Ferric Oxide Plant, Visakhapatnam

NMDC's Board of Directors in Feb. 95 approved setting up an Ultra Pure Ferric Oxide Plant at Visakhapatnam, A.P. at a cost of Rs.45.98 crores. The construction of this plant is over and is under trial runs. The plant is likely to be commissioned by end of December,2000.

C) Panna Diamond Mining Project-Expansion schemes

The expansion of Panna Dimond mines to produce 84,000 carats per annum has been approved by the board in its meeting held on 24.2.98 at a total cost of Rs.39.67 Crores, which includes present asset value of the project amounting to Rs.15.09 crores and a foreign exchange component of Rs.2.29 crores. The plant is under trial runs.

D) NMDC Iron & Steel Plant(Romelt Process) at Geedam,Dantewara

The feasibility report for setting up of a commercial pig iron plant of 0.30 MTPA capacity utilising iron ore slimes from Bailadila mines based on Romelt technology was approved by the NMDC Board on 19.12.98 at an estimated capital cost of Rs.298.68 crores including foreign exchange component of Rs.34.89 crores. An agreement was made with M/s. Romelt Sail India Ltd.,(RSIL) and M/s.Amet Ltd., Russia for basic engineering and grant of sub-licence for setting up of ROMELT Pig Iron Plant, on 19.1.99 and subsequently amended on 25.5.99.

The unit has since been registered with the Secretariat of Industrial Assistance (SIA), New Delhi possession of land and other administrative clearance are being obtained.

HMS Plant of Panna Diamond Mines of NMDC.

E) Tertiary Crushing Plant at Bailadila Deposit-14/11C

NMDC Board had approved the setting up of Tertiary Crushing Plant at Bailadila Deposit-14/11C, with a capital investment of Rs.31.47 crores for 100% production of calibrated lump ore. The construction period of the project is 24 months i.e. to be completed by March, 2001. Action has been taken up on various fronts to complete the project in time.

NEW BUSINESS DEVELOPMENT

A. Silica Sand Project, UPSMDC

All the formalities for taking over the plant at Lalapur have been completed. Agreements have been signed for transferring the lease and assets. Mining Lease has been transferred to NMDC. Action is on hand to start mining activities, commissioning of plant and to carryout trial runs.

B. Exploration of Gold in Madagascar

NMDC Board of Directors approved the Madagascar Gold Investigation work to be carried out in two phases in association with NGRI. A team of NMDC officials were deputed to Madagascar for registering the WOS (wholly owned subsidiary) company and the same has been registered & incorporated with the name National Mineral Development Corporation-SARL in the Republic of Madagascar.

Interim report of the collaborative gold exploration work on Boforona and Antalaha regions of Central and North Madgascar during 1999 has been prepared. Further exploration work at Antalaha is in progress. Presently, work is going on in three areas. Samples collected have been received in Tana and are under processing at OMNIS and National Laboratory. Magnetic survey and self-potential is also progressing along the profile lines. Arrangements are being made to hire a plot for setting up of laboratory facilities at Antalaha. Trenching work is progressing.

C. Exploration/Exploitation of Diamonds/ Gold in Namibia,Angola,Botswana and Tanzania

NMDC has obtained three Prospecting Licences for Gold in the United Republic of Tanzania. A team for reconnaissance survey and to prioritise the areas, has returned on 29.9.2000.

A view of silica Sand Project at Lalapur, U.P., NMDC

MANPOWER POSITION

As on 30th Sept 2000 the manpower position in different units of the company is as follows:

Group	Total No. of Regular Employees	No. of S/C Employees out of col.2	No. of S/T Employees out of col.2	No. of OBC Employees out of col.2
A	1025	116	34	55
B	1236	140	107	42
C	2579	490	637	100
D	1773	387	390	163
Total	6613	1133	1168	360

Energy Conservation

Consumption of Energy per tonne of Iron Ore Excavated was as under

A) Electrical Energy - KW / Tonne of excavation

Year	Target	Actual
1998-99	2.22	2.24
1999-2000	2.22	2.16
2000-01 (upto Sept.,2000)	2.02	2.18

B) Diesel Consumption - Ltrs./Tonne of Excavation

Year	Target	Actual
1998-99	0.28	0.30
1999-2000	0.29	0.29
2000-01 (upto Sept.,2000)	0.27	0.29

PROJECTS IMPLEMENTED DURING 2000-2001 (upto Sept.2000)

a. Extensive use of Fluorescent Lamps for all industrial uses.

b. Installation of PF improving Capacitors and maintenance of PF at + 0.90.

c. Installation of Non-Conventional Energy Sources like Solar Panels for water heating and cooking purposes in Guest House.

d. Reduction in domestic energy consumption.

e. Reduction of idling time of dumpers.

f. Recycling of Lubricants.

g. Formulation of Energy Audit Teams and carrying out energy audits.

h. Award schemes for best Suggestions.

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

During the year 2000-2001 (upto Sept.2000) the company produced 2.87 Lakh tonnes of pellets and despatched 2.79 lakh tonnes of pellets. The operations of the company for the period April to Sept.2000 have resulted in a cash loss of Rs.843 lakhs. The accumulated losses have thus stood at Rs.8571 lakhs.

Jammu & Kashmir Mineral Development Corporation Limited (J&KMDC) as a subsidiary company of NMDC was incorporated on 19.5.1989 for development of various mineral projects 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 Dead Burnt Magnesite (DBM) plant of 30,000 tonnes per annum was sanctioned by Govt. of India in Nov.'92. But, the project construction could not start since the viability of the project was badly affected due to reduction in customs duty on DBM in 1993-94 and further fall in the International price. NMDC intimated this to the Ministry of Steel on whose direction, further activities of the project were kept in abeyance pending establishment of the economic viability of the project. This matter was discussed in detail and it was felt that the project will not become economically viable and therefore it was decided to close the project in its original form for which Government approval was sought.

Subsequently, with the improvement in market situation, it was decided by JKMDC Board in 1997, to develop the project in a modified form in three phases as given below:-

Phase-I- Develop the deposit for a production of 25,000 MT of saleable magnesite in the first year at a capital cost of Rs.451.82 lakhs.

Phase-II- Expand the production to 50,000 MT of saleable magnesite per annum subject to availability of market from the second year onwards.

Phase-III- Expand the mine capacity to approx. 1 lakh tonnes and set up a 30,000 TPA DBM plant subject to economic viability based on the then prevailing market price for DBM.

The Board of Directors of J&KMD and NMDC have also agreed to the above proposal and Ministry of Steel has been informed accordingly. Works are taken up in the project in accordance with the above modified plan to start Phase-I.

The 7.5 Kms. Approach road is now open for movement of vehicles. Mining equipment purchased are under use for bench development. Amendments from the State Govt. permitting despatch of raw magnesite outside the State has already been received and 10 tonne sample have been despatched to NMDC's R&D Labs for testing.

KUDREMUKH IRON ORE COMPANY LIMITED (KIOCL)

General

The Kudremukh Iron Ore Company Limited (KIOCL), 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.

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, 1981. The plant went into commercial production in 1987 and is now exporting both Blast Furnace and DR grade Pellets to many countries including Japan, Australia, Iran, China, Taiwan, etc., and also to domestic Sponge Iron units such as Vikram Ispat, Ispat Industries, Ispat Matallics India Ltd and Jindal Vijayanagar Steel Ltd.

Production

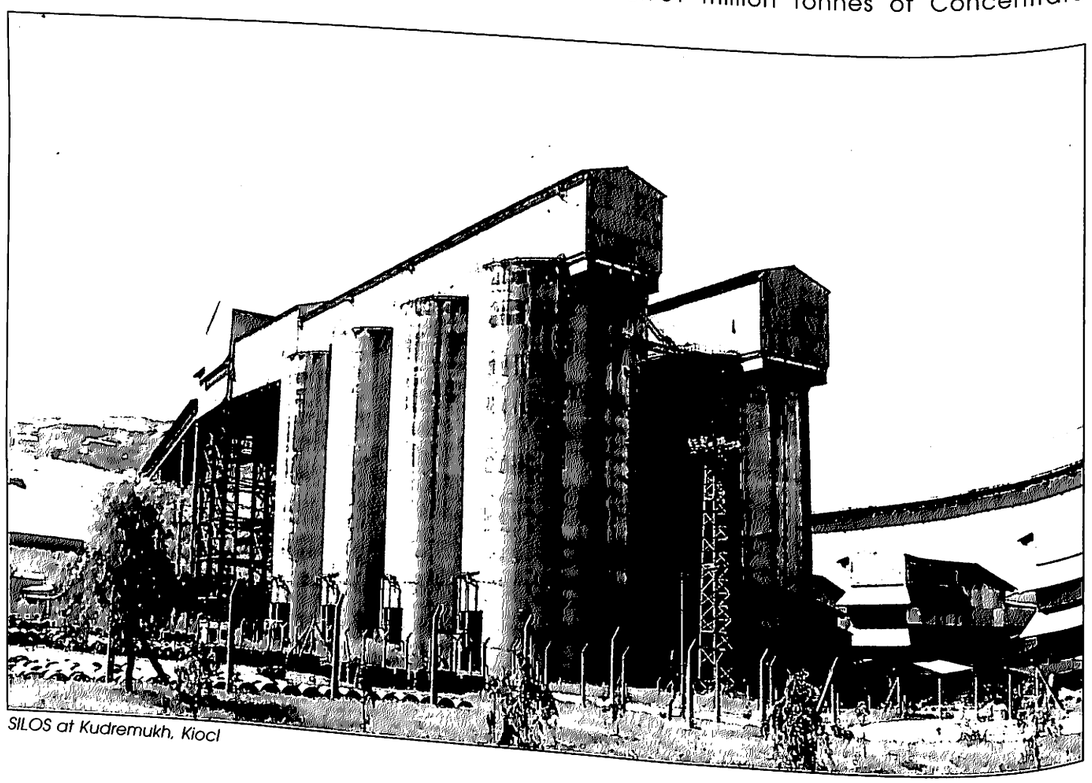
A target of 5.5 million tonnes and 3.6 million tonnes is set for production of Iron Ore Concentrate and Iron Ore Pellets respectively during the year 2000-2001. As against a target of 2.740 million tonnes of Iron Ore Concentrate fixed for the period April to September, 2000, the actual production was 1.798 million tonnes which represents 66% target fulfilment. Production of Pellets during the period April to September, 2000 was targetted at 1.700 million tonnes and the actual production during this period was 1.002 million tonnes representing 59% target fulfilment. In addition to this, 20084 tonnes of

Pellet Fines were generated during the said period.

There is shortfall in production of both Iron Ore Concentrate and Iron Oxide Pellets upto September, 2000 compared to the targets. The reason for shortfall is that the Company could not operate the Plant and other facilities from 18-07-2000 to 18-09-2000. A leakage in slurry pipeline, which transports Iron Ore Slurry from the Concentrate Plant to the Mangalore Port, was noticed on 18-07-2000. Repairs to the slurry pipeline took two months. Initially, the repair works had to be undertaken manually. Incessent rains and frequent land slides caused delay in completing the work. Since the stretch of the pipeline where leakage had occurred is situated in the Kudremukh National Park, permission of the State Forest Department had to be obtained for marching earthmoving equipment and cutting of trees. After vigorous followup and lot of pursuasion, the State Government gave its clearance only on 21-08-2000, after which, the repair work was completed only on 17-09-2000 and the Concentrate Plant commenced production on 18-09-2000. Due to non-availability of Pellet feed, the Pellet Plant was also closed upto 21-09-2000.

Exports:

During the year 1999-2000, total shipments were 6.054 million tonnes comprising 2.819 million tonnes of Concentrate and 3.235 million tonnes of Pellets. For the year 2000-2001, a target of 1.9 million tonnes of Concentrate and 3.6 million tonnes of Pellets has been fixed. As against a target of 0.957 million tonnes of Concentrate and 1.735 million tonnes of Pellets fixed for the period April,2000 to September,2000, actual shipments were 0.751 million tonnes of Concentrate and 1.030 million tonnes of Pellets representing 79% and 59% of the relevant targets respectively. In addition to this, 31054 DMT of Pellet Fines were shipped during the first half of 2000-2001. As production of Concentrate Plant and Pellet Plant were stopped from 18-07-2000, due to slurry pipeline leakage, and since all the stock of material was exhausted, no shipment of either Concentrate or Pellets was made in August, 2000 and after commencement of production in September, 2000, only one shipment of Pellets was made to China in September. The shortfall in Export of Concentrate and Pellets is on account of above reason.



SILOS at Kudremukh, Kiocl

Total sales for the year 1999-2000 were Rs.620.79 crores for the first time crossing Rs.600 crores mark. Estimated sales for the year 2000-2001 is Rs.649.79 crores. As against a target of Rs.315.40 crores fixed for the period April,2000 to September, 2000, actual sales were Rs.213.02 crores representing 68% of the target.

The Export earnings during the last five years from 1995-96 and upto September,2000, during 2000-2001 are detailed below:

(Rs. in lakhs)

Year	Concentrate	Pellets	Total
1995-1996	20676	27172	47848
1996-1997	21900	27359	49259
1997-1998	23310	36081	59391
1998-1999	18407	36369	54776
1999-2000	20731	41348	62079
2000-2001 (Upto Sept.2000)	5741	15560	21301

FINANCIAL PERFORMANCE:

An overview of the performance of KIOCL during the year 2000-2001 upto September, 2000 together with actuals for the previous three years, is indicated below:-

(Rs. In lakhs)

Particulars	1997-98	1998-99	1999-2000	2000-2001 up to Sep. 2000
Total value of Sales	59391	54776	62079	21302
Gross Margin .	14641	8048	12138	3025
Profit after Tax.	8182	1853	5851	253
Inventories (excluding finished stock).	11763	10708	9992	11024

Manpower Position

As on 30th September,2000, the total number of employees in KIOCL were as follows:-

Group	Total No. of employees including SC,ST as on 30th Sep. 2000	SC in position	ST in position
'A'	449	54	12
'B'	299	13	01
'C'	1355	207	55
'D'	170	37	23
'D' (Sweepers)	43	35	02
Total	2336*	346	93

* Includes 32 employees deployed from KIOCL to KISCO.

Workers' Participation in Management:

The Works Committee 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.

Voluntary Retirement Scheme

The Company had a voluntary retirement scheme ever since its inception. A revised voluntary

retirement scheme approved by the Board of Directors in September 1999 was in operation till 30th June 2000. During the operation of this scheme, 127 employees applied seeking Voluntary Retirement. However, keeping in view the requirement of the Company, 95 employees were released. The request of 24 employees was not considered and 8 employees were allowed to withdraw their request. The details of 95 employees who were allowed Voluntary Retirement are as under:-

	Executives	Supervisions	Non-Executives	Total
SC	1	0	9	10 (2 are Ex-servicemen)
ST	0	0	2	2
Ex-servicemen	1	0	17	18
Women	1	4	2	7
others	20	4	34	58
Total	**23**	**8**	**64**	**95**

The amount paid to the 95 employees in respect of VRS and Settling Allowance is Rs.4.31crores excluding Rs.4.58 crores paid in respect of PF and gratuity (Statutory payment).

Energy and Resource Consumption

A. At Mangalore :

PORT FACILITIES :

Power consumption has been brought down from 5.51 KWh per tonne to 5.07 KWh per tonne by operational controls like optimising the production rate ; optimising the loading rate ; during Plant idling hours service air taken from Pellet Plant for emergency purpose(i.e., for loading side sample cutter and wear and seal valves etc.) avoiding running of instrumentation air compressors of 250 KWH capacity; reduced fire water leakages by which during plant idling hours only one gland water pump (of 110 KW) could be kept running instead of two pumps earlier used and wherever possible Concentrate feeding is done directly to Pellet Plant (by which double handling of Concentrate is eliminated i.e., storing in the shed first and reclaiming to feed to Pellet Plant). In an endeavour to reduce energy consumption in the Filter Plant at Mangalore, the feasibility of use of new technology of filteration in place of conventional Disk filters were explored. This is under the active consideration of the Company to reduce energy consumption. Further by using improved disk filter bags, throughput per filter increasing is also under active consideration in order to reduce the energy consumption.

Crude ore being fed to the Crusher, KIOCL

PELLET PLANT:

By improving the quality of Bentonite, the Bentonite consumption in Green Ball preparation has been reduced from 1.2 Kg/Ton to 0.9Kg/Ton of Pellets. The total consumption of Bentonite per year was reduced by 10,500 tonnes with the result that the quality of Pellets improved by 0.2%, SiO_2 less. The consumption of Furnace oil has been reduced by 15.1 Ltrs/Ton to 14.00 Ltrs/Ton i.e. 7.28% reduction, by improving the efficiency of the burner in the process of Pelletization. Due to the oil consumption reduction, the heat consumption has been reduced from 1,43,000 K.Cals/Ton to 1,37,000 K. Cals/Ton decreasing 4.2% further.

B. CONCENTRATE:

Fuel	Total Consumption			Consumption per tonne of concentrate (1999-2000)
	1997-98	1998-99	1999-2000	
HSD (KL)	8543.1	6980.2	7626.8	0.46 Ltr/Ton
ELECTRICITY (Million units)	437.79	361.1	410	1.31 Units ton

Achievement in reduction of Electrical energy consumption

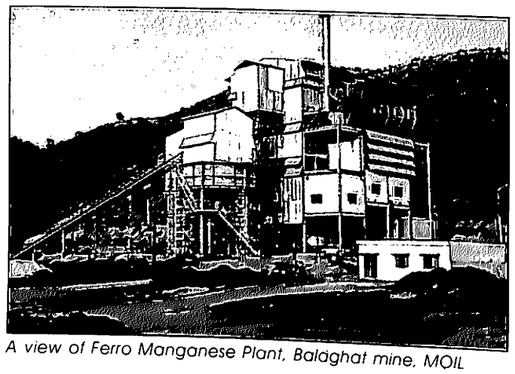
Energy efficient equipment like variable frequency drives, energy efficient illumination system and soft starters are being used. Transformer load management is one of the important energy conservation measures still being continued. Process modifications are being carried out to reduce energy consumption in plant like training line process modification to reduce electrical energy consumption; and variable frequency drives are installed for New Flotation System.

MANGANESE ORE (INDIA) LIMITED (MOIL)

Manganese Ore (India) Limited, (MOIL) was established in 1962. It is the largest producer of Manganese Ore in India. At the time of inception, 49% of its shares were held by the Central Province Manganese Ore Co. Ltd. (C.P.M.O.), and the remaining 51% in equal proportion by Govt. of India and the State Govt. of Madhya Pradesh and Maharashtra. Subsequently, in 1977, the shares held by C.P.M.O. in MOIL were acquired by Govt. of India and MOIL became a wholly owned Govt. Company with effect from October, 1977. As on 31.03.2000, the Govt. of India held 81.57% shares in MOIL with State Governments of Maharashtra and Madhya Pradesh holding 9.62% and 8.81% shares respectively.

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

- High Grade Ores for production of Ferro Manganese.
- Medium Grade Ore for production of Silico Manganese



A view of Ferro Manganese Plant, Balaghat mine, MOIL

- Blast Furnace Grade Ore required for production of Hot Metal, and,
- Dioxide Ore, which goes into production of Dry Battery Cells.

MOIL has set up a plant based on indigenous technology to manufacture Electrolytic Manganese Dioxide (EMD). This product is also used for the manufacture of dry battery cells. EMD produced by the Company is of good quality and well accepted by market.

Finance

Authorised Capital of the Company is Rs. 30.00 Crores and paid-up Capital was Rs. 15.33 Crores as on 31.10.2000.

Performance

Operational & Financial Results

The Physical & Financial Performance of the Company for the last 3 years i.e. 1997-98, 1998-99, 1999-2000 is given below :

		1997-98	1998-99	1999-2000
1.	Production			
	a) Manganese Ore (Thousand tonnes)	661	614	652
	b) E.M.D. (tonnes)	750	764	761
	c) Ferro Manganese (tonnes)	-	2690	9787
2.	Turnover (in Crores)	112.80	118.27	134.11
3.	Profit before tax (Rs. Crores)	23.76	20.03	17.21
4.	Reserves (Rs. Crores)	55.18	65.53	73.58
5.	Net Worth (Rs. Crores)	70.43	80.78	88.83
6.	Book Value per share (Rupees)	459.94	527.40	579.91
7.	Earning per share (Rupees)	92.69	89.43	76.52

Performance of the Company in 2000-2001 (upto Oct. 2000) is as under :

	2000-2001 MOU Target (Full year)	2000-2001 Actual upto (31.10.2000)
1. Production		
a) Manganese Ore (Thousand tonnes)	650	345
b) E.M.D. (tonnes)	900	417
c) Ferro Manganese (tonnes)	9200	6260
Turnover (Rs. in Crores)	125.14	81.20
Profit before tax (Rs. in Crores)	12.60	9.22

Marketing

Due to slow down in the Steel Sector, consumption of Ferro Manganese in the country has come down, thereby affecting the domestic sale of Manganese Ore. In order to reduce inventory, Company has made efforts to export the Ore. This year the Company has exported more than 42,300 tonnes till October, 2000.

Conservation of Energy

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

Capital Schemes/Projects

MOIL is planning/implementing the following projects/schemes :

Electrolytic Manganese Dioxide Plant EMD:

The 700 TPA Capacity Electrolytic Manganese Dioxide (EMD) Plant set-up as a part of diversification plan is working satisfactorily. The quality of the product is of international standard. The capacity of this plant has been expanded by 200 TPA considering the good demand in the domestic market. The company has received ISO-9002 Certification for its EMD Plant.

New EMD Plant :

The work of preparing project report was awarded to MECON who have submitted their report. The same is being studied by the Company. However, due to recession in the industry, this report is being re-examined.

Ferro Manganese Plant - Balaghat Mine :

The plant was Commissioned in October, 1998, and various technical parameters were stabilized. During 1999-2000 the Plant produced 9787 MT HC Ferro Manganese as against 2690 MT last year thus achieving 97.87% of capacity utilization. The sales escalated to 8883 MT against 1647 MT last year. The quality is one of the best in the country and firmly established in the market. Inspite of rising prices of coke and power & comparatively low prices of Ferro Manganese, the techno-economic norms were improved by constant monitoring. Specific consumption norms in respect of Manganese Ore, Coke, Dolomite Electrode paste and other consumables per tonne of HC Ferro Manganese could be brought below targeted consumption pattern by continuous effort to improve the technology. Further, measures of cost reduction are under implementation. The Plant has started making a turn around and generated Rs. 60.79 lakhs profit before tax in 1999-2000.

Captive Power Plant :

The Company has proposed to set-up a Captive Power Plant at Balaghat Mine but due to increase in the price of Diesel and the possibility of further increase in future, the proposal regarding installation of DG Set has been dropped. The Company is now exploring the possibility of getting cheaper power from other CPP owners who have been granted permission by MPEB to sell power by wheeling.

Cost Reduction Plans

The Company has introduced following cost reduction measures :

- Proper manpower planning and introduction of Voluntary retirement Scheme (without replacement) to reduce surplus man power.
- Judicious mechanisation of various mining operations.

Workers' participation in Management

The Company has set-up a mechanism for the association of workers representatives from the grass root level to the Apex Council which functions at the Corporate level, with workers and Management representatives under the Chairmanship of the Chairman-cum-Managing Director to review and find solutions to major problems. There is 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 employees.

Social Commitment

MOIL had adopted a Tribal Village viz. Gondi, close to Ukwa Mine in Madhya Pradesh. The Company has introduced a wide range of development activities such as repair of roads, construction of houses for homeless tribals, construction of school building to impart education to tribal children etc. as a part of their ongoing social welfare promotion scheme.

Personnel

The composition of the work force of the Company as on 31st October, 2000 was as under:

Group	S.C.	S.T.	O.B.C.	Others	Total
A	20	4	21	151	196
B	16	11	27	138	192
C	297	355	419	673	1744
D	1080	1644	2138	840	5708
Total	**1419**	**2014**	**2605**	**1802**	**7840**

Out of the total number of 7840 employees 882 are women.

MSTC LIMITED (MSTC)

INTRODUCTION

MSTC Limited (formerly known as Metal Scrap Trade Corporation Limited) was incorporated under the Companies Act, 1956 on 9th September 1964. The status of the Company underwent change in February, 1974 to that of a subsidiary of Steel Authority of India Ltd.(SAIL). In the year 1982-83, the Corporation was converted into a Government of India Company transferring the shares of SAIL to the President of India. It was the canalising agency for import of carbon steel melting scrap, sponge iron/hot briquetted iron and re-rollable scrap till February 1992. It was also the canalising agency for import of old ships for breaking, import of which was decanalised and put under OGL w.e.f. August 1991. Presently, the company undertakes disposal of ferrous and non-ferrous scrap arisings from integrated steel plants under SAIL/RINL etc. and disposal of scrap, surplus stores, etc. from other Public Sector Undertakings and Govt. Departments and also import of ferrous and non-ferrous scrap, coke, finished steel and petroleum products in competition with any other private trader.

CAPITAL STRUCTURE

The Company has an authorised capital of Rs.5 Crores and paid up capital is Rs.2.20 Crores as on 31.3.2000 of which approximately 90% is held by President of India and balance 10% is held by members of Steel Furnaces Association of India, and others. Paid up capital of Rs.2.20 Crores includes Bonus Shares issued in the year 1993-94 in the ratio of 1:1. Reserves and surplus as on 31.3.2000 has been Rs.52.96 Crores.

LOCATION OF UNITS

The registered and corporate office of the Company is located at Calcutta and it has four Regional offices at Calcutta, Delhi, Chennai and Mumbai, four branch offices at Visakhapatnam, Bhopal, Bangalore and Vadodara and three resident offices at Bokaro, Rourkela and Surat.

ORGANISATIONAL STRUCTURE

The Chief Executive Officer of the Company is the Chairman-cum-Managing Director who is assisted by three Chief General Managers and four General Managers.

ACTIVITIES

The Company has two major spheres of activities, i.e., International Marketing and Domestic Marketing.

DOMESTIC MARKETING

Company undertakes disposal of ferrous scrap and other secondary arisings generated in integrated steel plants and disposal of scrap, surplus stores, etc. from other public sector enterprises and Govt. Departments including Ministry of Defence. Company is now endeavouring to enter into trade of finished, semi-finished steel products. The Company also counts a few private sector undertakings amongst its clients.

INTERNATIONAL MARKETING

After decanalisation in February, 1992, the demand for imported scrap was considerably reduced in the country. The company has, therefore, enlarged its import basket and it now undertakes import of scrap on behalf of large industrial houses on back to back order basis and other items such as petroleum products, lam coke, superior kerosene oil, furnace oil, ferro-alloys, slab-end cuttings, DR Pellets, non-ferrous and ferro alloys etc. as per the needs of actual users in competition with other private parties.

SUBSIDIARY OF MSTC

MSTC plays yet another role of a holding company of FERRO SCRAP NIGAM LIMITED (FSNL) whose 60% share are held by MSTC and 40% by Harsco Corporation, USA. FSNL is engaged in salvaging and processing of scrap for recycling in the SAIL Steel Plants and elsewhere.

PERFORMANCE DURING 1999-2000

DOMESTIC MARKETING

Volume of sales achieved during the year 1999-2000 was Rs.565 Crores against a target of Rs.565 Crores and Rs.486 Crores during the previous year. Generation of scrap from integrated steel plants have come down drastically due to modernisation of Steel plants and due to cash crunch. Steel plants are selling directly to customers at a heavy discount and also recycling their own scrap to the maximum extent possible. Against all odds in this area, MSTC could achieve the target and envisage to improve performance by tieing up with manufacture for marketing their product in domestic and international markets.

INTERNATIONAL MARKETING

In the area of International Marketing total volume of sales achieved during the year 1999-2000 was Rs.285 Crores as against a target of Rs.100 Crores and Rs.82.57 Crores achieved in the previous year.

MARKETING SCENARIO : 2000-2001

1) DOMESTIC MARKETING

Volume of sales achieved during the period April-September, 2000 was Rs.263.68 Crores against a target of Rs.235 Crores and Rs.232.65 Crores achieved during the corresponding period last year. The achievement is 112% of the target and 113% of the corresponding period last year.

In the area of Domestic Marketing, a target of Rs.590 Crores was fixed for the year 2000-2001. It was anticipated that MSTC will be able to do some business in finished steel. However, despite best efforts it has not been possible to do any business in finished steel till date. The prospect of business in various steel plants is also coming down primarily because of fall in the disposal of scrap. It is, however, expected that disposal from defence sector will be more than the target for the year 2000-2001. MSTC has also tapped most of the PSUs for sale of their scrap and unserviceable/surplus items and is now pursuing with them for sale of their finished products. It has also entered into a purchase and sale contract with DSP on back to back basis with no risk to MSTC. It has also signed an MOU with KISCO a joint venture company of KIOCL, MSTC and MECON for selling their pig iron. If this trend continues, it is expected that MSTC will achieve the target of domestic marketing of Rs.590 Crores during 2000-2001.

INTERNATIONAL MARKETING

Volume of imports achieved during the period April-September, 2000 was Rs.165.95 Crores as against a target of Rs.100 Crores and Rs.89.35 Crores achieved during corresponding period last year. MSTC has imported SKO of around 5800 tonnes, HR Coils 4305 tonnes, Billets 2528 tonnes, during April-September, 2000. Due to low demand in secondary steel sector, MSTC had to

diversify its import basket and import ferro alloys steel items, scrap and petroleum products based on the back to back arrangement with actual users and traders of commodity. During the year MSTC has imported on behalf of large industrial houses such as ESSAR, ISPAT, MUKAND etc. for their imported raw material other than small buyers. It is hoped that the target of Rs.200 Crores set for the year 2000-2001 will be achieved.

MOU WITH GOVERNMENT

During the year 1999-2000, MSTC has been awarded "EXCELLENT" rating by DPE on MOU Performance evaluation based on provisional figures of 1999-2000.

PHYSICAL AND FINANCIAL PERFORMANCE

The physical and financial performance for the years 1998-99, 1999-2000 and 2000-2001 (upto September, 2000) are given below :

(Rs. in Crore)

	1998-99	1999-2000	2000-2001 (upto Sept.'2000) (prov.)
Financial Performance			
Turnover	104.53	258.89	216.74
Operating profit(before interest depreciation and other provision)	5.00	6.72	2.82
Profit before tax	3.06	5.73	2.600
Physical performance			
International Marketing			
Quantity('000 tonnes)	148.48	455.22	314.07
Value(Rs. in crore)	82.00	285	165.95
Domestic Marketing (Rs. in crore)	486.00	565	263.68
Total volume of business(Rs. in crore)	568.00	850	429.63

For the year 1999-2000 the Company declared and paid a dividend of 33% on the paid-up Capital, which was the highest % age amongst PSUs under Steel Ministry.

Ferro Scrap Nigam Limited (FSNL)

INTRODUCTION

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

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, Durgapur & at Ispat Metallics India Ltd., Dolvi.

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 during Iron & Steel making and also in the Rolling Mills.

In addition, the Company is also providing Steel Mill Services such as Scarfing of Slabs, Handling of BOF Slag, etc.

Organisation Structure

The Chief Executive Officer of the Company is the Managing Director who normally functions under the guidance of a part-time Chairman and a Board of Directors. The Managing Director is assisted by one CGM & eight GMs.

LOCATION OF UNITS

The Corporate office is situated at Bhilai and the Corporation has seven field units situated at Bhilai, Burnpur, Rourkela, Bokaro, Visakhapatnam, Durgapur and Dolvi.

PHYSICAL AND FINANCIAL PERFORMANCE

Physical Performance:

The production performance of FSNL for the last two years and for the year 2000-2001 (upto 30/9/2000) is given below: -

Item	1998-99	1999-00	2000-2001 30/9/2000 (Prov.)
Recovery of scrap (Lakhs M.Ts)	14.98	15.05	7.23
Market Value of Prod. (Rs.in Crores)	659.28	662.20	318.11

The Production performance of the Company for the half year ending 30th September'2000 is 7.23 M.T compared to 7.06 M.T. for the same period during 1999-2000, thereby achieving a growth of 2.37% over last year.

General

Financial Performance:

(Rs.in lakhs)

Item	1998-99	1999-00	2000-2001 30/9/2000 (Prov.)
Total Turnover (i.e. Service charge realised including misc. Income, etc.)	7135.25	8593.79	3793.71
Gross Margin Before Int.& Dep.	2401.00	2570.46	1138.11
Int.& Dep.	738.01*	645.64	453.72
P.B.T.	1662.99	1924.82	684.39

* Includes Rs.58.82 lakhs towards repayment of interest on loan for the moratorium period.

SALES REALISATION:

Sales realisation per metric tonne for the last two years and the estimated sales realisation for the year 2000-2001 upto 30th Sept.'2000 are indicated below:

(In Rs.)

Item	1998-99	1999-2000	2000-2001 30/9/2000 (Prov.)
Sales realisation per metric tonne	460.56	549.06	524.48

Employment Statistics

The employment statistics of the Company, including SC/ST as on 30/9/00 are given below:-

	Executives		Non-Executives		Total
	Male	Female	Male	Female	
Corporate Office	31	-	30	4	65
Rourkela Unit	21	-	195	3	219
Burnpur Unit	16	-	102	5	123
Bhilai Unit	21	-	235	1	257
Bokaro Unit	22	-	217	1	240
Durgapur Unit	19	-	148	3	170
Vizag Unit	20	-	203	2	225
Dolvi Unit	3	-	16	-	19
Total	**153**	-	1146	19	1318

Scheduled Castes/Tribes, Ex-Servicemen and Physical Handicapped Persons

Group	No fo Emplo-yees	SC		S.T.		Ex-Servicemen		Physically (otheropaedically Handicapped	
		Male	Female	Male	Female	Male	Female	Male	Female
A.	153	9	-	4	-	3	-	-	-
B.	294	16	-	3	-	-	-	-	-
C.	867	178	3	138	1	56	-	2	-
D.	4	4	-	-	-	-	-	-	-
E.	1318	207	3	145	1	59	-	2	-

TRAINING

A yearly plan for imparting training to the employees both Executives as well as Non-Executives is chalked out and the employees are imparted training through Internal as well as External agencies.

INDUSTRIAL RELATIONS & WORKERS PARTICIPATION IN MANAGEMENT

The Company is maintaining a cordial & healthy industrial relations in all the units. The grievances of the employees, if any, are duly discussed & sorted out by mutual discussions between the Management and the recognised Unions in the Joint Forum Committee's Meeting. All problems related to workers as well as company's business are discussed in the JFC meetings. This helps in getting mutual cooperation & understanding between the Management & the Unions.

FUTURE PROGRAMMES

FSNL is expanding its activities for scrap recovery and processing job to Private Sector/Joint Sector Steel Plants as per details given below:

a) ISPAT METALLICS INDIA LTD., DOLVI:

Long Term Agreement for processing of scrap and handling of slag at IMIL has been concluded and FSNL has commenced its operation on 12.7.2000. The units is likely to go into rated capacity by end of this year.

b) NEELACHAL ISPAT NIGAM LTD.:

The various techno-commercial terms and conditions have been concluded and the Agreement is likely to be signed by November, 2000.

MOU WITH GOVERNMENT

During the year 1999-2000, FSNL has been awarded 'Very Good' rating by DPE on MOU performance evaluation based on provisional figures of 1999-2000.

SPONGE IRON INDIA LIMITED (SIIL)

INTRODUCTION

Sponge Iron Plant of the Company was initially established as a demonstration unit with a capacity of 30,000 tpa 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% noncoking coal. The unit, based on non coking coal from Singareni Collieries Company Limited (SCCL) and iron ores available at various regions in Andhra Pradesh and neighbouring states of Madhya Pradesh and Karnataka went into regular operations in November, 1980. Being a Demonstration plant it was designed to be operated on a semi commercial basis i.e., both for production of saleable product and for R&D work. Several improvements and modifications were effected to the Sponge Iron Plant based on Rotary Kiln Process to suit the local raw materials and operating conditions, as a result of which the Company has established the viability of the technology but also paved way for the development of Sponge Iron Industry in the Country.

Taking note of the successful operations of Demonstration Plant, Company doubled its capacity from 30,000 tpa to 60,000 tpa by setting up a second kiln of like capacity. This unit, which was designed and built by the Company's engineers incorporating various improvements and design modifications carried out in the Demonstration Plant for adapting the technology to Indian conditions, went into regular production from October, 1985.

The Company has also successfully designed and built a plant for briquetting of sponge iron fines (below 5 mm size) which were earlier not used by electric arc furnaces and were being discarded. The Briquetting Plant was commissioned during October, 1987 and is operating to capacity.

A new and innovative project aimed at conservation of energy was commissioned with effect from 1.3.1993 for effectively utilising the sensible heat in the kiln off-gases for generation of electric power. By doing so it has not only improved the thermal efficiency of the process but also substantially reduced the dependence on external power thus effecting saving in costs.

The Submerged Arc Furnace Project with an installed capacity of 45,000 tpa was set up by SIIL for smelting sponge iron (including sponge iron fines) into high quality (low phos.) pig iron.

After having completed the trial runs by January '96 wherein it was established that the plant could achieve chemical composition at the required level for special grade pig iron, the plant was shutdown without going in for commercial operations due to;

a) shortage of availability of power in the State involving a power cut to the extent of 60%. Even the available power presently cost Rs.3.25 per unit as against Rs.2.15 envisaged in the project report.

b) as per the assessment made by M/s Kirloskar Consultants, the maximum selling price that the quality pig iron proposed to be manufactured could fetch in the market is only Rs.7,000/ t . The actual cost of production was working out to about Rs.10,500/ t , of which direct costs alone would be Rs.8,500/ t.

c) as compared to the Project report, while the selling price envisaged in the project report remained more or less constant, cost had gone up substantially particularly due to cost of raw materials and power.

In order to utilise the existing infrastructure established with a capital cost of about Rs.30 crores, possibilities of going in for production of Ferro Alloys have been explored, during which it was found that production of Silico Manganese can be taken up with the existing furnace and other equipment with some modifications. The plant is presently not in operation due to commercial reasons after completion of the modification works.

FINANCE

The authorised share capital of the Company stood at Rs.40.00 crores on 31.03.2000; paid up capital was Rs.32.58 crores. (Rs.31.75 crores held by Government of India and the balance of Rs.0.83 crore by the Government of Andhra Pradesh).

PRODUCTION

The Production and Financial Performance of the Company during the last two years, together with provisional figures for 2000-01, are as under:

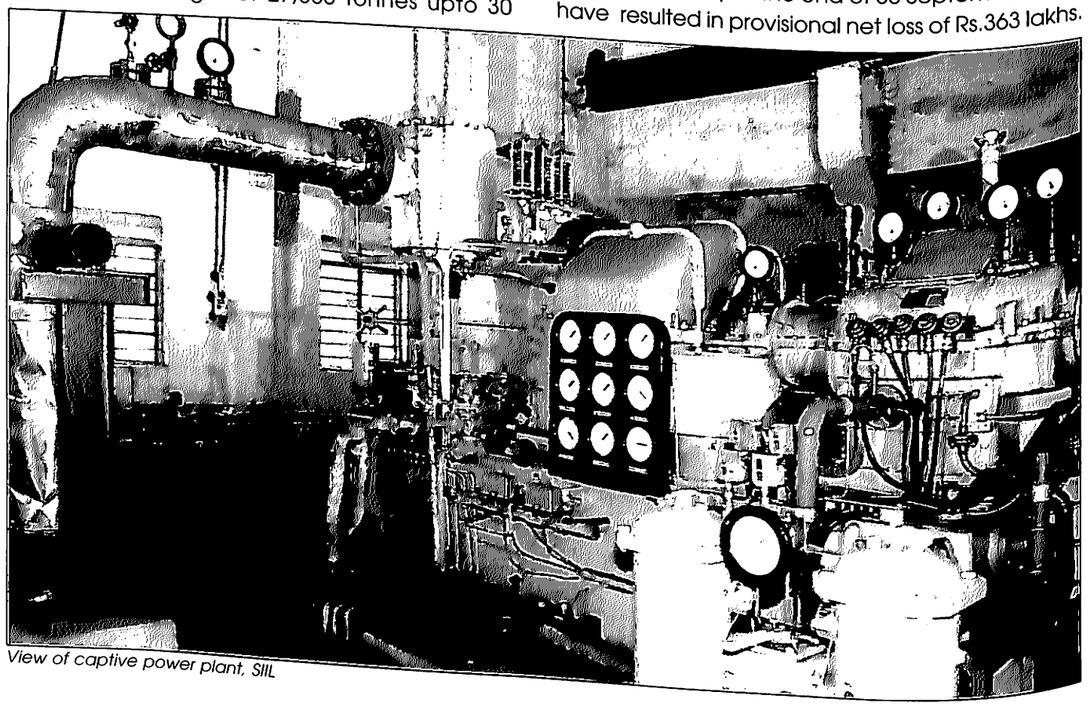
	1999-1999	1999-2000	2000-2001 (Provisional Upto 30.09.2K
Production			
- Sponge Iron (t)	44,110	39,793	25,864
- Power Generation (lakh Kwh)	59	25	33
- Capacity Utilisation (%)	73	66	86
Sales (t)			
- Sponge Iron	51,520	48,986	25,525
- Sales Turnover (Rs. In lakhs)	2,169	2,068	1,339
- Generation of Internal Resources (Rs. In lakhs)	-772	-1107	-183
- Net Profit (Rs. In lakhs)	-964	-1470	-363

As against the target of 29,200 tonnes, actual sponge iron production upto September, 2000 was 25,864 tonnes representing 89% of target.

SALES AND PROFITABILITY

Against a target of 27,300 tonnes upto 30 September, 2000, actual despatches were 25,525 tonnes representing 93% achievement of the target.

Operations upto the end of 30 September, 2000 have resulted in provisional net loss of Rs.363 lakhs.



View of captive power plant, SIIL

The Gross Margin is positive at Rs.57 lakhs with the improvement of market for sponge iron.

COST REDUCTION

The Company has been putting a thrust on cost reduction in all the areas so as to reduce the cost of production. Sevaral steps have been taken for cost reduction including separation of employees under VRS resulting in lower wage cost, reduction in hiring of vehicles in the company, lower inventory level of spares and consumables and raw materials, curtailing of telephone facilities reduction in consumption of coal per tonne of sponge iron, etc.

EFFORTS MADE TOWARDS INDIGENISATION

The Company has been putting all its efforts for indigenisation of all the equipment which were earlier being imported. At present the Company has achieved 100% indigenisation of all equipment and spares.

Manpower

The total number of Non-Executives as on 30.09.2000 was 325 out of which 57 employees belong to SC Category (18.15%), 32 persons belong to ST Category (9.84%). There are 27 women (7.67%), 7 Physically Handicapped persons.

The total number of Executives as on 30.09.2000 was 67, out of which 13 employees belong to SC Category (19.40%) and one (1) employee belonging to ST Category (1.5%). There is one (1) woman employee (1.5%) and one (1) Physically Handicapped employee (1.5%). The details are as under:

Sl. No.	Groups	Total No. of Employees	SC	ST	Ex-Servicemen	PHC	Women
1	Group A	67	13	1	-	-	1
2	Group B	46	9	2	-	1	1
3	Group C	144	30	10	-	4	9
4	Group D	135	20	20	-	1	16
5	Group D1	-	-	-	-	-	-
	Total	**392**	**72**	**33**	-	**6**	**27**

EMPLOYEES' PARTICIPATION IN MANAGEMENT

As per the directives of the Govt. of India, a Scheme for Employees' participation in management has been implemented in the Company. Various Committees under the Scheme were reconstituted. The members of the Committees were nominated by the Recognised Union and Officers' Association. With a view to increase induction of women at various levels in the Management, the women employees were also included in the Committees. The Committees are functioning systematically and their contribution by way of suggestion, wherever feasible, were implemented.

MECON LIMITED

MECON was the first consultancy and engineering organisation in the country to be accredited with ISO:9001.It has developed considerable expertise not only in the field of consultancy services like basic engineering , detailed engineering, project management etc but also in design and supply of equipment for the ferous,non-ferrous, oil and gas, petro-chemical and other general industries. Long association with integrated steel plants has enabled MECON to build a strong technological base. MECON has diversified its services not only in traditional areas but also in infrastructure areas like power, environmental engineering, ocean engineering, roads & highways ,oil and petrochemical , gas

Scheduled Castes/Tribes, Ex-Servicemen and Physical Handicapped Persons

Group	No fo Employees	SC		S.T.		Ex-Servicemen		Physically (otheropaedically Handicapped	
		Male	Female	Male	Female	Male	Female	Male	Female
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The Submerged Arc Furnace Project with an installed capacity of 45,000 tpa was set up by SIIL for smelting sponge iron (including sponge iron fines) into high quality (low phos.) pig iron.

After having completed the trial runs by January '96 wherein it was established that the plant could achieve chemical composition at the required level for special grade pig iron, the plant was shutdown without going in for commercial operations due to;

a) shortage of availability of power in the State involving a power cut to the extent of 60%. Even the available power presently cost Rs.3.25 per unit as against Rs.2.15 envisaged in the project report.
b) as per the assessment made by M/s Kirloskar Consultants, the maximum selling price that the quality pig iron proposed to be manufactured could fetch in the market is only Rs.7,000/t. The actual cost of production was working out to about Rs.10,500/ t, of which direct costs alone would be Rs.8,500/ t.
c) as compared to the Project report, while the selling price envisaged in the project report remained more or less constant, cost had gone up substantially particularly due to cost of raw materials and power.

In order to utilise the existing infrastructure established with a capital cost of about Rs.30 crores, possibilities of going in for production of Ferro Alloys have been explored, during which it was found that production of Silico Manganese can be taken up with the existing furnace and other equipment with some modifications. The plant is presently not in operation due to commercial reasons after completion of the modification works.

FINANCE

The authorised share capital of the Company stood at Rs.40.00 crores on 31.03.2000; paid up capital was Rs.32.58 crores. (Rs.31.75 crores held by Government of India and the balance of Rs.0.83 crore by the Government of Andhra Pradesh).

PRODUCTION

The Production and Financial Performance of the Company during the last two years, together with provisional figures for 2000-01, are as under:

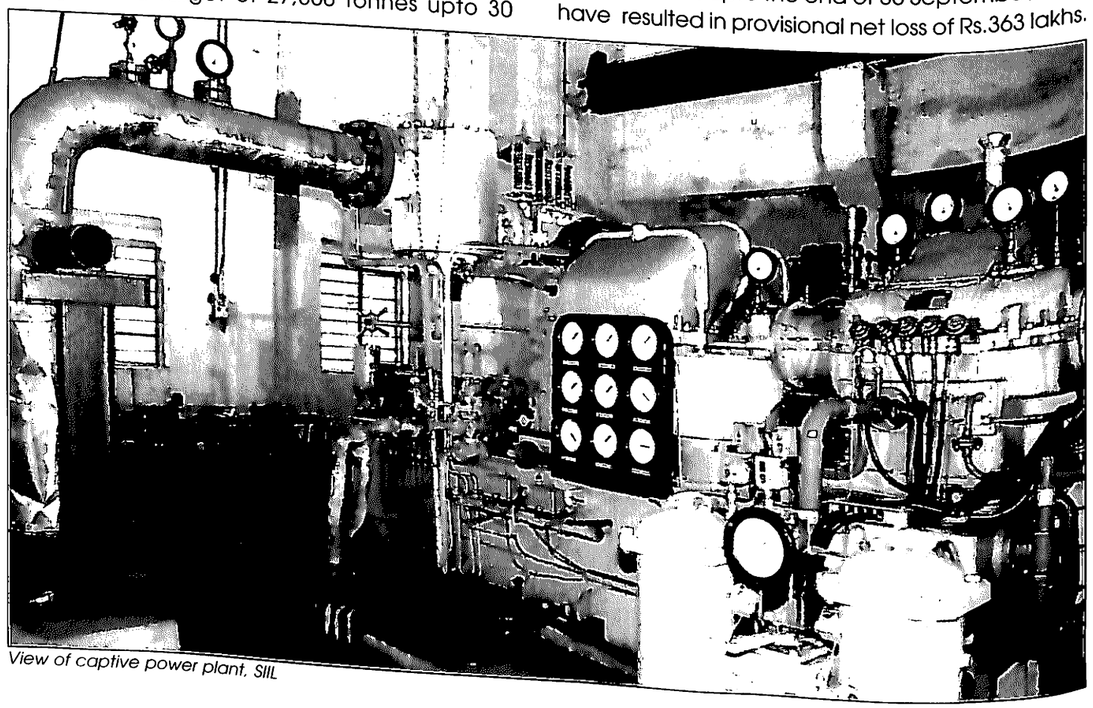
	1999-1999	1999-2000	2000-2001 (Provisional Upto 30.09.2K
Production			
- Sponge Iron (t)	44,110	39,793	25,864
- Power Generation (lakh Kwh)	59	25	33
- Capacity Utilisation (%)	73	66	86
Sales (t)			
- Sponge Iron	51,520	48,986	25,525
- Sales Turnover (Rs. In lakhs)	2,169	2,068	1,339
- Generation of Internal Resources (Rs. In lakhs)	-772	-1107	-183
- Net Profit (Rs. In lakhs)	-964	-1470	-363

As against the target of 29,200 tonnes, actual sponge iron production upto September, 2000 was 25,864 tonnes representing 89% of target.

SALES AND PROFITABILITY

Against a target of 27,300 tonnes upto 30 September, 2000, actual despatches were 25,525 tonnes representing 93% achievement of the target.

Operations upto the end of 30 September, 2000 have resulted in provisional net loss of Rs.363 lakhs.



View of captive power plant, SIIL

The Gross Margin is positive at Rs.57 lakhs with the improvement of market for sponge iron.

COST REDUCTION

The Company has been putting a thrust on cost reduction in all the areas so as to reduce the cost of production. Sevaral steps have been taken for cost reduction including separation of employees under VRS resulting in lower wage cost, reduction in hiring of vehicles in the company, lower inventory level of spares and consumables and raw materials, curtailing of telephone facilities reduction in consumption of coal per tonne of sponge iron, etc.

EFFORTS MADE TOWARDS INDIGENISATION

The Company has been putting all its efforts for indigenisation of all the equipment which were earlier being imported. At present the Company has achieved 100% indigenisation of all equipment and spares.

Manpower

The total number of Non-Executives as on 30.09.2000 was 325 out of which 57 employees belong to SC Category (18.15%), 32 persons belong to ST Category (9.84%). There are 27 women (7.67%), 7 Physically Handicapped persons.

The total number of Executives as on 30.09.2000 was 67, out of which 13 employees belong to SC Category (19.40%) and one (1) employee belonging to ST Category (1.5%). There is one (1) woman employee (1.5%) and one (1) Physically Handicapped employee (1.5%). The details are as under:

Sl. No.	Groups	Total No. of Employees	SC	ST	Ex-Servicemen	PHC	Women
1	Group A	67	13	1	-	-	1
2	Group B	46	9	2	-	1	1
3	Group C	144	30	10	-	4	9
4	Group D	135	20	20	-	1	16
5	Group D1	-	-	-	-	-	-
	Total	**392**	**72**	**33**	-	**6**	**27**

EMPLOYEES' PARTICIPATION IN MANAGEMENT

As per the directives of the Govt. of India, a Scheme for Employees' participation in management has been implemented in the Company. Various Committees under the Scheme were reconstituted. The members of the Committees were nominated by the Recognised Union and Officers' Association. With a view to increase induction of women at various levels in the Management, the women employees were also included in the Committees. The Committees are functioning systematically and their contribution by way of suggestion, wherever feasible, were implemented.

MECON LIMITED

MECON was the first consultancy and engineering organisation in the country to be accredited with ISO:9001.It has developed considerable expertise not only in the field of consultancy services like basic engineering , detailed engineering, project management etc but also in design and supply of equipment for the ferous,non-ferrous, oil and gas, petro-chemical and other general industries. Long association with integrated steel plants has enabled MECON to build a strong technological base. MECON has diversified its services not only in traditional areas but also in infrastructure areas like power, environmental engineering, ocean engineering, roads & highways ,oil and petrochemical , gas

pipelines, information technology , defence projects etc. The company is undertaking some of the prestigious projects like external coal handling system for TNEB, Sardar Sarovar Canal Based drinking water supply project of Government of Gujrat, Second Launch Pad project of ISRO .

The company has its registered office at Ranchi, Jharkhand and regional offices at Bangalore, Engineering offices at Delhi, Calcutta, Mumbai, Hyderabad and Chennai. Beside this MECON has its site offices at Bhilai, Bokaro, Durgapur, Rourkela and Duburi and overseas offices at Ajaokutta (Nigeria).

Capital Structure

The authorised share capital of the company as on 31st March,2000 is Rs. 400 Lakhs against which the paid up capital is Rs. 242 Lakhs. Out of the paid up capital of Rs. 242 lakhs Bonus Shares of Rs.40.31 lakhs were issued during the year 1996-97.

Financial Performance

The company recorded consistent profits during the last 25 years of its existence till 1997-98. Due to recessionary trend in Steel Sector the company has incurred losses in last two years

The financial performance of the company in the last four years is enumerated as under :-

(Rs. in Lakhs)

Particulars	1997-98	1998-99	1999-2000	2000-2001 Up to September, 2000
Turnover	18,581	20,793	23,504	11,018
Profit/ Loss before tax	317	(-)1,117	(-)2,027	(-) 940
Tax Provision	150	NIL	NIL	NIL
Profit after tax	167	(-)1,117	(-) 2027	(-)940

MANAGEMENT INITIATIVE

During the year, a number of steps were taken to keep pace with the customer needs and emerging business scenario of working with foreign companies both in India and abroad. Some of the steps taken by the company are:-

State of the art Technology Incorporation :-

MECON was fully associated in Renovation, Moderanisation & Updating (RMU) Residual Life Assessment (RLA) and Modernisation and Life Extension Studies, which the company has bagged in thermal as well as hydel power generation sectors from various State Electricity Boards.

In Non-conventional Energy sector MECON has been assigned by MNES to prepare a status report for wave energy power generation Assignment . MECONs proposal to MNES for installing solar energy system for villages is under consideration

MOU /Agreement on Technology & Business Promotion

During the year the company has signed following important MOUs/Agreement with reputed national /international organsiatons :-

- MECON, National Metallurgical Laboratory, Jamshedpur, RMD Consult GmbH, Germany jointly with Power Finance Corporation of India for carrying out Life Extension Study and Renovation, Modernisation and Updating work for Hydel power Stations.
- Industrial Development and Promotion Company,Dammam, Saudi Arabia for environment engineering projects in the gulf.
- Wardell Armstrong, UK for engineering consultancy services for projects in the area of waste management in India and abroad.
- Ocean Engineering Centre , IIT Chennai for Trial Cum Berthing Jetty, for India Navy
- INDEC , SA Chile in the fields of nonferrous metals and non metallic minerals mining and metallurgy projects in India

MOU with Ministry of Steel

The company has signed MOU with Ministry of Steel on 1st April,2000 for the year 2000-2001

Renewal of ISO -9001 Certification

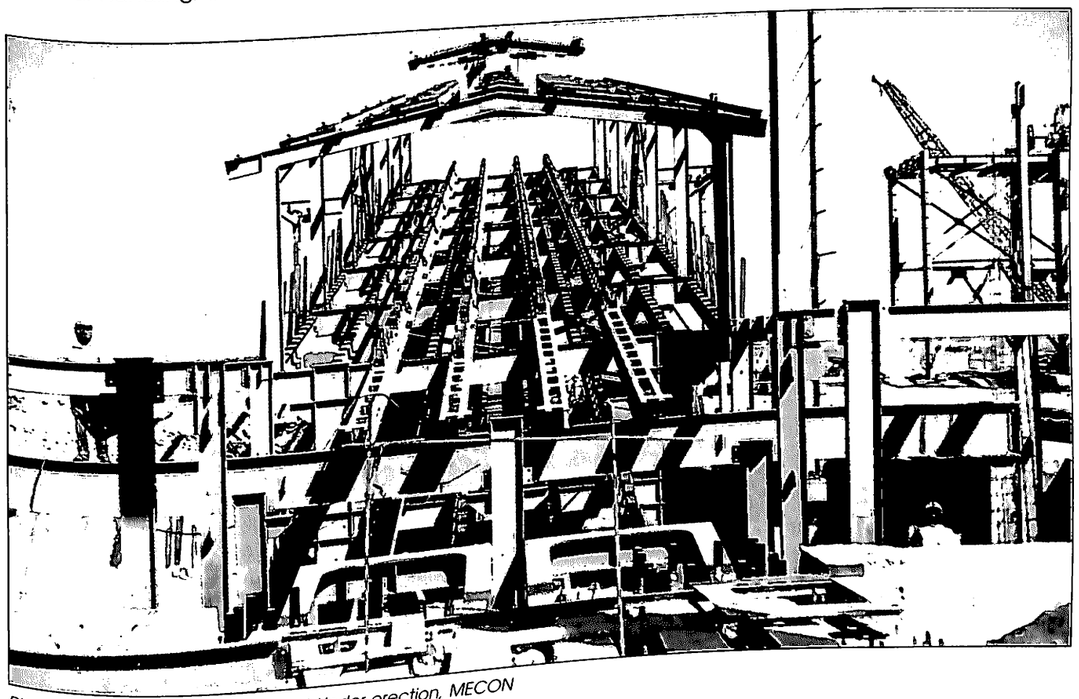
Based on audit carried out by RWTUV, MECON has received renewed ISO-9001 Quality System accreditation for "Consultancy, Design & Engineering, Procurement of Plant & Equipment, Construction & Project Management Services and Execution of Turnkey Projects which is valid till January, 2003.

Business diversification

Oil and gas pipelines, LNG/LPG terminals, refineries, petro-chemicals, POL terminals power generation & transmission, information technology, material handling, infrastructure like ports, roads, highways. Bridges, water supply etc. continue to be the main thrust areas identified for business diversification of MECON and notable success had been made in securing jobs in these areas.

Foreign Assignments in Progress

- **SAUDI ARABIA :-** MECON is associated from the beginning with M/s United Gulf Steel Mill Company Ltd(UGSMCL) for their medium section mill project commissioned in May 2000 at Al-Jubail. Now MECON is preparing techno-economic feasibility report for expansion of the project
- **IRAN:-** MECON is providing back up consultancy service with International Steel Industrial Engineering Company Ltd to Tavazon Project
- **WORLD BANK:-** has awarded MECON an assignment to organise training and work shops on environment issue in power sector



Pig Casting No-2 of NINL Steel Plant Under erection, MECON

Other works in India

- Indian engineering and consultancy for installation of 1.1. Mt/yr integrated steel plant for Neelachal Ispat Nigam Limited and for installation of 7 m tall coke oven battery for Konark Metcoke Limited.
- 350 m3 Blast Furnace of KISCO for Indomag Steel Technology Limited and fabrication, supply and erection of 1600 t of structures for overhead conveyor of Captive Power Plant and Centra Repair Shop of KISCO, Mangalore.
- Detailed engineering & consultancy services for POL terminal at Mathura for IOCL.
- Consultancy, engineering and project monitoring services for expansion of steam Generation Plant at Alumina Refinery at Damanjodi for National Aluminium Company Limited.
- Consultancy for 2 x 20 MW expansion of Thermal Power Station-I of Neyveli Lignite Corporation, Neyveli.
- Cost study of Cold Rolling Mill entrusted by Hoogovens Services , Canada
- Incorporation of TMT system in Bar Rolling mills at Chittagong and Karachi.
- Design, engineering, manufacture, supply, storage, construction of civil and structural works, erection, painting, testing and commissioning of External Coal Handling System for Tamil Nadu Electricity Board,Chennai.
- Some other important assignments under execution include SLP Project of ISRO, Project Sea Bird of Indian Navy, IBP, Sangrur, Reheating Furnace of Bokaro Steel Plant, etc.
- Detailed engineering & consultancy services for IOCL's Oil Terminal at Kakinada, Gokavaram near Rajamundry and Kondapalli near Vijaywada on total responsibility basis.
- Detailed engineering & consultancy services for RMU of Unit No.3 & 4 of Hirakud Power House No.1, for Orissa Hydel Power Corporation.
- Engineering services for installation of 33 KV/ 11KV sub-station at Khudiramnagar and drawal of 33 KV and 11 KV Transmission lines for Haldia Development Authority.
- Preparation of EIA/EMP Report for Subansiri Upper/Middle Dam Project for NHPC Ltd. and 65 MW Power Plant for Kudremukh Iron & Steel Company Ltd., Bangalore.

A view of the 350 M3 blast furnace of KISCO project at Mangalore, MECON

Conservation of Energy

During 1999-2000 MECON has submitted a report to Ministry of Steel on Energy Efficiency Improvement in Secondary Steel Sector. MECON has prepared few proposal for implementation of recommendations, which are under consideration of the government for financial assistance.

With the introduction of Energy Bill 2000 in the Parliament on 24thFeburary 2000-energy audit has become mandatory for power intensive industries. The Ministry of Power, Industrial Development Bank of India & various states Governments have registered MECON as an authorized Energy Auditor.

Human Resources Development

During 1999-2000 MECON laid emphasis on imparting Knowledge and skill in area of Human Resource Development in following ways: -

- Workshop on key result areas, business processes reengineering and business risk analysis and management
- Courses on planning of small hydro power projects analysis , design of structures for wind and seismic loads and Information Technology
- Management of power distribution and loss reduction system and urban solid waste
- Hazard analysis in chemical Industry
- Training of employees on enhancing productivity at work, communication skills etc.

Manpower Position

The company has been able to reduce its employee's strength from 3250 as on 31.3.1999 to 2949 as on 31.9.2000. Out of this employee strength, 629 belong to Scheduled Caste and Scheduled Tribe categories. MECON continued with its Voluntary Retirement Scheme and 105 employees availed the benefits under the VRS between 1st April to 30th September 2000.

Industrial Relations

On the industrial relations front, the company continued to have peaceful and cordial relations with the employees. Most of the issues were settled through dialogue with representatives of non-executive and executive employees.

HINDUSTAN STEELWORKS CONSTRUCTION LIMITED

General Background

Hindustan Steelworks Construction Limited (HSCL) was incorporated in June, 1964 with the primary objective of creating in the Public Sector an organisation capable of undertaking complete construction of modern integrated steel plants. HSCL has executed works in Steel Plants right from the inception till commissioning viz. Bokaro Steel Plant, Vizag Steel Plant, Salem Steel Plant and was associated with the expansion and Modernisation activities of Bhilai Steel plant, Durgapur Steel Plant, IISCO (Burnpur) as also Bhadravati Steel Plant. With the tapering of works, the company diversified its activities in other sectors like Power, Coal, Oil and Gas as also infrastructural facilities like Roads and Highways, Bridges, Dams, Underground communication and Transport System besides Industrial and Township complexes involving high degree of planning, co-ordination and modern sophisticated techniques.

The Company has developed its expertise in the areas of Piling, Soil investigation, Massive Foundation works, High rise structures, Structural Fabrication and Erection, Refractory, Technological Structures and Pipelines, Equipment Erection, instrumentation including testing and commissioning.

The company also specialises in carrying out capital repairs and rebuilding works, including Hot repairs of Coke Ovens and Blast Furnaces and other allied areas in the Integrated Steel Plants.

To meet the present day need for setting up of number of infrastructural facilities, the company has tie-up arrangements with some reputed agencies both in India and abroad for providing technical know-how.

Capital Structure

The Authorised Capital as on 30.9.2000 was

Rs.150 crore. The Authorised Capital has been increased from Rs.20 crore to Rs. 150 crore in the Extraordinary General Meeting held on 4th May 2000. The Paid- up Capital has been increased from Rs.20 crore to Rs.117.10 crore due to conversion of Plan Loan to Equity as granted by Govt. of India in the "Financial Restructuring-cum-Financial Assistance Package". The total amount of GOI loan outstanding as on Sept. 2000 was Rs.274.26 crore (Plan Loan Rs. 5 crore and Non-Plan Loan Rs.269.26 crore).

Loan from Banks for V.R.

The company was authorised to raise a loan of Rs.318.36 crore from Banks under the Guarantee given by Govt. of India for separating 6000 employees within a span of 3 years from 1999-2000. The Company has already received the first instalment of loan for Rs.209.82 crore from State Bank of India in June 2000. The balance Rs.108 crore will be co-financed by Indian Overseas Bank and Indian Bank for which Govt. Guarantee has already been provided. Out of the first instalment, Rs.194.56 crore has already been disbursed as on 31.10.2000 to 4600 employees towards terminal benefits arising out of VRS .

Performance

The financial performance of the company during the period 1999-2000 and 2000-2001 are as under:

(Rs.in Crore)

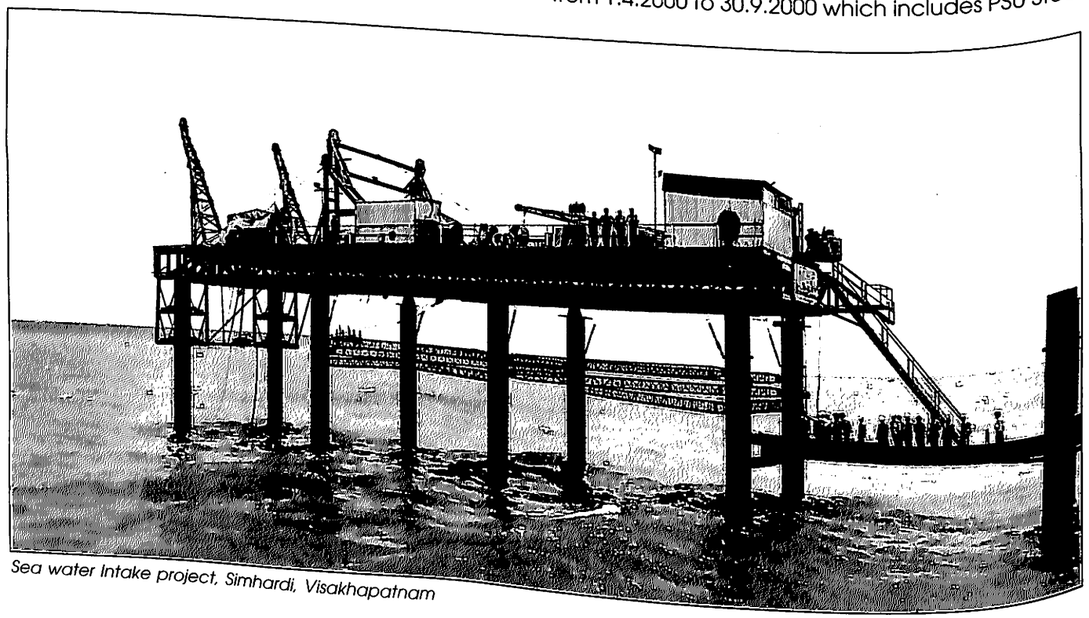
Year	1999-2000	2000-2001 (April-Sept)
Turnover	296.80	90.11
Gross Loss	97.99	41.14
Net Loss	106.08 (*)	45.22 (#)

(*) After the waiver of interest on the Govt. loan the windfall profit has been achieved amounting to Rs.851.73 crore.

(#) The above loss has been worked out without considering the expenditure incurred for separating the employees opted for VR.

Order Booking

HSCL has secured orders valuing Rs.124 crore from 1.4.2000 to 30.9.2000 which includes PSU Steel Sector Rs.31 crore (25%) and Non-steel sector Rs.93 crore (75%).



Sea water Intake project, Simhardi, Visakhapatnam

Manpower Position

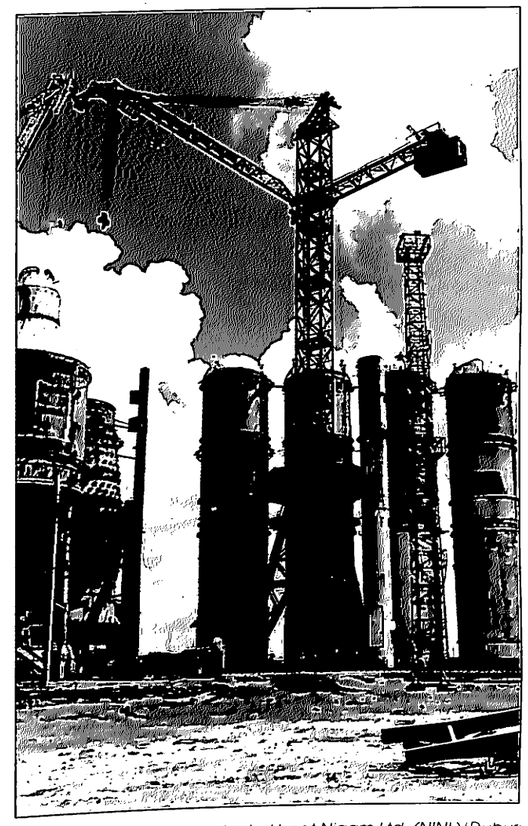
The manpower position of the company as on 31.10.2000 was 7863. Due to reasons beyond its control the company was carrying excess manpower strength of 22902 in the year 1985-86 which was far beyond its requirement and adversely affected the profitability of the company and to reduce the manpower the company decided to introduce Voluntary Retirement Scheme on the line of DPE's approved scheme in 1986-87.Till March, 2000 a total of 9954 employees could be separated under the scheme. Further 3771 nos. of employees have been separated and the VR benefits have been paid to them upto 31st Oct. 2000.

Employees Voluntary Welfare Scheme

Central Welfare Scheme for HSCL employees was introduced with effect from 1.4.1987. It covers all sections of employees in the company. The scheme is intended to provide immediate financial assistance to the dependents of employees in the event of death due to any reasons anywhere while in service in the company by a system of voluntary contribution by employees at the maximum of Rs.10/- per month.

Workers Participation in Management

Sl. No.	Name of the Committee/Council	Details
1.	Joint Productivity Council, Shop Council	Joint councils at unit level for major units at BS City and Bhilai and Shop Councils at Shop level to have participation in economy and cost reduction, wastage control, safety quality improvement and implementation in production and productivity, etc.
2.	Apex level Joint Forum	This comprisses of the management of HSCL and the National level Trade Unions i.e. INTUC, CITU, AITUC, HMS and independent Unions. From the inception of the formation of the Apex level Joint Forum Body in 1981, there have been 31 meetings till 30.9.2000.



Blast Furnace work of Neelachal Ispat Nigam Ltd. (NINL)/Dubur

BHARAT REFRACTORIES LIMITED (BRL):

Background

Bharat Refractories Ltd. (BRL), a Government of India Undertaking was incorporated on 22nd July, 1974 and at present it has the following four units:

- Bhandaridah Refractories Plant at Bhandaridah
- Ranchi Road Refractories Plant at Ramgarh
- Bhilai Refractories Plant at Bhilai
- IFICO Refractories Plant at Ramgarh.

The Company is engaged in the manufacture and supply of various kinds of refractories not only to the integrated steel plants but also to the mini and midi steel plants.

Capital Structure:

The authorised share capital of the Company, as on 31st March, 2000 was Rs. 11300.00 lakh against which the paid up capital was Rs. 10390.42 lakh.

Performance

The production performance of different units of the Company during 1999-200 and 2000-2001 upto Sept. 2000 was as follows: -

Quantity in Tonne

Value Rs. in lakh

	1999-2000 Actual		2000-2001 (Provisional) Target		Actual	
	Qty.	Value	Qty.	Value	Qty.	Value
Bhandaridah Ref. Plant (BHRP)	184555	2372.54	10710	1105.68	8146	1073.50
Ranchi Road Ref.Plant (RRRP)	6288	1759.75	4350	1149.24	3173	857.14
Bhilai Ref. Plant (BRP)	12231	1917.69	19200	2639.82	5014	588.04
IFICO Ref. Plant (IFIC RP)	10161	1540.81	9798	1807.66	4554	713.16
Total	47135	7590.79	44058	6702.60	20887	3231.84

Financial Performance

During the year 1999-2000 the Company achieved a total turnover of Rs.7847.13 lakhs and the losses (before interest and depreciation) in respect of BRL amounted to Rs. 3305.30 lakh but after providing for interest, depreciation and prior period adjustment to the tune of Rs. 253.55 lakh, Rs. 343.04 lakh and 153.70 lakh respectively it incurred a net lost of Rs. 3748.19 lakh. During the year 2000-2001 upto September, 2000 the company incurred a net loss of Rs. 2072.72 lakh.

Foreign Collaboration

5.1) Bharat Refractories Ltd. has been able to adopt successfully, the technical know-how acquired from KRC of Japan for various items of high performance refractories. Except for spinel and Magnesia spinel bricks, the technology of which could not be adapted due to constraints of firing facilities, commercial production of all other items, namely Magnesia Carbon Bricks (MCB), Slide Gate Refractories, Gunning Repair materials and cast mixes of Steel Ladle have already been established. Consequently, the company has emerged to be one of the major suppliers of MCB to SAIL Steel Plants. The company has also started commercial production to coke oven Silica Bricks, for which know-how was acquired from Shingawa Refractories Co. Ltd., Japan.

The Company has also entered into foreign collaboration agreement with M/s. PLIBRICO, France for manufacture of castables for Blast Furnace. The company's project for setting up facilities for production of refractories for Continuous Casting of Steel is under active consideration of Government for its approval.

Energy Conservation

Some of the steps taken for improvement in conservation of energy are as under:

a) Pre-heating of furnace oil is done for achieving better automisation of oil in burners;
b) Calibration of Fuel pump and nozzle of engines at regular intervals.
c) Adoption of appropriate setting pattern of green bricks
d) Uses of recommended lubricating oil for engines
e) Switching off unwanted load for reducing electricity consumption.

Industrial Relations

During the period from April 2000 to September 2000 the industrial relations were by and large peaceful except in the IFICO Refractories Plant and Bhilai Refractories Plant unit.

Manpower

The manpower position of Bharat Refractories Ltd. as on 30th Sept., 2000 was as follows:

Indicator	Total No. employees	No. of SC	No. of ST	No. of Ex-Serviceman	No. of Physically handicapped	No. of women employees
BRL	3410	333	457	78	29	115

Contract labour

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

[illegible] COMPANIES

The Undertaking of the erstwhile Bird & Company Limited was nationalised by the Govt. of India by virtue of The Bird & Company Limited (Acquisition and Transfer of Undertakings and other properties) Act, 1980 (Act No. 67 of 1980). Consequent upon the nationalisation of the Undertaking of Bird & Company Limited, shares held by the said company in twenty one companies as referred to in Schedule I of the aforesaid Act, as "specified companies", stood transferred in the name of the President of India.

Based on the shareholding pattern, the following eight companies out of the twentyone companies as mentioned above came under the administrative control of the Ministry of Steel, Govt. of India.

(a) The Orissa Minerals Development Company Limited (OMDC).
(b) The Bisra Stone Lime Company Limited (BSLC)
(c) The Karanpura Development Company Limited (KDCL)
(d) Scott & Saxby Limited (SSL)
(e) Eastern Investments Limited (EIL)
(f) Burrakar Coal Company Limited (Burrakar).
(g) Borrea Coal Company Limited (Borrea).
(h) Kumardhubi Fireclay & Silica Works Limited (KFSW).

KFSW was engaged in manufacturing and marketing of refractory materials and got linked with Bharat Refractories Limited.

EIL is an investment company. In 1984 through a scheme of amalga-mation under section 396 of the Companies Act, six other companies under the Bird Group were amalgamated with EIL. Coal Companies viz. Burrakar and Borrea, have become non operational after Nationalisation of coal mines.

Three Companies, viz., OMDC, BSLC & KDCL are mining companies. SSL is engaged in the work relating to sinking of deep tubewells and mineral exploration.

Performance of Operational Companies (OMDC, BSLC, KDCL & SSL)of Bird Group

At the time when the above named companies came under the administrative control of the Ministry of Steel, Govt. of India all of them were financially sick. The basic problems which were faced by the above companies are listed below :

i) Inadquate market demand particularly of BSLC's products due to change in steel making technology.
ii) Outstanding liabilities.
iii) Excessive manpower coupled with high wage structure of BSLC resulting into heavy burden of fixed expenses.
iv) Huge accumulated losses.
v) Erosion of working capital.
vi) Continuous pressure from unions for better emoluments/amenities which the companies could not agree due to poor financial health resulting into frequent industrial unrest.

With the financial support from the Ministry of Steel, Govt. of India, problems mainly relating to excessive manpower, erosion of working capital and outstanding liabilities could be solved to a considerable extent. Efforts were simultaneously made at the Group level to improve marketability of products through better product mix and enrichment of quality.

Performance of the four operating companies as a whole during the past few years as well as in the current year with respect to sales turnover and gross margin before charging depreciation and interest on govt. loans is given below :

It may be observed that the group had registered continuous growth in terms of sales turnover till 1996-97. Against the negative gross margin before charging depreciation and interest on Govt. loans during 1992-93 to the extent of Rs. 171 lakhs, the situation considerably changed during 1995-96 when there was positive gross margin of Rs.538 lacs. The highest turnover of Rs.5147 lacs was however achieved during 1996-97 against Rs.3312 lacs during 1992-93.

There had been set back in the performance of the operating companies particularly The Orissa Minerals Development Co Ltd (OMDC) and The Bisra Stone Lime Co Ltd (BSLC) since 1997-98 due to fall in demand of their products arising out of recession in Iron & Steel Industry. Despite the fact that overall turnover had considerably reduced, yet as a result of the efforts made towards reduction of the cost the negative gross margin could be kept under control. As a result of various measures taken by these companies during the year 1999-2000 the four operating companies under the group again earned positive gross margin of Rs.93 lakhs as against the negative gross margin of Rs.104 lacs during the year 1998-99. It is anticipated that due to various steps taken, the group as a whole shall have positive gross margin during 2000-2001 also.

Performance of Companies

The company was incorporated in the year 1918 with authorised capital of Rs.60 lacs. The mines of the company are located around Barbil, Dist. Keonjhar, Orissa. The activities relate to mining and marketing of iron ore and manganese ore. A number of steps have been taken since 1991-92 to improve upon its performance. This resulted into net profit (after charging depreciation and interest on Govt. loan) during three consequtive years i.e. 1994-95, 1995-96 and 1996-97. The position however deteriorated since 1997-98 due to recession in Iron and Steel Industry. There was sharp decline in the demand of its products. With the improvement in the recessionary trend of the steel industry the demand for iron ore is picking up. The company is trying to take advantage of the situation by stepping up production/ despatch of the sized ore. Stress has also been laid on the development of the new areas in the company's Roida mines with a view to step up production of medium grade Manganese Ore to meet the demand for the same. The company has also installed a beneficiation plant (Joplin Jigs) at its Bhadrasai Mines, Roida to produce value added Manganese Dioxide ore from the low value Manganese Ore Fines.

The demand for B F grade iron ore and B F grade manganese ore is also showing signs of improvement.

The company has taken steps to reduce manpower by implementing Voluntary Retirement Scheme (VRS) with the grant-in-aid from Ministry of Steel, Govt. of India. During the year 1999-2000, 104 employees could be separated. Total separation under the scheme is 418 nos. of employees till date. In view of the changed scenario and also rationalisation of surplus manpower it is expected that the company will improve upon its performance during 2000-2001.

The year-wise performance of the company is given below :

(Rs. in lacs)

	94-95	95-96	96-97	97-98	98-99	99-00	April'00 to Sept.'00	2000-01 (Exptd.)
Sales	3908	4773	5147	3681	3494	3817	1960	4907
Gross Margin (Before charging Interest on Govt. loans & Deprn.)	+276	+538	+241	-112	-104	+93	+65	+451

THE BISRA STONE LIME COMPANY LIMITED (BSLC)

The company was incorporated in 1910 with authorised capital of Rs.50 lacs. Its mines are located around Birmitrapur in the District of Sundargarh, Orissa. The main activities are mining and marketing of limestone and dolomite. With the change in steel making technology the demand for BSLC's products declined considerably and as a consequence company ran into heavy losses year after year. During the year 1991-92 the negative gross margin i.e. margin before charging depreciation and interest on Govt. loans stood at Rs.585 lacs. With the financial support from the Govt. of India steps were taken to rationalise manpower through implementation of Voluntary Retirement Scheme (VRS). Steps were also taken to change the product mix and improve the quality. As a result the company could earn positive gross margin i.e. margin before depreciation and interest on Govt. loan in the year 1995-96. The position however deteriorated from 1996-97 initially due to labour trouble and thereafter due to demand constraint since 1997-98 as a result of recession in Iron and Steel Industry. With the gradual improvement of recessionary trend production and despatch had shown marginal improvement during the year 1999-2000 as would be evident from the performance of the company.

(Rs. in lacs)

	94-95	95-96	96-97	97-98	98-99	99-00	April'00 to Sept. '00	2000-01 (Exptd.)
Production ('000 MT)	533	772	768	467	578	564	319	712
Sales	2096	2769	3302	1846	2042	1986	1082	2813
Gross Margin (Before charging Interest on Govt. loans & Deprn.)	389	524	618	209	406	238	126	550
Net Profit/Loss	31	53	43	-475	- 368	- 635	- 378	- 570

* Including non-trading profit/adjustment

The year-wise performance of the company is given below :

(Rs. in lacs)

	94-95	95-96	96-97	97-98	98-99	99-00	April'00 to Sept. '00	2000-01 (Exptd.)
Production ('000 MT)	834	896	743	666	534	702	340	780
Sales	1601	1846	1740	1549	1157	1574	722	1720
Gross Margin Before charging Interest on Govt. loans & Deprn.	-126	+19	-361	-332	-516	-278	- 74	-132
Net Profit/Loss	-1513	-1629	-1477	- 2223	-2590	-2753	-1454	-2982

During the year 1999-2000, 309 employees were separated. Since introduction of VRS total 2877 nos. of employees have been separated till date. Despite this position the company is still overburdened with excessive manpower coupled with high wage structure compared to what is existing in the competitors mines. As a consequence there is imbalance between the expenditure on account of salaries and wages and the turnover. For the very survival, the company needs to have further rationalisation of manpower from existing strength of 1719 to around 1300 to reduce the fixed cost and bring back the balance between the expenditure on account of salaries, wages and turnover.

THE KARANPURA DEVELOPMENT COMPANY LIMITED (KDCL)

The Company was incorporated in 1920 with authorised capital of Rs.40.00 lakhs. The subscribed and paid up capital of the Company is Rs.20.00 lakhs only . The mines are located around Sirka, Dist. Hazaribagh, Bihar . The company produces limestone suitable for cement manufacture.

The Company suffered a set back during December, 1995 when in pursuance of a notification issued by the Govt. of India, prohibiting mining of limestone through contractors, the activities of the Company came to standstill. The company could resume normal mining operations from December, 1996 onwards with the help of departmental workers and through deployment of hired equipment for raising of limestone.

The Govt. has permitted to have contract mining for a period of two years from 22.6.1999. During the year 1999-2000, the company achieved positive gross margin of Rs. 102 lacs before charging interest on Govt. loans and depreciation as against Rs.4 lacs for the previous year resulting in a net profit of Rs.65.98 lacs. The market for cement grade limestone is improving and it is therefore expected that activities relating to production / despatch will be stepped up during the year 2000-2001.

The company had taken cost control measures through rationalisation of manpower under Voluntary Retirement Scheme (VRS). This resulted in considerable reduction of fixed cost. Since introduction of the VR Scheme 132 nos. of employees out of total strength of 203 as on 01.04.1992 had been separated till date.

The year-wise performance of the company is given below :

(Rs. in lakhs)

	94-95	95-96	96-97	97-98	98-99	99-00	April'00 to Sept. '00	2000-01 (Exptd.)
Production ('000 MT)	93	57	24	83	76	48	32	85
Sales	154	98	47	170	156	97	66	174
Gross Margin (Before interest and Deprn.)	+12	-6	-18	+9	+4	+102	+5	+ 8
Net Profit/Loss	-17	-41	-56	- 29	- 33	+66	-13	-28

Scott & Saxby Limited (SSL)

The Company is a wholly owned subsidiary of The Karanpura Development Company Limited (KDCL) with authorised capital of Rs.1.00 lakh only. The Company is mainly engaged in the activities of sinking deep tubewells and mineral exploration work. Owing to continued disruption in the normal working environment, the Company was compelled to declare 'Suspension of Work' w.e.f. 14.11.1992 at its factory and at all the working sites. After prolonged negotiation a Tripartite Memorandum of Settlement was signed on 19.08.1996 by representatives of Govt. of West Bengal, workmen of negotiating unions and the management. The order for 'Suspension of Work' was lifted w.e.f. 01.11.1996 and activities restarted at the workshop in Calcutta and at the work sites.

During the year 1997-98 and 1998-99 the company earned positive gross margin before charging depreciation and interest on Govt. loan to the extent of Rs.2 lacs. The company expanded its business considerably in the State of Tripura, during the year 1999-2000. Apart from the normal activities the company also diversified its activities for erection and commissioning of water treatment plant, construction of overhead tank etc. As a consequence the sales turnover of the company showed significant improvement during 1999-2000 resulting in positive gross margin of Rs.31 lakhs as against Rs. 2 lakhs during the earlier two years. The company is expected to pursue its activities for expansion of its business and improve upon its performance during the year 2000-2001.

With a view to rationalise man power and reduce the fixed cost the company introduced Voluntary Retirement Scheme (VRS). Out of a strength of 365 as on 01.04.1992, total 244 nos. employees were separated under the scheme till date.

The performance of the company in recent years is given below :

(Rs. in lacs)

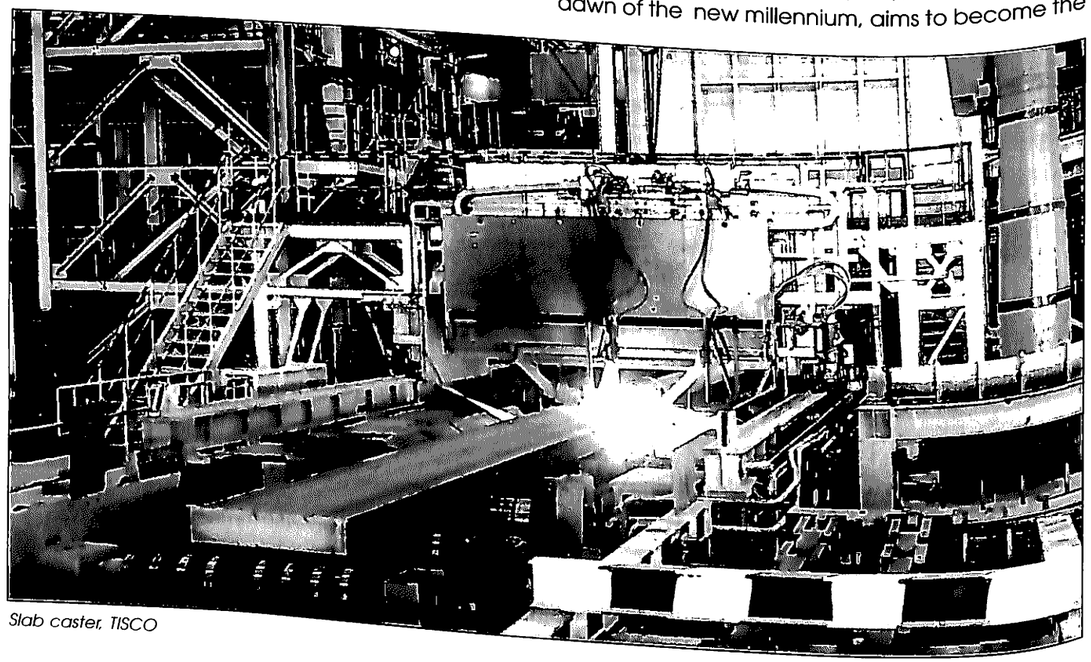
	94-95	95-96	96-97	97-98	98-99	99-00	April'00 to Sept. '00	2000-01 (Exptd.)
Sales	57	60	58	116	139	160	90	200
Gross Margin Before charging Interest on Govt. loans & Deprn.	1	1	2	2	2	31	8	25
Net Profit/Loss	-123	-130	-136	-139	-135	-102	- 61	-111

PRIVATE SECTOR

Private Sector is playing a dominant role in augmenting the steel availability in the country. Their contribution in finished steel production increased to 58.10% in 1999-2000 as compared to 45% in 1992-93. In spite of the difficult phase through which Indian Steel Industry is passing currently, their contribution has further increased to 59% during April-September, 2000. Similarly, the private sector is also playing a significant role in the production of pig iron and sponge iron.

Pre-liberalization, their was only one integrated steel plant in the private sector in the country. This was the unit of the Tata Iron & Steel Co. Ltd. existing since 1907. In addition, there were a large number of Mini Steel Plants (Electric Arc Furnace Units) and Steel Processing Units (i.e. stand alone Hot/Cold Rolling Mills, Galvanising and Colour Coating units etc.), a few Sponge iron units and one pig iron unit. Post-liberalization, the scenario changed with the setting up of several new/green-field iron/steel plants. This was associated with structural changes in the sector. While steel plants based on world class capacity & state-of-the-art technologies (viz, Corex Technology for iron making, Twin Shell Electric Arc Furnace & thin Slab Casting - Compact Strip Mill, Energy Optimising Furnaces) were commissioned, inefficient & un-competitive units continued to close down.

A profile of the major private sector plants is given below.



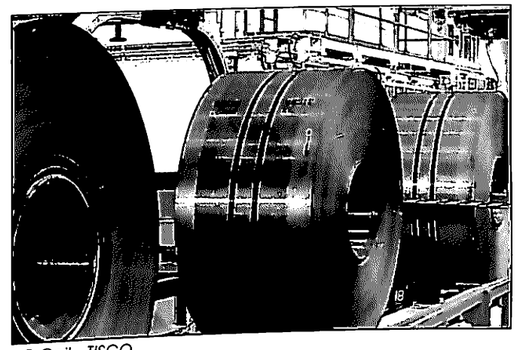
Slab caster, TISCO

The Tata Iron and Steel Company Ltd.(TISCO) was established by its founder, Sh. J.N. Tata. in 1907 at Jamshedpur, Bihar. The first ingots were rolled in TISCO in 1911. Asia's first and India's largest private sector integrated steel company, Tata Steel at the dawn of the new millennium, aims to become the supplier of choice by delighting its customers with its services and products.

The Company's four-phase Modernisation Programmes have enabled it to become one of the most modern steel making facilities in the world. The highly productive blast furnaces along with the LD Converters and its downstream continuous casting facilities provide a distinct edge that will enable Tata Steel to achieve its vision of becoming the world's lowest cost producer of steel. The Coke Ovens with stamp charging technology has helped the Steel Company to make blast furnace grade coke at the lowest cost in the world and drastically reduce wastage and also emission of pollutants. Tata Steel Commissioned its 1.2 million Cold Rolling Mill Complex at 'Record Speed and Cost' in April 2000.

The fifth phase of the Modernisation Programme, which has been launched recently, seeks to leverage the intellectual capabilities of its employees. Thus, Tata Steel by better knowledge management initiatives hopes to shift focus of its employees from creating new physical assets to utilising them with ingenuity and a sturdy business sense.

As a web-enabled enterprise, Tata Steel is rapidly linking up with its customers and suppliers. The implementation of SAP, an Enterprise Resource Planning software package, will ensure better customer order management and fulfillment. An



HR Coil, TISCO

Internet driven system, SAP will improve decision making during its operations by making data available on-line and allow customers to get information on their orders, through a robust B2B system. Besides, Tata Steel is also a pioneer in the creation of neutral B2B marketplaces, and has, among others, created one for steel, jointly with SAIL and Kalyani Steels. In addition to this, enterprise information and employee services are provided across major locations of the Company on its Internet.

Tata Steel has also been conferred ISO-14000 certification for the four critical units of the company - the Sukinda Chromite Mines, Noamundi & Joda Iron Ore Mines, West Bokaro Collieries and the Steel Works Division.

Performance of TISCO during the last two years are highlighted in the table given below:

Production:

(Unit: Million Tonnes)

Products	1998-99	1999-2000	April-Sept 1999	April-Sept. 2000
Crude Steel	3.264	3.434	1.669	1.794
Saleable Steel	3.110	3.287	1.579	1.755
Finished Steel	2.274	2.672	1.261	1.383

Performance Indices:

Items	1998-99	1999-2000	April-Sept. 99	April-Sept.2000
B.F.Productivity	1.32	1.40	1.38	1.44
A-F Furnace	2.19	2.25	2.20	2.07
G Furnace	543	541	546	554
Coke rate(Kg/tonne Hot metal)				
Specific Energy Consumption (G. cal/tcs)	7.997	7.78	7.967	7.475

New Steel Projects

The New Industrial Policy announced in July, 1991 has completely opened the iron & steel industry for private investment. Today, there are 19 new/green field steel projects sanctioned by the Financial Institutions involving a total capacity of approx. 13 million tonnes(Saleable Steel). The aggregate investment is over Rs. 30,000 crores.

Of the above, so far 8 units have been fully commissioned and 4 more units have partly commissioned manufacturing facilities. Thus, capacity to the tune of approx. 7 million tonnes have been added during the period. Some of the important players are Essar Steel Ltd., Lloyds Steel & Industries Ltd., Jindal Steel & Power Ltd, Jindal Vijayanagar Steel Ltd., Ispat Industries Ltd., Southern Iron and Steel Company Ltd. and Hospet Steel etc.

Brief Profile of a few plants are given below:

ESSAR STEEL LIMITED

Essar Steel Limited (ESTL) has set up a state-of-the-art hot rolled coil steel plant of capacity 2 million mt. per annum (MTPA) at Hazira, Gujarat which has subsequently been enhanced to 2.4 MTPA and is the fourth largest private sector company in terms of assets in the country. It is also the largest fully integrated manufacturer of high quality flat products in western India.

ESTL manufactures steel incorporating the latest technology through arc furnance route and is the largest of its kind in India. It is also the largest exporter of flat steel products from India and earned a 'Star Trading House' status from Ministry of Commerce, Government of India, within a span of only four years since it commenced exports. ESTL has exported 645,000 MT of flat products in the year 1999-2000 thereby earning valuable foreign exchange for the country. ESTL plans to touch an export target of 1 million MT in the next three years.

Some of the highlights of the year 1999-2000 are:-

- HRC sales grew 12% to 1.62 million MT from 1.45 million MT the previous year
- Largest exporter of HR coils from India for Fourth consecutive year
- Exports grew 46% to 0.64 Million MT, up from 0.44 Million MT over the previous year
- Export realisation grew 11% over the previous year
- Specific power consumption of liquid steel fell by 11%

The focus for 2000-2001

- Increase HRC production by 44% over 1999-00
- Reduce costs substantially through continous in-house research and development activities
- Restructure DEBT exposure to reduce DEBI and lower cost of funds
- Increase exports and tap newer international market

The production to man power ratio is upwards of 1000 MT per employee which is among the highest in the industry.

ESTL has a strong in-house R&D base which enables ESTL to continuously upgrade and improve upon the technology in order to improve quality of steel, increase productivity and reduce cost of manufacture through process re-engineering and bench marking.

ESTL has already received ISO 9002 and ISO 14001 status as a result of its constant endeavous to improve in all facets of Productivity and contribute to the growth of the country & economy in a significant way.

Financal highlights for third quarter ended December 2000:-

(Rs. In Crores)

Particulars	1999-2000 (upto 31.12.2000)	1998-1999(upto 31.12.1999	Previous year ended 31.3.2000
Total sales and other income	2016.38	1691.20	2470.15
Gross profit before interest, depreciation, tax etc.	517.91	190.17	370.17
Gross profit/loss before depreciation etc.	192.05	(-) 121.45	(-) 218.02
Gross profit loss before tax	20.97	(-) 395.56	(-) 580.72
Net profit (loss)	20.97	(-)3566.56	(-) 561.24

ISPAT INDUSTRIES LTD.

Ispat Industries Ltd. (formerly, Nippon Denro Ispat Ltd.) a company incorporated by the ISPAT INDIA Group started with setting up a galvanising line in Hingna Industrial Area near Nagpur, Maharasthra where the company later installed a modern Cold Rolling Mill and also a Colour Coating Line. The company subsequently commissioned a gas based sponge iron plant based on the MIDREX Mega Module at Geetapuram, Dolvi, Distt : Raigad in Maharasthra and significantly added to the Production/availability of sponge iron in the country. Post-liberalization, the Group came up with the idea of full integration at Dolvi with their intention of setting up forward steel making and rolling facilities to produce hot rolled steel flat products.

Trail runs of Phase- I of its 3 million tonnes per annum Hot Rolled Coils (HRC) at Geetapuram, Dolvi were started from 9.4.1998. This plant has successfully combined the latest technologies in steel making-the Thin Slab Casting (CSP) technology and the Conarc processes for steel making-for the first time anywhere in the world. the Phase-II of the Hot Strip Mill will also be commissioned shortly.

Within their integrated steel complex at Geetapuram, Dolvi, (under the banner of Ispat Metalllics India Ltd., Which is promoted by Ispat Industries Limited), They have successfully implemented 2 million tonnes per annum Blast Furnace, to produce pig iron/hot metal on 8th of May 2000. The operation of this unit is under stabilisation. Once operation is stabilised, it would regularly supply liquid hot metal for use in steel making operations of HSM. This would improve cost competitiveness of hot rolled coils which are now produced by using liquid hot metal, this would substantially reduce the usage of energy and consequential cost for the Hot Strip Mill Plant.

The plant, using State of the Art technology, conceived to roll thin guage HRC at Hot Strip Mill is the most energy efficient plant that has proved its mettle by using 100% solid DRI charge. With higher usage of Hot Metal from the Blast Furnace and with the CSP technology the plant is expected to be one of the lowest - cost steel producers in the world.

Within their integrated steel complex, a Captive Power under the banner of Ispat Energy Ltd. of 367 MW capacity is being set up for the steel plant. The company is also making efforts to enhancing sponge iron production to 1.77 million tonnes per annum.

The implementation of this programme will substantially bring down the fixed cost, interest and depreciation per tonne, thereby reducing the cost of production of Sponge Iron.

The continuous thrust of R & D has yielded very good results and has enabled establishment of new processes and development of new products, the highlights of which include use of Roof lance in EAF and production of steel by CO Arc process; oxygen Injection through the bustle pipe for raising the

Bustle Gas Temperature to 975 degree centigrade to improve the Sponge Iron Plant efficiency; addition of Carbide Stablizer in low carbon steel to improve the picklability of low Carbon Steel and improved passivation and avoiding clustering of DRI lumps by coating iron ore with lime slurry.

The new products developed include grades susch as API 5LX 65, API 55J and Corrosion Resistant High Tensile Steel; development of Boron treated low carbon steel for Cold Rolling Ultra Thin Gauges; production of Low carbon steel, containing micro alloying for medium tensile low temperature application and development of medium carbon steel containing 0.55% C through SCP route.

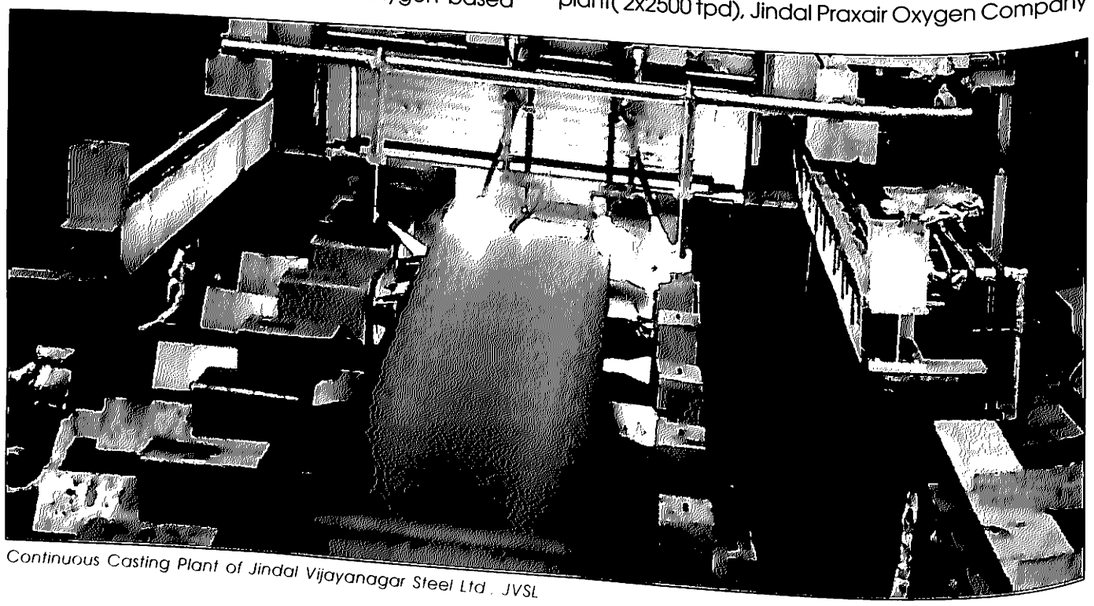
JINDAL VIJAYANAGAR STEEL LTD. (JVSL)

Jindal Vijayanagar Steel Ltd.(JVSL) has conceived as a eco-friendly green field integrated steel plant in Karnataka with a capacity of 1.60 mtpa hot rolled steel products.

JVSL, spread over an area of over 3500 acres in Toranagallu around 340 Kms from Bangalore, in the rich iron ore belt of Bellary-Hospet, is the only flat steel producer in South India, and the first integrated steel plant to use oxygen based iron making (COREX) technology in the country. The technology is based on use of iron ore lump/pellets and non-coking coal thereby eliminating sintering and coke oven plants- the two most polluting units in any integrated steel plant. The unit is based as 2x C-2000 modules of COREX Plant.

The steel making facilities include two 120T converters, a 1300T Mixer and two single slab casters of latest design from SMS Demag, Germany on a turnkey basis. The Hot strip Mill has been engineered by Denielli United, USA, incorporating the latest technology of coil box and a 250T walking beam furnace from Stein Heurtey, France. The other major units of the plant are, a 4.0 mtpa Raw Material Handling Plant and a 3.0 mtpa Pellet Plant from Kvaerner Metals, USA, besides a number of infrastructure and auxiliary units.

Another unique feature of the steel conglomerate is the integrated availability of the major inputs in one location. The joint Venture Power Plant (2x130MW) generate power from the Corex export gas. The world's largest air separation plant(2x2500 tpd), Jindal Praxair Oxygen Company Ltd., a joint venture with Praxair, USA, ensures availability of oxygen, while, the steel plant itself is assured of iron ore/fines from Vijayanagar Minerals Pvt. Ltd., a joint venture with Mysore Minerals Ltd.(Government of Karnataka undertaking).



Continuous Casting Plant of Jindal Vijayanagar Steel Ltd . JVSL

The JVSL project was started in 1994 and the trial production with the commissioning of Hot Strip Mill commenced in August 1997. With the commissioning of Corex -I for iron making and BOF steel making and 1st continuous slab caster in August 1999, the first phase of JVSL's integrated operation has commenced. The Pellet plant is scheduled to be commissioned by end of 2000 and the second Corex Unit and Continuous Slab Caster in the first quarter of 2001.

The pioneering efforts of Jindal Vijayanagar Steel Ltd., in introducing a revolutionary technology is expected to help the company in achieving a production cost of hot metal below $ 100 per tonne and making it one of the most cost competitive integrated steel plants.

Present performance in terms of production, productivity, specific consumption of inputs and quality is comparable with world standard. Since September 1999, JVSL has been exporting commercial grade HR coil to North Amercia, Canada & Europe. The company has already crossed the one lakh tonnes mark in exports.

JINDAL STEEL & POWER LTD.

Jindal Strips Limited has been restructured into its core strength areas, Stainless Steel, Sponge Iron and Power. The Raigarh and Raipur divisions of the company have been hived off to form Jindal Steel & Power Limited.

The focus area of the company is Sponge Iron, Mild Steel & Power. Sponge iron capacity has been recently expanded to 6.2 lakh tonnes per annum.

Other core strength of the company is Power. From the captive power generation capacity of 28 MW in 1995-96, the present generating capacity is 95 MW. The company is presently generating approx. 75 MW power out of which about 35 MW power is being supplied to Madhya Pradesh Electricity Board on regular basis. The company is using hot gases (generated during manufacture of sponge iron), coal washery rejects, char and coal fines for generation of power and this makes the operations highly economical and environment friendly. The captive power plant capacity is being further expanded by 110 MW. The company also has the facility to manufacture Mild Steel Slabs and Ferro Chrome. The company has gone in for backward integration by acquiring Iron Ore Mines at Tensa, Orissa and Coal Mines at Gare Coalfields, Raigarh, M.P.

To retain its dominant position in the industry, the company has initiated the following plans: -

1. Installation of 6th kiln and heat recovery boiler which will augment the Sponge Iron capacity by 1.20 lakh tonnes per year and power generation capacity by 7.5 MW. The 6th kiln has since been commissioned in Sept. 2000.
2. Up-gradation of steel making facilities including Vacuum Degassing for making quality steel at Raigarh with a long term contract signed with Maharashtra Seamless Limited for supply of Mild Steel rounds.
3. Setting up of hot metal facilities (Mini Blast Furnace) to substantially reduce the cost of steel making and improve productivity of Electric Arc Furnace.
4. Setting up additional captive power plant of 110 MW to ensure consistent and reliable quality power supply.
5. Forward integration by setting up of a Universal Beam/Rail Mill for production of heavy structural and rails. It would be the only plant in the country to produce 'H' beams in bigger sizes and rails of 78 meter length.
6. Expansion projects for augmenting captive mining in Coal & Iron Ore with a coal washery at the pithead.

PRODUCTION PERFORMANCE

Production	Unit	1997-98*	1998-99** (15 Month Period)	1999-2000 (9 Month Period)
Sponge Iron	M.T.	376,631.00	497,379.77	320,838.00
Power	KWH	408,458787	557,035,760	392,810,850

* THE FIGURES ARE OF THE RAIGARH DIVISION OF JINDAL STRIPS LIMITED

** THE FIGURES INCLUDE THE PRODUCTION OF 01 APRIL 1998 OF THE RAIGARH DIVISION OF JINDAL STRIPS LIMITED

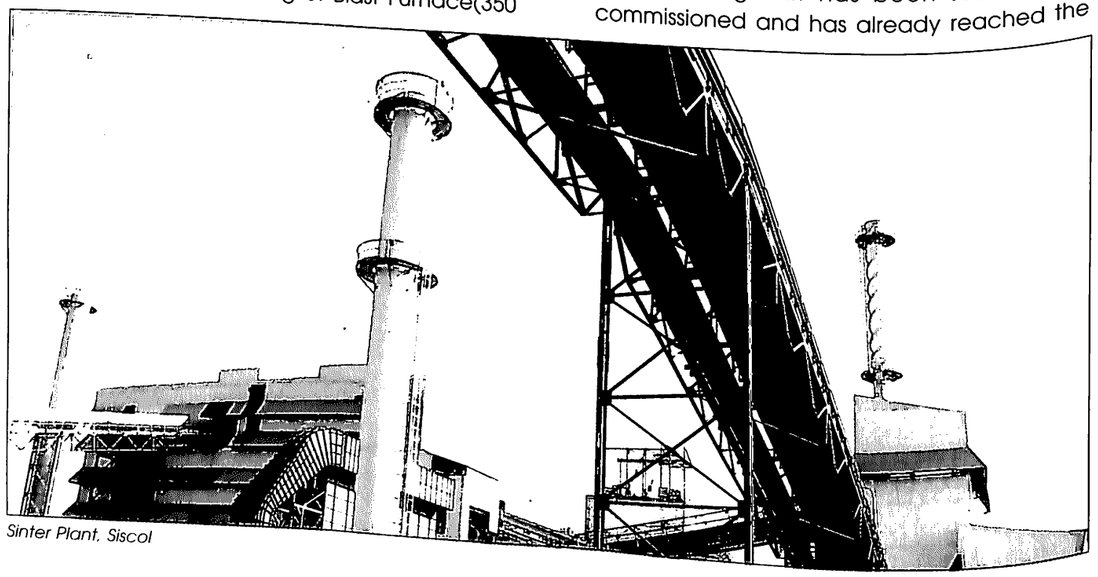
SOUTHERN IRON AND STEEL COMPANY LIMITED (SISCOL)

Southern Iron and Steel Company Limited(SISCOL), incorporated in Septmeber 1991 is a Public Limited Company promoted by M/s Lakshmi Machine Works Ltd.(LMW) and Tamil Nadu Industrial Development Corporation Ltd.(TIDCO). The Company has put up an integrated Steel Plant at Pottaneri, M.Kalipatty villages, about 35 Kms from Salem and about 12 Kms from Mettur for manufacture of pig iron, billets and bars & rods.

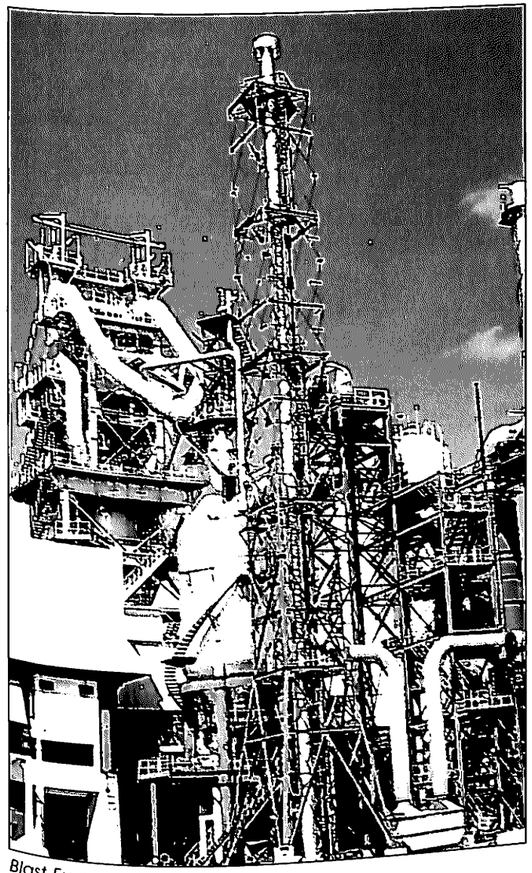
The plant consists of 3 main sections, viz.,

(i) Iron Complex, consisting of Blast Furnace(350 cubic meter useful volume) , Sinter Plant (425 TPD) and a 2-strand pig casting machine, capable of making pigs upto 22 kg per piece with single notch. The commercial production of pig iron has commenced from July 1996 and the Sinter Plant has also been commissioned from August 1997. The nominal capacities of Blast Furnace and Sinter Plant per annum are 2,32,750 tonnes and 1,41,000 tonnes respectively. The blast furnace has consistently produced more than twice the useful volume, daily.

(ii) Steel Making and Concast, consisting of 30 T Energy Optimising Furnace (EOF), 30 Tonne ladle furnace and 2-strand concast machine of 9/16 radius, capable of casting 100 mm sq. to 200 mm sq. The nominal capacity of liquid steel production is 2,69,000 tpa. The steel making unit has been successfully commissioned and has already reached the rated production. An Argon rinsing plant is also being provided before the Concast Machine.



Sinter Plant, Siscol



Blast Furnace, Siscol

(iii) Rolling and Finishing Mill consisting of 22 stand Bar & Rod mill preceded by a 3-high break-down stand. This is a continuous, versatile mill capable of producing up to 300,000 tonnes per annum of bars and rods from 6 mm to 55 mm sq. hexagons and flats in various grades of steel ranging from mild steel, medium carbon steel, high carbon steel, low alloy steel, electrode quality and stainless steel. The mill has finishing facilities for special quality bar including shot blasting machines, straightening machines and on-line inspection. The Mill has already been commissioned and is under trial production.

STEPS TAKEN BY GOVERNMENT TO ASSIST THE LAST-MILE PROJECTS

Most of the steel projects under implementation in the private sector have been facing time and cost over-runs mainly due to the following two factors:

(i) Inability of the promoters to bring in the equityor debt as per the envisaged means of financing.

(ii) Inability of the promoter to generate cash from their existing business, if any, because of global slumps and general slow-down in the economy.

Government has been taking several steps to help the Steel Industry. Ministry of Steel has constituted a Project Co-ordination Group (PCG) under the Chairmanship of the Steel minister to interalia, address the fund problems of the newly commissioned and up-coming steel plants. So far, two meetings of the Group have been held wherein problems of individual units have been discussed with the Financial Institutions and remedial measures have been suggested.

A profile of the private sector units and their sub-sector wise performance is an under :-

1. ELECTRIC ARC FURNACE UNITS

(i) Status	Number	Capacity (In Tonnes)
Commissioned Units	188	12055860
Closed Units	147	5614860
Working Units	41	6441000

(ii) Production

(In '000 tonnes)

Category	1997-98	1998-99	1999-2000	2000-01 (Apr.-Sept., 2000)
Mild Steel	1509.60	1119.5	932.5	582.5
Medium/High Carbon Steel	1183.20	1223.2	1313.8	725.8
Alloy Steel	1093.10	769.5	966.8	360.3
Stainless Steel	146.20	314.3	382.1	223.9
Others	2.80	92.2	108.9	79.0
Total Reported	3934.90	3518.7	3704.1	1971.5
Total Estimated	125.40	129.6	931.2	480.6
Grand Total	**4060.30**	**3648.3**	**4635.3**	**2452.1**

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

2. HOT ROLLING MILLS (FOR LONG PRODUCTS)

(i) Status

	Number	Capacity (In Tonnes)
Commissioned Units	1215	24056747
Closed Units	466	8338659
Working Units	769	15718088

(ii) Production

Production of Hot Rolled Long Production manufacturing units which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

Category	1997-98	1998-99	1999-2000	2000-01 (Apr.-Sept., 2000)
Bars/Rods (Incl. Squares)	1836.5	2108.0	2257.7	1112.5
Wire Rods	1023.4	935.2	774.1	394.2
Structural	814.6	969.4	877.9	433.9
Hoops	0.2	6.0	14.1	3.8
Special Sections	489.7	270.0	239.5	113.1
Slabs/Plates	0.6	406.6	534.5	262.6
Total Reported	4165.0	4695.2	4721.5	2320.1
Total Estimated	2147.2	1873.1	2072.5	985.4
Grand Total	**6312.2**	**6568.3**	**6794.0**	**3305.5**

3. HOT ROLLING MILLS (FOR LONG PRODUCTS)

(i) Status

	Number	Capacity (In Tonnes)
Commissioned Units	12	6302500
Closed Units	5	262500
Working Units	7	6040000

(ii) Production

Production of Hot Rolled Steel Sheets/Strips, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years is given below: -

Category	1997-98	1998-99	1999-2000	2000-01 (Apr.-Sept., 2000)
Hot Rolled Steel Sheets/Strips	2254.5	2604.9	3897.2	2023.0
Plates	227.7	288.8	279.8	76.5
Total Reported	2482.2	2833.7	4177.0	2099.5
Grand Total	**2556.0**	**2833.7**	**4177.0**	**2099.5**

4. COLD ROLLING MILLS

(i) Status

	Number	Capacity (In Tonnes)
Commissioned Units	79	3994921
Closed Units	20	301580
Working Units	59	3693341

(ii) Production

Production of Cold Rolled Steel Sheets/Strips Units, which are reporting their production to the Office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

(In '000 tonnes)

Category	1997-98	1998-99	1999-2000	2000-01 (Apr.-Sept., 2000)
Mild Steel	1558.9	1960.0	2417.4	1260.1
Medium Carbon Steel	79.6	55.7	106.1	57.7
High Carbon Steel	-	—	-	-
Alloy Steels	0.6	1.3	0.7	0.1
Stainless Steel	22.3	29.3	33.7	31.1
Others	67.5	43.4	163.0	74.0
Total Reported	1728.9	2089.9	2721.0	1423.0
Total Estimated	205.5	228.2	212.1	39.8
Grand Total	**1934.4**	**2318.1**	**2933.1**	**1462.8**

5. GP/GC, PVC/VINYLE COATED SHEETS/STRIPS UNITS

(i) Status

	Number	Capacity (In Tonnes)
Commissioned Units	19	1603250
Closed Units	3	84500
Working Units	16	1518750

(ii) Production

Production of GP/GC Sheets/Strips Units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years is given below: -

Category	1997-98	1998-99	1999-2000	2000-01 (Apr.-Sept., 2000)
GP/GC Sheets/Strips (including colour coated)	777.7	911.1	1144.1	587.2
Total Reported	777.7	911.1	1144.1	578.2
Total Estimated	-	-	-	-
Grand Total	777.7	911.1	1144.1	587.2

6. TIN PLATE UNITS

(i) Status

	Number	Capacity (In Tonnes)
Commissioned Units	3	151638
Closed Units	1	60000
Working Units	2	91638

(ii) Production

Production of Tin Plate Units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

(In '000 tonnes)

Category	1997-98	1998-99	1999-2000	2000-01 (Apr.-Sept., 2000)
Oil Can Size/ Non Oil Can Size	39.0	66.7	92.9	49.9
Total Reported	53.5	66.7	92.9	49.9
Total Estimated	-	-	-	-
Grand Total	**53.5**	**66.7**	**92.9**	**49.9**

7. STEEL WIRE DRAWING UNITS

(i) Status

	Number	Capacity (In Tonnes)
Commissioned Units	90	1190805
Closed Units	47	507467
Working Units	43	683338

(ii) Production

Production of Steel Wire Drawing Units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last three years and current year is as under: -

Category	1997-98	1998-99	1999-2000	2000-01 (Apr.-Sept., 2000)
Mild Steel	125.0	128.1	118.3	60.8
Medium/High Carbon Steel	221.6	204.6	210.9	94.7
Alloy Steel	9.0	10.4	10.2	5.7
Stainless Steel	13.9	13.5	11.4	5.6
Others	12.9	12.3	6.6	3.0
Total Reported	382.4	368.9	357.5	169.8
Total Estimated	94.3	48.8	32.8	11.6
Grand Total	**476.7**	**417.7**	**390.3**	**181.4**

PIG IRON INDUSTRY:

1. Pig Iron is one of the basic raw materials required by the foundry and casting industry for manufacture of various types of castings for the engineering sector.

2. Post liberalization, considerable interest was shown by a large number of entrepreneurs, for setting up Mini blast Furnaces for production of hot metal/pig iron. The Financial Institutions/ Commercial Banks have sanctioned financial assistance to 21 units with gross hot metal capacity exceeding 4.8 million tonnes per annum. So far, 17 units have already been commissioned, 3 remaining units are at various stages of implementation and one unit is lying closed after part implementation.

3. Commissioned Pig Iron Units are mostly stand-alone type. One unit at Jamshedpur namely, Usha Martin Industries Ltd. has integrated the Mini Blast Furnace(MBF) with Electric Arc Furnace(EAF) and is using the hot metal in the charge-mix directly for manufacture of steel. One unit each at Karnataka (M/s. Hospet Steel, a Joint Venture of Kalyani & Mukand) and Tamilnadu (M/s. Southern Iron & Steel Company Ltd.) has integrated their MBF with Energy Optimisng Furnace (EOF) for manufacture of steel. The excess hot metal produced by them supplements the pig iron production.

Besides MBFs, a COREX Plant(alternative to conventional MBF/BF) along with down-stream steel making through Basic Oxygen Furnace (BOF) which has been commissioned in Karnataka by Jindal Vijaynagar Steel Ltd., also supplements the production of pig iron. In addition, very recently, Ispat Metallics (India) Ltd. has set up a large blast furnace to produce approx. 1.8 million tpa hot metal/pig iron. The excess hot metal after meeting the requirement of their parent company(Ispat Industries Ltd.) for manufacture of steel will be available as pig iron for sale.

The gross pig iron manufacturing capacity in the secondary sector as on October 2000 is approx. 3.5 million tonnes.

4. The Sector/company-wise production of pig iron during the last 5 years are given in the following table:

(Million Tonnes)

Sl.No	Name of the unit	1996-97	1997-98	1998-99	1999-2000	2000-01 (April- Sept.)
1.	SAIL	0.68	0.78	0.74	0.60	0.20
2.	IISCO	0.35	0.40	0.34	0.38	0.15
3.	RINL	0.70	0.52	0.27	0.25	0.10
4.	Total Main Producers	1.73 (52%)	1.70 (50%)	1.35 (45%)	1.23 (39%)	0.45 (29%)
5.	Private/Secondary Producers	1.57 (48%)	1.69 (50%)	1.64 (55%)	1.95 (61%)	1.06 (71%)
	Grand Total	**3.30**	**3.39**	**2.99**	**3.18**	**1.51**

NB:The figures within brackets indicate the percentage contribution by the respective sectors.

It may be noted that the contribution of the private/secondary sector units has increased from 55% in 1998-99 to 61% in 1999-2000. During the current year first half also, the private/secondary sector units have achieved still higher contribution of 71% in the overall production. This is mainly because of decreasing production of pig iron by SAIL and RINL and setting up of new units in the private sector.

The Pig iron industry continues to pass through difficult times. Several blast furnaces/units remained closed down. After a recovery in the 1st quarter during the current year, the industry is again faced with problems due to stagnant demand and depressed market conditions, global slump, declining price, increasing price of metallurgical coke, sharp decline in the value of Indian Rupees etc.. Government have taken several measures for the benefit of the industry. The Industry has been exempted from the purview of anti-dumping duty on imported metallurgical coke w.e.f. 19.5.2000.

Sponge Iron industry

Presently there are 29 units covering a capacity of 6.43 million tonnes per year. Out of these, there are 3 coal based units covering a capacity of 3.73 million tonnes per annum and 26 gas based units, covering a capacity of 2.67 million tonnes per annum.

Production of Sponge Iron Units, which are reporting their production to the Office of the Development Commissioner for Iron & Steel during the last three years and current year given as under:-

(In '000 tonnes)

	1997-1998	1998-1999	1999-2000	2000-2001
Total Reported	5325.0	5165.7	5328.4	2757.2
Total Estimated	—	—	—	—
Grand Total	5325.0	5165.7	5328.4	2757.2

RESEARCH & DEVELOPMENT

Empowered Committee on Research & Development

In accordance with the decision of the Government of India to spend upto Rs. 150 crore per annum to supplement Research and Development activities in the iron & steel sector, an Empowered Committee (EC) has been set up. The EC advises Ministry of Steel on the policies and programmes which need to be pursued in developing domestic capabilities in scientific and technological research, development of design, engineering and research in the iron and steel processes and products.

It approves Scientific Research Programmes, considers and approves specific research projects and proposals for funding fully or partially from Steel Development Fund (SDF) and provide overall direction to the total research effort in iron and steel in the country.

Secretary, Ministry of Steel is the Chairman of the Empowered Committee and representatives of major steel producers and other experts in the field are its members.

Research and Technology (R & T) Mission which will work as the Secretariat of the Empowered Committee, is under formulation. The report of a sub-committee for drafting the Memorandum of Association, Rules and Regulations etc. for registration of R&T Mission under Indian Societies Act (Act No. XXI, 1860) has been discussed and approved by the Empowered Committee. The same has been sent to Ministry of Law and Justice for vetting. The work of Research and Technology Mission is at present being carried out by Technical Wing of Ministry of Steel.

Since 1998-99, the Empowered Committee has met, four times, up to 31.1.2001. The EC has approved 21 research proposals from both public and private undertakings, research laboratories, educational and other promotional institutions. The research areas covered by these projects include mining and beneficiation of ores, improvement of productivity of plants and quality of products, development of human resources, reduction of costs etc. in Indian iron and steel plants. The total cost of these 21 projects is Rs. 149.98 crore. Out of this, Rs. 79.69 crore is to be met from Steel Development Fund. The amount has been released as follows :

(Rs. in crore)

Sl. N.	Year	R&D Projects	Other science and Technology related projects	Total
1.	1997-98	0.04	0.08	0.12
2.	1998-99	1.38	0.04	1.42
3.	1999-2000	24.52	Nil	24.52
4.	2000-2001 (April-Jan 2001)	24.64	Nil	24.64

Out of the 21 projects, two projects have been completed, one has been stopped and 18 are still continuing.

Research & Development Activities by Iron and Steel Producers :

Iron and Steel producers, both in the public and private sector, continued to pursue their research and development activities to deal with their plant specific problems, assimilate and innovate newer technologies, utilise Indian minerals and raw materials in larger proportion, reduce pollution, conserve energy and reduce cost of production.

Total amount of money spent on Research and Development by iron & steel plants and other related industries during last three years were as follows:

(Rs. in Crore)

	1998-1999	1999-2000	2000-2001 (April-Sept. 2000)
Public Sector			
Steel Authority of India Ltd.	44.50	44.46	25.06
Rashtriya Ispat Nigam Ltd.	2.50	2.50	1.20
National Mineral Dev. Corpn.	4.72	5.40	2.49
Kudremukh Iron Ore Co. Ltd.	0.60	2.30	0.30
Manganese (Ore) India Ltd.	0.93	0.77	0.31
Sponge Iron India Ltd.	0.03	0.06	0.01
Bharat Refractories Ltd.	0.82	0.81	0.41
Sub Total (a)	**54.10**	**56.30**	**29.78**
Private Sector			
Tata Iron & Steel Co. Ltd.	13.50	13.65	-
Mukand Ltd.	0.77	0.47	0.13
Sunflag Iron & Steel Col Ltd.	0.15	0.31	0.06
Usha Martin Industries Ltd.	0.01	0.005	-
Jindal Vijay Nagar Steel Ltd.	0.00	0.12	9.50
Ispat Industries Ltd.	3.50	8.00	3.00
Lloyds Steel Industries Ltd.	0.10	0.15	0.20
Sub Total (b)	**18.03**	**22.705**	**12.89**
Grand Total (a+b)	**72.13**	**79.005**	**42.67**

Performance of individual/undertakings during 2000-2001 are reported to have been as follows:

Steel Authority Of India Limited (SAIL)

Research and Development Centre of SAIL completed 78 projects during the year 2000-2001. Major part of R & D efforts have provided technological inputs to SAIL plants/units that have resulted in cost reduction, value addition, quality improvements and development of new product.

During the year, R & D Centre has filed 30 Patents including a foreign Patent. For the first time, 3 foreign patents filed earlier were sealed during the year along with an Indian Patent. Moreover 15 copyrights were filed & 16 copyrights filed earlier have been granted.

Technology marketing efforts through consultancy, know-how transfer and Royalty yielded an external earning of about Rs. 78 lakh during the year. RDCIS undertook contract research work from Ministry of Steel (SDF assisted projects) and Ministry of Information Technology (Department of Electronic). Four projects of National importance have been approved by Empowered Committee to be pursued by SAIL with a cumulative SDF assistance of about Rs. 38.87 crore for a period of three years. These projects are as follows :

- To achieve Refractory Consumption of international bench-mark level in integrated steel plants, being pursued solely by RDCIS.
- Simultation of Thermo-mechanical Processing and Hot Workability studies of High Strength Steels, being pursued solely by RDCIS.
- Production of Continuously Cast Billets/Blooms of quality suitable for single stage conversion, being jointly pursued by RDCIS & TISCO.
- Maximising BF productivity with Indian Iron Ores, being jointly pursed by RDCIS, TISCO & NML and would be collaborated with a large number of institutes including IITs, IISc. (Bangalore), IGCAR (Kalpakkam) etc.

Specific Areas in which R&D Activities were Carried Out by the Company include:

- Quality Improvement
- Yield/Productivity Improvement & Cost Reduction
- Energy Conservation
- New Technology/Product Development

Benefits Derived as a Result of R&D Efforts

Quality Improvement

- Improvement in quality and yield of ETP grade of steel at RSP has been achieved with improved chemistry and optimisation of hot rolling parameters. HR coils of desired hardness could be produced with increase in prime yield of ETP coils from 20 to 50% and overall yield improvement by 10% (from 60 to 70%).
- Treatment of SPADE plates through water quenching at RSP has resulted in full fibrous structure in the fractured surface leading to acceptance level of 100%.

Yield/Productivity Improvement

- An average productivity of 0.936 t/m3/day in BF # 2 & 3 at RSP could be achieved by adjustment of burden distribution, increase in screening time of sinter, ore & coke, increased No. of cast/day, regular flushing of alkali by lean slag practice & control of slag chemistry operating furnaces at RAFT of 1900 + 25°C and maintaining K.E. of blast at 4500 Kg.m./sec.
- For improving performance of Wheel & Axle Plant in DSP, process technology has been developed for VAD operation and 3 ppm hydrogen in liquid steel has been achieved on consistent basis. Modified practices for teeming, forging, rolling, heat treatment and machining of wheels have been introduced. Block heating furnace control has been computerised. These technological inputs have increased the yield of ingot from liquid steel to 80% and of finished wheels from ingot to 68% (from 45%).

Development of Decision Support System for minimum cost hot metal production, RDCIS :

- A mathematical model was developed simulating various plants operating and cost parameters leading to production of hot metal at minimum cost.
- The model is being tested at BSP in its Coke Oven, Blast Furnace complex. Initial results with the use of 67.5% imported coal in the coal blend, indicated a cost saving of about 100/- per ton of hot metal under New technology/Product Development.

Energy Conservation

- Gaseous energy consumption at SP # 1 at RSP has been reduced by 10% by modification of wind boxes, introduction of electricity operated damper control system for ignition hood; introduction of permeability bars and reduction in air infiltration in suction track. This resulted in an increase in bed height by 7%, increase in specific productivity by 7.5%.
- Introduction of dual fuel burner in rotary kilns of RMP-I and II at BSP has resulted in flexible burner operation leading to saving of liquid fuel and elimination of pulverised coal firing and pollution.
- Low thermal mass lining in annealing Furnace of heat treatment shop at ASP has shown 25-30% saving of energy and 6% increase in furnace availability. The shell temperature has come down by 30°C.

New Technology/Product Development

- Process technology has been developed for production of EDD steel with superior formability properties through CC route with close control of chemistry and hot rolling parameters, maximisation of cold reduction and improved annealing cycle.
- Process chart for API X 65/X-70 grade plates at BSP has been redesigned with respect to draft, speed and thermal regime in roughing and finishing stands to avoid overloading; line pipe steel plate upto 25mm thickness was successfully rolled conforming to specification.
- Technology of slag splashing in BOF of SMS-II at BSL has been introduced. SOS has been formulated for coating of different zones of the lining. Addition of dolo-chips, during blowing has also been introduced. This technology has increased the average lining life of BOF to 697 heats from earlier level of 557 heats.
- For market promotion of special steel product at BSL, special steel grades with high contribution and good marketing potential were identified. Process chart was developed and 20,000 t of steel despatched to customers.

R&D Expenditure

(Rs. in crore)

	1998-99	1999-2000	2000-2001 (April-Sept. 2000)
Capital	4.82	5.45	1.86
Revenue	39.68	39.01	23.20
Total	44.50	44.46	25.06

The Tata Iron and Steel Company Limited (TATA STEEL)

Objectives

R&D activities of Tata Steel are primarily directed:

- To make Tata Steel a Profitable & World class producer of Quality Steels.
- To identify and develop new products and processes so that the Company stays ahead of its competitors.

Significant achievements during 2000-2001 :

- Use of ternary blend of semi soft coal tailored to the requirement of coke making and for blast furnace injection have been established through plant scale trials. Additionally two new sources have been identified & recommended for plant scale trials.
- Car body components (eg. Fender reinforcements) have now been press-formed successfully at Hyundai plant, Chennai, from their IF-HS grade (earlier Telco have used them successfully for Indica exterior). More heats of IF-HS have now been rolled for further commercial supply.
- Technology for manufacturing Fly Ash Bricks is ready for transfer to a local entrepreneur.
- R & D studies on lowering the feed rate & use of viscosity modifier have been tried; preliminary plant data have shown that the yield in composite clean coal can be substantially (~ 3%) enhanced. Further confirmatory plant trials are planned to establish the same.
- A coke breeze combusting enhancer for sintering process has been selected based on pot-grate tests; this is expected to increase sinter plant # 2 productivity by 2t/m2/d.
- A process of pre-pelletisation of LD sludge has been developed which on implementation is expected to increase sinter plant productivity by 0.3t/m2/d.
- The off-line simulator for predicting the properties of low carbon HR coils has now been fully developed and extensive on-line validation with data from HSM done.
- A software (BASIM) for understanding the batch-annealing process has been developed in collaboration with TRDDC, Pune.
- An understanding of the blast furnace hearth erosion has been developed through mathematical modeling and has been demonstrated to BF group.
- Inclusion precipitation model of Mn-Si-Al deoxidation for low carbon steel has been developed.
- Several plant trials concerning dephosp-horisation of BOF slag have been conducted; FeSi powder addition has given encouraging results; more trials are on the anvil.

R&D Expenditure

(Rs. in Crore)

Year	Turnover	Expenditure R&D	R&D Expenditure as % of turnover
1998-1999	6335	13.50	0.213
1999-2000	6943	13.65	0.196

Rashtriya Ispat Nigam Ltd. (RINL)

Objectives

R & D activities of RINL are primarily directed towards trouble shooting, process improvement and product development.

Significant Achievements during 2000-2001

New Products developed

- EN 15B Rounds
- Corrosion Resistant Rebars
- 20 Mn Cr 5 Billet for forging industry
- SAE 1541 Billets for forging industry

New Sections rolled

- 13 mm Wire Rods in WRM
- 16.5 Plain, 34 Plain & 36 Rebars in Bar Mill
- 71,77 and 80 mm rounds in MMSM

Process improvements

- Successful trials of converter blowing with 5 holes lance
- Pot sintering in laboratory to evaluate the physical properties of sinter with use of ilmenite sand
- Process development and slag chemistry control for producing value added steel through ladle furnace route.
- Introduction of on-line test certification for despatches of coils and rounds
- Condition monitoring of TOCB by Ultra-sonic examination

The energy consumption for the last three years has been as under :-

Year	G.Cal/t of liquid steel
1998-1999	8.17
1999-2000	7.51
2001-2001 (April-Sept. 2000)	7.49

R&D Expenditure

(Rs. in crore)

Year	Turnover	Expenditure R&D	R&D Expenditure as % of turnover
1998-1999	2761	2.5	0.090
1999-2000	2973	2.5	0.084
2000-2001 (April-Sept. 2000)	1505	1.2	0.079

Manganese Ore (India) Ltd. (MOIL)

Objectives and thrust area

The R&D efforts in MOIL have mainly been directed in the following areas:

(i) Development of alternative Mining and Support methods.

(ii) Exploratory Core drilling, Trenching, Pitting etc. for locating new reserves and upgrading the confidence level of the existing reserves.

(iii) Beneficiation of medium and low grade ore as well as medium grade Dioxide ore to battery grade.

(iv) Development of processes for manufacture of Manganese base compounds.

(v) Improvement of surface environment around mining areas.

R&D Expenditure

(Rs. in crore)

Year	Turnover	Expenditure R&D	R&D Expenditure as % of turnover
1998-1999	118.27	0.93	0.78
1999-2000	134.11	0.77	0.57
2000-2001 (upto Oct. 2000)	81.20	0.31	0.38

In addition to above efforts MOIL has undertaken several Research & Development Schemes for technology upgradation and conservation/optimum utilisation of valuable mineral resources, resulting in reduction in cost of production, improvement in productivity and safety. Some of these schemes are as under :

- Use of Cable Bolting and Steel Roof Support in Underground Mines
- Use of Sand Stowing in Underground Mines in place of manual filling.
- Improvement in Underground Mining Support methods including Geotechnical investigation and Cavability studies.
- Diamond Drilling to locate new Manganese bearing areas and prove further reserves in the existing leasehold areas in greater depth by use of latest technology.
- Beneficiation of medium low grade ores as well as medium grade dioxide ore to battery grade.
- Optimisation of process parameters for EMD Plant.

MECON Ltd.

The major R&D efforts made by MECON Ltd. during 1999-2000 were as under:

1. Rapid Water Quenching System was developed for thermo -mechanical treatment of rebars .Order for supply of bar has been received from Indian Iron & Steel Co Burnpur and Southern Iron & Steel Company Ltd. TamilNadu
2. An in-house developed Optical Setting Project for alignment of finishing mill guides of wire Rod Mill supplied to VSP.
3. Laser Line Projection System to align long sheet /plate in Side trimming Machine is developed and work order for supply of two such systems has been received from Bhilai Steel Plant
4. The development of Solid State Cooling Garment for Tank Crew is under progress.
5. The development of Thermoelectric Cooling boxes is completed

Bharat Refractories Ltd. (BRL)

During the year 1999-2000, in-house R&D was carried out in respect of the following are:

1. Improving the life of MCB used in LD converters
2. L.D.Gunning Mass
3. Fireclay Bricks for capital repair of coke-oven of BSL
4. ZCC quality refractories used in different areas i.e. ladle purging system
5. Tundish well block etc.
6. Ladle well mix
7. Inflow mass for S/G system

Most of the above products are developed and commercialised which inturn, resulted in an upward thrust towards the performance of the Company.

Expenditure on R&D during 1999-2000 was Rs. 81.83 lakh.

National Mineral Development Corporation (NMDC)

Objectives

The R & D projects are taken up in line with the Company's policies and programmes with a view to achieve optimum utilisation of mine wastes and production of value added products.

Highlight of R&D Activities:

(a) Pilot Demonstration of Water Filter candles / column made from Kimberlite waste for removal of Fluoride from drinking water rich in fluoride content.

(b) Production of Ferrite powders from Blue Dust concentrate/UPFO

(c) Production of Carbon free sponge iron powder and development of value added products there of.

(d) Production of synthetic rutile, pig iron and High Pure Iron Oxide from ilmenite concentrate obtained from Bheemunipatnam beach sand.

R&D Expenditure

(Rs. in crore)

Year	Turnover	Expenditure R&D	R&D Expenditure as % of turnover
1998-1999	725.23	4.72	0.65
1999-2000	786.16	5.40	0.69
2000-2001 (April-Sep., 2000)	447.28	2.49	0.56

Kudremukh Iron Ore Company Ltd. (KIOCL)

Objectives

Objectives of R&D activities at KIOCL are directed towards quality improvement through process development / modifications to suit multi-product needs and to modify Process Flow Chart to cater to the present run of mine ore characteristic.

R&D activities undertaken at KIOCL include implementation of new technology / processes like column flotation and high rate thickner for reduction of silica in final product to enable value addition and ensure better quality pellets. By introduction of these techniques the concentrate quality has shown improvement with the higher Fe and reduction in silica in the product.

Highlight of R & D activities during 2000-2001

a) Feasibility report on the recovery of iron value from tailings were taken up in consultation with Mineral technologies, Australia.

b) Preliminary tests on primary ore samples were conducted in Canada to establish the ore characteristics.

c) Nellibeedu Ore characteristic were tested at Kudremukh in-house laboratory. Grant of mining lease for this deposit is awaited for further study.

d) M/s J.K. Tech of Australia were engaged for studies on optimization of energy consumption for Ball Mill regrinding circuit as grinding consumes major portion of energy for the process requirement.

e) M/s Met-Chem of Canada have been engaged for mathematical modeling and detailing statistical process control methods for pelletisation. This work has been completed and implemented.

f) In 1999-2000, study on possibility of using Bellay - Hospet iron ore in pellet making was taken up. Initial trials have been undertaken. Further Plan scale are under progress.

R&D Expenditure

(Rs. in crore)

Year	Turnover	Expenditure R&D	R&D Expenditure as % of turnover
1998-1999	547.00	0.60	0.11
1999-2000	620.79	2.30	0.37
2000-2001 (April-Sep., 2000)	213.02	0.30	0.14

Mukand Limited

R & D Achievements

1. Management of inclusions which are formed during continuous casting, manouvering them as harmless phenomena for preserving steel quality.
2. Elimination of surface defects in En 1 A (leaded) steel bars for further improvement in quality.
3. Development of polycoat paints for improving the surface condition of engineering components.
4. Characterizing steels in relation to the effects of contaminants in alloy grades, input materials and establishing remedies.
5. Cost reduction in heat treatment through development of correlation between spheroidizing process and properties of steels.
6. Development of C-45 material for application in crane wheels manufacturing.

Expenditure on R&D

(Rs. In Crore)

Year	Turnover	Expenditure R&D	R&D Expenditure as % of turnover
1998-1999	706.24	0.77	0.11%
1999-2000	844.79	0.47	0.05%
2000-2001 (April-Sept. 2000)	-	0.13	-

Sunflag Iron & Steel Company Ltd.

Highlights of R&D activities

- Re-installation of dolomite weighs feeder to improve process for DRI-sulphur control.
- Wet scrubber for handling cooler steam has been modified for better pollution control.
- Successful development of further qualities in Alloy Steel.
- Modification of oxygen injection system.
- Development of higher sections of forging quality steel.

Energy consumption

The following measures were taken during the year under review for conservation of energy :

a) Review of compressed air usage has resulted in power savings.

b) EAF electric regulation optimization has been undertaken to achieve lower rate of power consumption on account of melting.

c) At BSM, 90 KW of primary descaler and 45 KW motor of secondary descaler have been replaced by lower capacity motors of 45 KW and 30 KW respectively.

d) Reduction of MVA demand by proper planning has resulted in considerable saving in energy cost.

R&D Expenditure

(Rs. in crore)

Year	Turnover	Expenditure R&D	R&D Expenditure as % of turnover
1998-1999	352.00	0.1498	0.050
1999-2000	421.00	0.3127	0.075
2000-2001 (April-Sept. 2000)	256.00	0.0645	0.025

Usha Martin Industries

Highlights of R & D activities

i) Development of black auto spoke wire for two wheeler automotive - industries and healed wire for textile industries.

ii) Process modification of shaped wire 11 le for LCWR ropes.

iii) Development of elevator ropes for international market.

Energy Consumption

(kwh/tcs)

1998-1999	1999-2000	2000-01 (upto Sept. 2000
346	350	326

R&D Expenditure

(Rs. in crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of turnover
1998-1999	361.92	0.0133	0.003
1999-2000	385.45	0.0050	0.002
2000-2001 (April-Sep., 2000)	214.87	0.0000	0.000

Ispat Industries Limited

Ispat Industries Ltd. will have tie up with many research institutions and organizations like I.I.T, Mumbai, I.I.T, Chennai and National Metallurgical Laboratory, Jamshedpur for following R & D projects :

i) Development of Ferritic Rolling for production of thin gauges,

ii) Development Ferritic Stainless Steel.

iii) Development of Iron Carbide

iv) Cold briquetting of Iron Ore fines.

v) Development of Grades such as API 5LX65, API 55J and Corrosion Resistant High Tensile Steel.

vi) Development of Boron treated low Carbon steel for Cold rolling Ultra thin Guages.

vii) Replacement of Cold Rolled Steel by thin Guage HR for D/DD application.

Expenditure on R & D

(Rs. In Crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of turnover
1998-1999	1442.63	3.50	0.24
1999-2000	1425.48	8.00	0.56
2000-2001 (April-Sept. 2000)	1168.08	3.00	0.25

Jindal Vijaynagar Steel Limited

In-house laboratory investigations are being carried out for characterisation of raw materials, optimisation of operating parameters and modifications of the equipment/system for improving the plant availability. In-house development also includes trial with cheaper iron bearing material feed into the COREX process like iron ore fines and coal/coke fines, changes of operational practice for optimum distribution of oxygen through tuyers and dust burners to minimize oxygen consumption and fuel rate.

In addition to the above development work in the iron making area, the following process improvement have been carried out in the steel making and hot rolling process.

- Implementation of slag splashing technology in BOF to improve the lining life.
- Maximizing usage of DRI in BOF as replacement of scrap.
- Development of clean steel technology.
- Implementation of hot/warm slab charging practice in HSM.
- Improvement in shape and profile of the product.
- Developments in casting and rolling processes for production of critical grades like LPG, EDD critical, Micro alloy steel, high carbon steel, etc.

JVSL outsourced a major R & D work with Indian Institute of Science, Bangalore and Central Fuel Research Institute, Dhanbad. The project has been jointly funded by the Ministry of Steel and Department of Science and Technology of Government of India and JVSL.

Under the R & D project, I I Sc. is carrying out

- Mathematical modeling of COREX to find the effect of composition of the volatile matter on COREX process, to estimate hot metal chemistry and temperature, and to understand the behaviour of char bed of melter gassifier.
- Experiments to analyse the factors causing the DRI Jamming in the shaft.

Expenditure on R & D

(Rs. In Crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of turnover
1998-1999	538.00	0.00	0.00
1999-2000	930.00	0.125	0.012
2000-2001 (April-Sept. 2000)	738.00	9.50	1.28

Lloyds Steel Industries Limited

Objectives:

R & D work at Lloyds Steel is a continuous process with the main objective of process and product improvement with a mission to achieve customers' satisfaction and technology upgradation.

Highlights of R&D activities (2000-01)

i) Process optimisation to improve surface characterstics of hot rolled plates. Standardisation of cooling during casting of slab for different grades and final sizes and descaling pass schedule during rolling as per the grade & final thickness to achieve superior surface.

ii) Process optimisation for production of LPG grade steel from 100% coal based DRI by improved melting, desulphurization practices during steel making and ensuring proper rolling attributes particularly w.r.to temperatures.

Expenditure on R & D

(Rs. In Crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of turnover
1998-1999	739.86	0.10	0.013
1999-2000	485.83	0.15	0.030
2000-2001 (April-Sept. 2000)	262.41	0.20	0.076

SAFETY

Preventive measures for averting accidents at work sites continued to receive the top most priority in the Safety Management Programmes of all the Public Sector Companies under the Ministry of Steel. Steps were initiated to enhance safety performance in Steel Plants including systems of internal benchmarking, guidelines to Managers for responsibility towards safety, spread of Safety and Health Management systems, development of standards on Safety Procedures for hazardous jobs and standard Operating & Maintenance Practices. The companywise position was as follows:

STEEL AUTHORITY OF INDIA LTD. (SAIL)

Consistent efforts were made by the SAIL Safety Organisation for competence building through HRD interventions covering Heads of Shops, Line Managers, Safety Personnel and Trade Union Members. During the year, there was overall improvement in the safety performance of the Company.

MAHARASHTPA ELEKTROSMELT LTD.

During the year under review in Industrial Safety the Company has been awarded the Prestigious National Safety Award from British Safety Council, London. SAIL Chairman's Silver Plaque for No Fatal Accident during the year 1998, Three Regional Safety Awards were received from Vidarbha Industrial Safety Committee for the year 1997-98 and National Safe Driving Award to 55 Drivers for the year 1998 from National Road Accident Prevention Society.

[illegible]

Safety of all employees is the prime concern of VSP. Safety training and refresher training are imparted to the employees in continuous basis. Safety training is made compulsory for all the contractual employees working in the Plant. The training is imparted by Safety Engineering Department.

One Central safety committee and 22 Departmental safety committees inspect various units in the Plant and identify unsafe points and ensure that suitable actions are taken to eliminate the same.

On-site emergency plan is implemented periodically, Twelve Departmental level Mock Drills were conducted every month and two Plant level Mock Drills were conducted in 1999-2000. Road safety measures are also given due thrust and campaigns are conducted for propagating the habit of using Crash helmet.

Safety is a part of ISO-9002 systems and covered in the certification for the whole plant. VSP achieved a hat-trick by winning the prestigious Steel Minister's Trophy for Best Safety Performance for the third consecutive year in 1998. VSP won this award five times since inception.

NATIONAL MINERAL DEVELOPMENT CORPORATION (NMDC)

In orer to ensure safety of the persons regular training modules have been formulated and training is imparted at every Project. The following precautions are being followed in NMDC projects:

a) Air pollutions control measures

b) Dust suppression systems.

c) Closed conveyar sysems.

d) Water sprinkling on mine haul road.

e) Wet Drilling operations.

f) Noise pollution control measures

g) Efforstation mensures etc.

With the implementation of all the above measures NMDC could achieve the sufety of the persons working in mines.

The number of fatal accidents during the year of 1999-2000 is Nil to NMDC mines. The number of serious injuries in all the mines of the Corporation is only 5 (five) during 1999-2000. There is a continuous decreasing trend recorded in respect of minor accidents.

Safety performance has been included as one of the paramerer for the year 2000-2001 and target fixed for the whole year in respect of mandays last per 1000 mandays worked is 5.00 and actual upto Sept., 2000 is only 1.27 which shows that NMDC is always striving for Zero accidents.

KUDREMUKH IRON ORE COMPANY LTD. (KIOCL)

A Safety Department is functioning effectively. Pit Safety Committees with Wokers' 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. As is the practice, 'Safety Week' was observed during the year.

MANGANESE ORE INDIA LTD. (MOIL)

With the continuous depletion of near surface ore deposits, mining is progressively being extended to deeper horizons and extraction is increasingly done through deep under-ground working. This requires extra attention to be paid to various aspects viz. support system, ventilation and efficient filling of the voids arising out of extraction of ore. Continuos emphasis is laid on training of employees. Mine working is regularly inspected by members of Pit Committees, Workman Inspectors, Safety Officers and General Manager (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 by any mine worker is discussed to avoid recurrence. The Company pays special attention to ensure safety of the mines and workforce employed therein. The company has participated in Regional Safety Competition and has won 50 prizes. The Company has bagged the prestigious National Safety Award for the years 1997 and 1998 forits Ukwa and Kandri Mines.

FERRO SCRAP NIGAM LTD. (FSNL)

In order to create safety awareness among the employees, various training programmes are organised on Safety through National Safety Council as well as other institutions.

Apart from this, the Safety Day celebrations comprising of debate on Safety are also held in all the units & Corporate Office, wherein the employees take part with full enthusiasm and the winners are given suitable prizes.

HINDUSTAN STEEL CONSTRUCTION LTD. (HSCL)

HSCL has formulated safety code and adequate steps have been taken for its implementation.

BHARAT REFRACTORY LTD. (BRL)

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

POLLUTION CONTROL AND WASTE MANAGEMENT

The areas of pollution control and waste management measures have assured greater importance and urgency due to rapid deterioration of the environment. The Public Sector Undertakings under the Ministry of Steel are already aware of these aspects and have been making vigorous efforts to maintain a cleaner environment in and around their plants and units. The company wise details are as under:

STEEL AUTHORITY OF INDIA LIMITED (SAIL)

With continued thrust on pollution control, improved performance has been witnessed during the year 1999-2000, in respect of compliance with norms for ambient air quality, effluent discharge quality and stack emissions.

During the year, two units of Bhilai Steel Plant, namely, Plate Mill and Dalli Iron Ore Mines, were accredited with Environment Management System (EMS)/ISO-14001 certification. Besides, satisfactory progress has been recorded during the year, in our efforts to achieve EMS certification for Silicon Steel Mill of RSP and Meghahataburu Iron Ore Mines.

Salem Steel Plant bagged the Golden Peacock Environment Management Runners Up award for 1999, organised by the World Environment Foundation, New Delhi, for outstanding achievement in the field of environment management, in medium enterprises category. Sustained efforts to green the SAIL plants, mines and township with plantation were continued during the year.

INDIAN IRON & STEEL COMPANY LIMITED (IISCO)

Environment Management and pollution control have become priority areas in the activities of the company. Ambient air quality, stack emission and work environment quality were within specified limits of statutory authority.

Environment awareness campaign through observance of the world Environment Day and Workshop/Training on Environment Management were organised for different section of employees. About 8000 saplings of different plants were planted in Burnpur township and Works area.

Water consumption per tonne of crude steel was reduced from 12.72 Cu.M in 1998-99 to 5.37 Cu.M in 1999-2000 and resulted savings of Rs.9.0 lakhs for water cess to DVC & WBPCB. Dust extraction system at THF was stabilised. Consent for air emission and effluent discharge and handling/disposal of hazardous waste has been received from West-Bengal Pollution Control Board.

MAHARASHTRA ELEKTROSMELT LIMITED

Environment Management and pollution control continued to get top priority in Company's activities during the year. To keep environment clean for ecological protection, thrust was given in the areas of green belt development in and around the plant premises, solid waste management, monitoring of liquid and air effluent for various environmental parameters. In and around the plant 500 teak and other saplings were planted in addition to the regular maintenance of existing 14000 teak plants.

To comply with environmental standards set up by Maharashtra Pollution Control Board (MPCB), Gas Cleaning Plant for SAF-II costing around Rs. 1.6 crores has been commissioned. This would also enhance the availability of clean gas for gainful utilisation as a fuel to Sintering Plant, Lime-Kiln and Gas based Captive Power Plant of 4.2 MW capacity.

Continuous steps were taken towards gainful utilisation of High MnO Slag in SiMn Production, Lumpy SiMn Slag as rail ballast and Sale of SiMn Slag for road construction and repairs, dedusting system in Sintering Plant.

RASHTRIYA ISPAT NIGAM LIMITED (RINL)

Environment Management is given topmost priority at VSP. Accordingly, persistent efforts are made for maintaining all emissions and effluents within the norms. Ambient air parameters and stack emissions are monitored regularly and are maintained well below the norms fixed by the Central Pollution Control Board and State Pollution Control Board.

Major actions taken include improvement in availability of DE Systems; increase in sale of Lime Dust, thereby improving Housekeeping; Improvement in Water conservation; improvement in waste utilization.

The expenditure on the maintenance of pollution control equipment has been brought down to Rs.75.07 crs in 1999-2000 from Rs. 75.77 crs in 98-99 by improving operational efficiency and taking suitable preventive measures. During the first half of the current year, an amount of Rs.37.5 crs. was incurred towards pollution control and waste management.

NATIONAL MINERAL DEVELOPMENT CORPORATION (NMDC)

Regular air pollution control works like dust suppression through water sprinkling & effective noise pollution control measures are being continued at all production projects.

71,100 tree saplings, 58,000 Agave bulbs and 1000 bamboo saplings have been planted during the year at the production projects. Survival rate of the plantation is found highly encouraging. Further, 124 ha of blank forest areas of Bailadila region falling in the six mining leases have been taken up for afforestation through MP Social Forestry Division, Jagdalpur.

Bailadila Iron Ore Project, Dep-14/11c:

Desilting of Kirandul nala and Kadampal tailing dam to an extent of 2 lakh cum of slimes has been completed. Desilting of Kirandul nala and Kadampal tailing dam is under progress. Two check dams on the downstream of Kadampal tailing dam have been made for controlling flow of suspended solids in Koyar nadi.

Bailadila Iron Ore Project, Dep-5 mine:

Deep garland trenches have been made and 3.63 lakh tonnes of fines have been excavated from the old fine ore dump to remove water pollution problem. One check dam in the mining area at hill top and check bund at Tailing dam-1 have been constructed at a cost of Rs. 3.82 lakhs.

Donimalai Iron Ore Mine:

Wet screening is practised throughout the year in the project. Recycling of water from tailing dam is being done for use in the Screening plant. A new check dam in the upstream of Ubbalagundi village on the eastern flank of South block has been completed and Oxidation pond has been desilted.

Panna diamond mining project:

Second module of HMS plant has been commissioned at the project. Thus the total mineral processing operations are in wet circuit resulting in good air quality in the Plant premises.

KUDREMUKH IRON ORE COMPANY LIMITED (KIOCL):

Pollution Control Action Plan:

By selecting low sulphur Furnace Oil (from 4% to 1.5% sulphur) the Flue Gas Desulphurisation (FGD) units installed in Captive Power Plant (CPP) at Mangalore has reduced the consumption of Alkalil (ie. NaOH Lye) by 55% . An upgraded sewage treatment plant (STP) working satisfactorily and the Quality of effluent generated is well within the norms of Pollution Control Board. In the trade effluent discharging pipeline monitor, the pH of trade effluent Discharging to the sea.

An acid dosing system is also installed and commissiond to reduce the pHI in the trade effluent from pH 10.5 to 6.00 to 8.5 which has been specified by Pollution Control Board. A separate flow meter is being fixed in the trade effluent discharge pipeline to monitor the quantity of effluent discharging to sea. ISO - 14001 Certification is expected and for this an external agency (DNV) has already audited our Environmental Management System. A RCC diversion channel was constructed at Dump Pond to prevent trade effluents from entering river and for effective desilting of accummulated material.

Toe of hills was protected along Kuniya stream to prevant the erosion and pollution. Checkbunds were constructed to arrest the Minewash on the down-stream of Pollution Control Dams. Culverts

and open swivels to direct the Minewash to Pollution Control Dams were provided. Suppression of dust in Mine Haul Roads and Mine benches by Water sprinkling is undertaken.

Total Expenditure incurred for Pollution Control Measures, (including desilting of Minewash collected in pollution control dams and Afforestation measures etc) during 1999-2000 was Rs. 5.65 crores.

Achievements and Status:

At Kudremukh air pollution monitoring is being done regularly and the results are within limits as prescribed by the State Pollution Control Board (KSPCB). At Mangalore, emission monitoring is done regularly and the ambient air has 215 micrograms per Cu. Mtr. of particulate matter as against standard norms of 500 micrograms per Cu. Mtr.

At Kudremukh and Mangalore regular water pollution analysis is jointly being done along with KSPCB for all the parameters and the results are within limits.

In the area of solid Waste Management: At Kudremukh, the following steps are being taken:

a) Mine wash arrested in Pollution Control Dams are being desilted during non-monsoon periods and is put back to the system for processing ie., (Around 1.5 million tonne is recovered ie., 5 % of the total ore mined).

b) Tailings generated after processing the Ore is deposited in Lakya Tailings Dam. Possibility of recovery of Iron Ore is being explored.

c) The trade effluents accumulated at Dump Ponds are regularly desilted and put back to the system.

Afforestation and Pollution Control:

Afforestation is done at 80 % of the Waste Land at Kudremukh & 10 % at Mangalore inside Plant & Township during 1999-2000 an amount of Rs. 40 Lakhs was spent on there efforts. Till date 8.0 million saplings have been planted on Mine area, Township, Parks, Road sides, River sides, hill-tops and slopes etc. Financial support of Rs.50 lakhs extended to Manga-lore University for research on type of plants suitable for afforestation in Kudremukh area.

An amount of Rs.5 crores was released uto 1998-99 to Karnataka State Forest Dept. for development of Kudremukh National Park Area.

Govt. of Karnataka, at the time of recom-mending renewal of Mining lease of the Company for 20 years to the Ministry of Environment & Forests, Govt. of India, has stipulated condition that the Company will pay a sum of Rs. 20 crores over a period of 10 years for the development of Kudremukh National Park. So far the Company has released a sum of Rs. 3 crores to the State Forest Dept. for the said purpose. Number of check bounds have been provided in all the valleys for arresting the silt flowing to the river at a cost of Rs.1.5 lakhs.

MANGANESE ORE INDIA LIMITED (MOIL):

The Company is conscious of it's responsibility towards protection of enviornment in its leasehold areas. 65000 saplings were planted during 1999-2000 at different mines. The total cumulative plantation till date is more than 11 lakhs.

SPONGE IRON INDIA LIMITED (SIIL)

As a part of afforestation programme to control pollution levels, about 200 plants were planted. Regularly the pollution level of stacks emissions and water outlets are being checked by A.P.Pollution Control Board and the actions suggested by them, basing on their report, are attended immediately. Besides with available facilities pollution level monitoring is done departmentally also, to keep pollution within levels. About 1.0 hectors of waste land was levelled and about 200 saplings were planted as a part of afforestation and waste land development during the half year ending Sept. 2000.

BHARAT REFRACTORY LIMITED (BRL)

All units of the company have obtained/applied for valid "consent" from the concerned State Pollution Board. Dedusting units have been installed at the Plants to control air pollution. BRL appointed experts for analysis of pollution levels and suggestions made by them are being implemented. The norms prescribed are strictly complied with.

DEVELOPMENT OF MANAGEMENT INFORMATION SYSTEM (MIS)

The Computer Centre in the Ministry has been established as a central facility and is equipped with two Pentium Servers (Unix & Windows-NT based) and 5 nos. of Pentium based Client nodes, one no. Scanner for document imaging operations and switches & hubs as a backbone for Local Area Network and Internet Operations in the Ministry. Apart from NIC Central facility, about 75 Pentium based computers capable of handling present day Window based Office Automation Suit have been operational with Officials and Desks/Sections in the Ministry.

A Local Area Network (LAN) of about 75 nodes has been set up in the Ministry with the assistance of NIC. The LAN has been extensively used for sharing of files/documents , collecting information/ material on annual reports from Sections/Desks as well as replies to parliament questions and their onward transmission through E-mail to Rajya Sabha and Lok Sabha on the very next day of the reply. Efforts have been initiated to set up a Ministry-wide Intranet by computerising Work-Flow applications at Section/Desk level and providing Web-enabled interfaces for monitoring applications such as On-line lodging of complaints for admn. genl. related matters, monthly indents for issuing of stationery, booking of staff car on Local Area Network (LAN). Ministry-wide Bulletin-board service on establishment related forms has been made available to the officers/staff. Pentium based computers have been provided to all officials/ Desks/Sections in the Ministry with browsing and e-mail facility on Internet

The Computerised Management Information System (MIS) developed for Ministry of Steel with the assistance of National Informatics Centre (NIC) is functional in the area of Accounts and Budget, O&M, Monitoring of Important References, Industrial Entrepreneur memoranda System, Monthly D.O. and Monthly Summary on PSUs performance for Cabinet Secretariat, Personnel Information System and Public Grievances Monitoring and MIS on Steel Sector.

The Ministry's Homepage on Internet has been re-designed in bilingual format as per PMO guidelines and provide details on administrative set up, major activities of the Ministry, the policy framework, the Annual Report (1999-2000), an overview of the steel sector, research and technology mission and links to Ministry's PSUs and attached offices to have a wide coverage of information on Steel Sector. The responsibility and periodicity of updating the Homepage by concerned Sections/Desks has been fixed. Most of the points of 12-point agenda on e-governance have already been achieved whereas actions on the remaining points have been initiated to achieve them in a scheduled time frame.

To resolve the Y2K problems at Ministry of Steel, Sub-ordinate Offices and it's PSUs, adequate care has been taken in advance so that no disruption of services and operational problems have taken place. As a special measure, control rooms were set up in PSUs to resolve the Y2K problems especially for embedded systems.

Various in-house training programmes on LAN operations, E-mail and browsing operations on Internet and Window-based Office Automation Suits have been oraganised in-house or by engaging external agency on IT for the staff/officials of the Ministry from time to time. By doing this, at least 2 to 3 staff members from each Section/Desk have working knowledge of computers.

ORGANISATIONAL STRUCTURE

The Ministry of Steel is under the Independent Charge of the Minister of State for Steel.

The Ministry is responsible for the planning and development of Iron & Steel Industry (including Pig Iron & Sponge Iron) development of essential inputs such as iron ore, lime stone, dolomite, manganese ore, chromite, ferro alloys & refractories etc. and other related functions. There are 10 Public Sector Undertakings under the administrative control of the Ministry of Steel. The details are given in Annexure-I.

The Ministry has a Secretary, 3 Joint Secretaries, 6 Directors, 2 Deputy Secretaries, 15 Under Secretaries, including 10 in-situ Under Secretaries, one Deputy Director (Official Language) and other supporting level officers and staff. The Ministry also has a Financial Adviser in the rank of Additional Secretary and a Chief Controller of Accounts. A Technical Wing, consisting of an Industrial Adviser, 3 Dy Industrial Advisers, 2 Assistant Industrial Advisers provides support and give advice in respect of technical matters.

The Organisational Chart of the Ministry is at Annexure-II. The details of classification/ category of personnel in position are given in Annexure-III.

The Ministry has an attached office viz., Office of the Development Commissioner for Iron & Steel (DCI&S) at Calcutta. The DCI&S is an Officer of the rank of Joint Secretary and is assisted by a Joint Development Commissioner. The DCI&S has 4 Regional offices, one each at Delhi, Mumbai, Kolkata and Chennai headed by Regional Development Commissioners for Iron and Steel. The Organisational Chart of the Office of DCI&S is at Annexure-IV.

List Of Public Sector Undertakings Under The Administrative Control Of The Ministry Of Steel

1. Steel Authority of India Ltd., Ispat Bhavan, Lodhi Road, New Delhi-110003.

1.1. Indian Iron and Steel Co. Ltd., Burnpur, Distt. Burdwan, West Bengal – 713325

1.2 IISCO Ujjain Pipe and Foundry Ltd., 50, Chowrangee Road Kolkata-700071 (Subsidiary to IISCO, under liquidation)

1.3 Visveswaraya Iron & Steel Ltd., Bhadravati, Karnataka-577301

1.4 Maharashtra Elektrosmelt Ltd., Mul Road, Chandrapur-442401, Maharashtra (Subsidiary of SAIL)

2. Rashtriya Ispat Nigam Ltd, Administrative Building, Visakhapatnam-530031, Andhra Pradesh.

3. MECON Limited MECON Building, Ranchi-834002, Jharkhand.

4. Kudremukh Iron Ore Co. Ltd., II Block, Kormangala, Bangalore-560034, Karnataka.

5. National Mineral Development Corpn. Ltd., Khanij Bhavan, 10-3-311/A, Castle Hills, Hyderabad-500028, Andhra Pradesh.

5.1 J&K Mineral Development Corpn, 19/9, Trikuta Nagar, Jammu – 180012, J&K (Subsidiary of NMDC).

6. Hindustan Steelworks Construction Ltd., No.1, Shakespeare Sarani, 8th Floor, Kolkata-700071,West Bengal.

7. Bharar Refractories Ltd., Sector IV, Central Avenue, Bokaro Steel City, Bokaro –827004, Jharkhand.

8. Sponge Iron India Ltd., Khanij Bhavan, 10-3-311/A Castle Hills, Hyderabad-500028, Andhra Pradesh

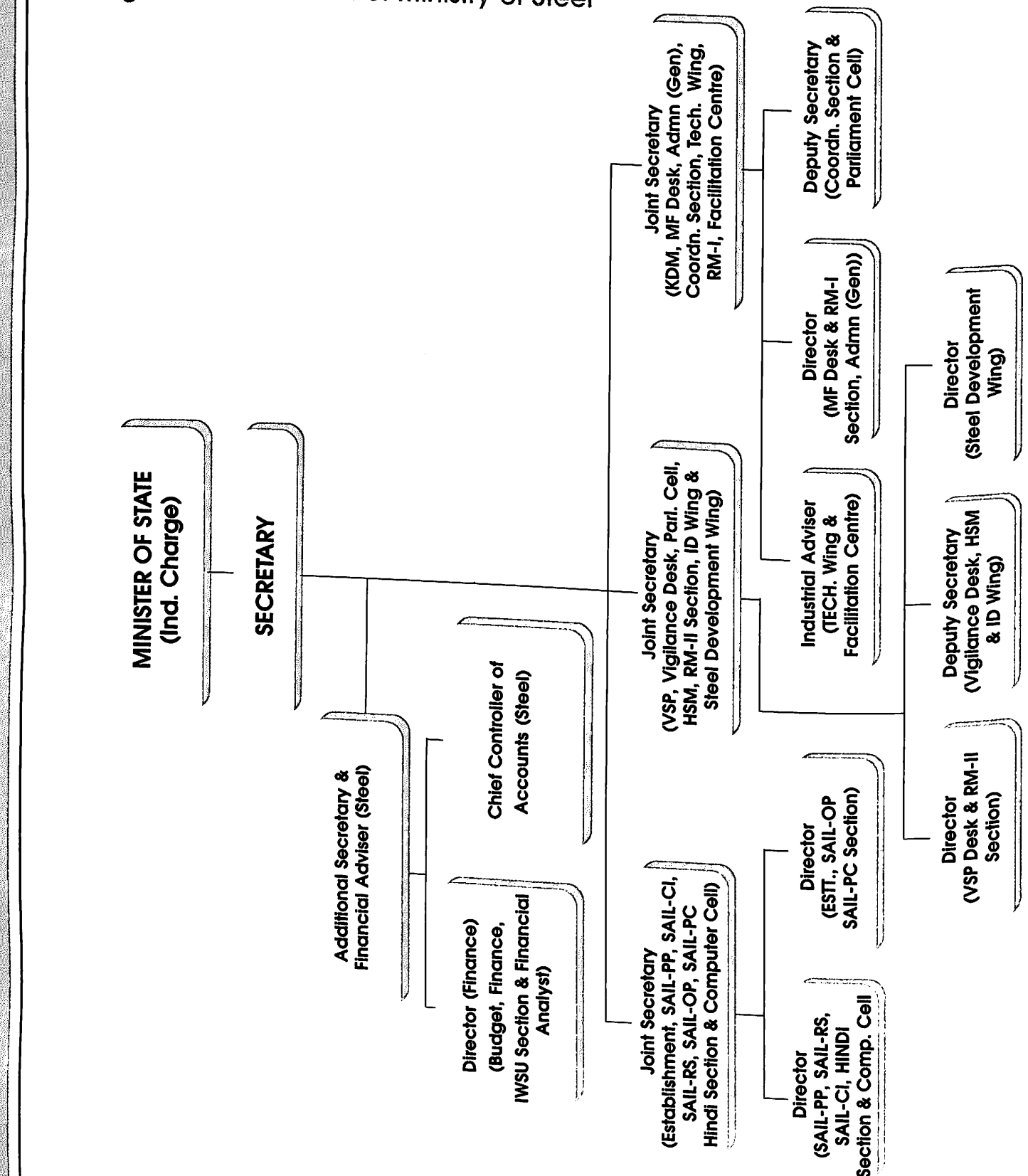
9. MSTC Limited 225-F, Acharya Jagdish Bose Road, Kolkata-700020. West Bengal

9.1 Ferro Scrap Nigam Ltd., FSNL Bhavan, Post Bag No.37, Equipment Chowk, Central Avenue, Bhilai-490001, Madhya Pradesh (Subsidiary of MSTC Ltd.)

10. Manganese Ore India Ltd., 3, Mount Road Extension, Post Bag No.34, Nagpur-44001, Maharashtra.

Organisational Chart of Ministry of Steel

Annexure-II



Annexure-III

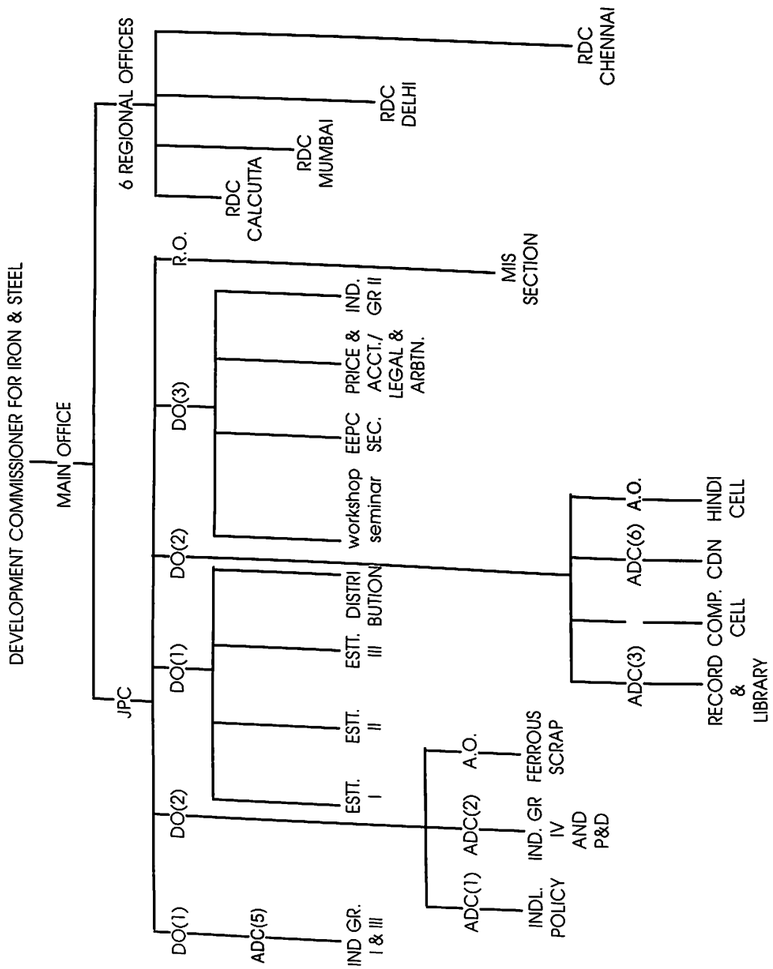
Statement Showing the Number of SC/ ST/ OBC/ Ex-Servicemen Men & Women as on 30.9.2000 in respect of Ministry of Steel.

Classification of post	No. of Employees in position	Men	Women	SC	ST	OBC	PH	Ex-Servicemen
A	39	34	05	04	02	—	—	—
B	80	57	23	10	05	03	—	—
C	91	67	24	15	06	03	02	—
D	72	69	03	34	08	02	01	01
Total	282*	227	55	54	21	08	03	01

* Includes personal staff in SM's Office.

Annexure-IV

Office of the Development Commissioner for Iron & Steel Organisational Chart



WELFARE OF WEAKER SECTIONS

A Cell under the charge of a Liaison Officer functions for monitoring implementation of Government policy relating to reservations for the representation of Scheduled Castes, Scheduled Tribes and other backward classes in the Department of Steel, the attached and subordinate offices and 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/OBCs against the vacancies reserved for them are scrutinised in the Cell and appropriate instructions issued to the PSUs and attached office as and when necessary.

The actual record of PSUs in respect of representation of SCs/STs/OBCs during 1999-2000 is indicated below:

Steel Authority Of India Limited (SAIL)

Presidential directives on Scheduled Castes and Scheduled Tribes continued to be implemented and monitored on a regular basis. As on 31st December, 1999 out of the total manpower, 14 per cent were Scheduled Castes and 10 per cent were Scheduled Tribes.

Rashtriya Ispat Nigam Limited (RINL)

As on 30.9.2000, the representation of SC/STs and Minorities in the overall manpower is given as under.

Classification on of posts	Total Employees	SC		ST		Minorities
		No.	%	No.	%	%
1	2	3	4	5	6	7	8
Group - A	4045	614	15	126	3	175	4
Group - B	1044	221	21	106	10	39	4
Group - C	8979	1509	17	562	6	351	4
Group - D	3134	506	16	238	8	37	1
Total	**17202**	**2850**	**17**	**1032**	**6**	**602**	**4**

The measures taken for welfare of SC/ST and Minorities, inter-alia, includes the following:

- A fixed percentage of houses (10% for A&B types and 5% for C&D types) have been reserved for the SC/ST employees in Steel Township.
- A scholarship Scheme has been introduced exclusively for the children of the SC/ST employees, under which two Scholarships of Rs.250 per month and one Scholarship of Rs.150 per month are awarded each year. A Merit Cash Award Scheme also exists for the students of SC/ST Communities under which, a First Merit Award of Rs.500 and a Second Merit Award of Rs.250, are given to students who pass 10th Class from every School in the Company's Township.
- Two parks in the Steel Township have been named after Dr.BR Ambedkar and Babu Jagjeevan Ram respectively and also a separate Library-cum-Reading Room was named after Dr. BR Ambedkar. Further, on the request of the ST employees, a new children's park as Sector-I named "EKALAVYA" Park has been developed, which is going to be inaugurated shortly.

National Mineral Development Corporation (NMDC)

Manpower

The total number of regular employees in NMDC

as on 30.9.2000 was 6613 out of which 1133 persons belong to Scheduled Castes (17.13%), 1168 Scheduled Tribes (17.66%), 360 OBCs (5%) and 344 women (5.20%).

Other Welfare Measures

NMDC has become the forerunner in the socio economic and peripheral development and fulfilling its social obligations. The neighbouring areas in its production mines particularly in Bailadila region have undergone a transformation in the very approach to life and work, ushering in better living amenities, education facilities and opportunities for growth. The Corporation has been drawing up peripheral development plans under each project management for the development of the area around these projects and such peripheral development has been gaining momentum year after year.

The Corporation has set up fulfledged hospitals in its production projects for the benefit of the employees and their families and the local population. In order to provide best medical facility, one of its hospital in Bailadila-5 is run by Apollo Hospital. Free out-patient and in-patient treatment is provided to the local adivasis in these hospitals. Free diet is also provided to adivasi patients in case of in-patient treatment. Rest shelters have also been provided for the benefit of the family members of the adivasis, who are admitted in the hospitals. Primary health centres have been set up by our Bailadila projects in the nearby villages so as to provide basic medical facilities to the local adivasis at their door steps.

The projects also participate in eye camps organised by the State Government and render all necessary help by way of deputing Doctors, arranging such camps in project hospitals, distribution of sarees, dhotis, etc.

The children of the local adivasis get the educational facility in Project schools. In addition, five free-ships for each academic year have been introduced in DAV School for the children of the local adivasis from the nearby villages. At Bailadila-5 Project, the Corporation has constructed a school building which has been handed over to the State Government for running a Senior Secondary School. The Corporation is also regularly undertaking repair/ renovation of the state run school building in the vicinity of its projects for the benefit of children of local adivasis who are studying in these schools apart from distributing uniforms, text books, etc. to the SC / ST children of certain schools.

A skill development programme for the SC / ST candidates of the adjoining villages has been commenced by Bailadila projects which aims at imparting necessary knowledge, skill and proficiency in the operation of mines / plants for the purpose of helping them in seeking employment. The Corporation has also provided a building and other infrastructural facilities to the State Government of Madhya Pradesh for running an ITI at Bhansi. In addition another ITI has been opened at Bhansi, which is run by DAV Managing Committee and the recurring and non-recurring expenditure on it is borne by NMDC. This is functional from 2000-2001 academic year.

Bailadila projects have provided facility to the local adivasis to sell their products directly to the consumers by constructing sheds in the market. The local tribals also get the facility of viewing weekly film shows in the Project Townships and also avail of the service of the Project Co-operative Societies even though not being a member.

At Donimalai Project in Karnataka, 2 Community Centres have been constructed in the nearby villages of Narsingapura and Bhujanga Nagar with a total cost of Rs.20 lakhs each for the benefit of SC / ST and other Backward classes. The other developmental works selected in the nearby villages viz. Narasingpura, Ranjitpura, Vittalnagara, Bhujanganagar, Taranagar, Ubbalagandi and Sandur includes laying of drinking water pipeline, tube-wells construction of class rooms, drinking water tanks, toilets for women etc. NMDC conducts frequent eye, dental, cancer and orthopaedic, family planning and other health camps, where free counseling as well as free medical outdoor and indoor treatment is provided besides providing spectacles and family planning devices, sarees and dhoties to the tribal patients as part of encouraging Family Planning measures among the tribal population. Also provided laproscopic equipment to the Vijayanagar Institute of Medical Sciences, Bellary, in our Donimalai mine.

At our Panna Project in MP protected water supply has been provided to the Hinota village for the benefit of the villagers. One auto analyser and one air conditioner machine costing Rs.2.4 lakhs has been provided to Government Hospital Panna for the benefit of patients. Protected drinking water supply was provided to nearby villages Free transport facilities are provided to the nearby village people from Majhgawan to Panna. Internal BT roads are laid in the nearby Hinota village.

Cultural programmes are organised regularly by NMDC's Projects in the Community Centres in the townships. The local population is also benefitted by these programmes. Other important peripheral development works being undertaken by Projects in the villages include construction of approach roads, installation of hand pumps, assistance to State run school by way of providing furniture, educational aides, etc.

Training Programmes

In the training programmes conducted during the year 2000-2001 (Upto Sept. 2000), SC/ST/OBC/ Physically Handicapped and Ex-servicemen were also covered. The details are given in the following Table:

Year	SCs	STs	General (Incl. OBCs, P.H & Ex-Sirmen
2000-2001 (upto Sept.2000)	93	34	1792

Kudremukh Iron Ore Company Limited (KIOCL)

Welfare Measures:

a) The Company has setup full fledged facilities at Kudremukh and Mangalore by establishing a modern town-ship, hospital, recreation facilities etc., 10% of type "A" & "B" quarters and 5% of "C" & "D" type quarters are reserved for SC/ST employees.

b) During the year 1999-2000, 11 Nos. of the Merit-cum-Means Scholarships were given to the children of SC/ST employees for whom the qualifying standard of First class or 60% whichever is higher, is relaxable to 50% in the aggregate marks.

Periodic Meetings with SC/ST representatives :

There is a regular interaction with the Management and SC/ST Welfare Association at Kudremukh, Mangalore and Bangalore. The Management representatives and the Welfare Association meet once in a quarter, besides the CMD meeting them once in six months. The grievances of SC/ST employees are dis-cussed and appropriate action is taken to redress their grievances.

Further, Dr.Ambedkar's Jayanthi at Kudremukh, Mangalore and Bangalore was celebrated as that of the previous year.

Training Programmes

During the year, various Training programmes were organised for executives and non-executives. These include inhouse programmes and also nomination to outside programmes. The in house programme for non-executives included subjects like Positive Work culture for Productivity, Role of Responsibilities, Disasters & Emergency Management, etc. All employees irrespective of their category, participated in this programme.

The SC/ST/OBC employees participate alongwith other employees in all these programmes. They are also made to actively participate as core team member, internal auditor and internal trainees for designing, implementing, training and audit of the quality management system and environment management system introduced in our Company as per ISO 9002 standards and ISO 14001 standards. In addition,

they were nominated to various seminars, conferences and workshops to update their knowledge in respective fields.

Executives were nominated for various outside programmes to enable them to update their knowledge in their respective fields. Apart from this, a special programme on Reservation Policy on SC/ ST/OBC' by Shri CC Unnikrishnan, Dy.Secre-tary, DPE was organised for the office bearers of the SC/ST Welfare Association.

MANGANESE ORE INDIA LIMITED (MOIL)

Manganese Ore (India) Ltd. is a Labour Intensive Organisation with 7850 employees on its Rolls. About 77% of the total strength belongs to SC/ST/OBC. MOIL has undertaken several measures for the welfare of the Weaker Sections. Some of them are as listed below:-

a) Adoption of Tribal villages.
b) Training in Sericulture for economic development.
c) Help to the schools in the surroundings of mines.
d) Organising Eye Camps/Childs Welfare Camps.
e) Grant of subsidy to Gram Panchayats for Water Supply Schemes.
f) Giving financial assistance to Social Institutions who are working for rehabilitation of the aged and handicapped.
g) Donated Tricycles to handicapped persons. Provided sewing machines for development and upliftment of the Tribal Women.

MOIL constantly upgrades various Welfare Measures Provided to the weaker Sections with a view to improve the quality of life.

Manpower as on 1-10-2000 is 7850 out of which 1417 belong to the SCHEDULED CASTES Category (18%), 2011 belong to ST Category (26%) and 2615 belong to OBC Category (33%). Moreover, there are 895 female employees (11.40%), physically handicapped 17(0.22%) and Ex- servicemen 150(1.91%) employees.

Groupwise percentage of SC/ST/OBC Categories of Employees

	S.C	S.T	O.B.C
Group A	10.10	2.02	10.61
Group B	8.29	5.70	13.99
Group C	17.08	20.27	23.93
Group D	18.96	28.75	37.63

MSTC LIMITED

The Presidential Directives issued from time to time pertaining to policies and procedures of the Government in regard to reservation, relaxation, concession, etc. for the SC/ST/ OBC candidates have been kept in view while taking action/decision on any matter laid down therein.

Best efforts were made to comply with the directives in matters concerning recruitment and promotion. Adequate representation of SC/ST/OBC members was made available in both Departmental Promotion Committee as well as Selection Committees (in case of recruitment).

In order to improve the efficiency of the employees belonging to the reserved categories and to prepare them to take up higher positions in the future, special attention was paid to their training and development in their respective fields of function. During the year 2000-2001 (till date), 2 ST employees of the Company were sponsored for training programmes, both In-House and Institutional. Apart from this, all welfare facilities provided to other employees of the Company are also extended to them.

In addition, all possible cooperation and assistance was provided to the MSTC SC/ST Employees' Council, which functions primarily to safeguard the interest of the reserved section of employees of the Company.

Statistical information regarding representation of Scheduled Castes/Tribes, Physically Handic-apped persons, Ex-servicemen and OBCs is given below:-

Group	Total	SC (%)	ST (%)	OBC (%)	Physically handicapped(%)	Ex-servicemen (%)
A	122	15(12.29)	8(6.55)	4(3.27)	1(0.81)	-
B	97	21(21.64)	4(4.12)	-	2(2.06)	3(3.09)
C	34	10(29.41)	2(5.88)	2(5.88)	1(2.94)	-
D	26	10(38.46)	1(3.84)	-	1(3.84)	-
TOTAL	**279**	**56(20.07)**	**15(5.37)**	**6(2.15)**	**5(1.79)**	**3(1.07)**

FERRO SCRAP NIGAM LIMITED (FSNL)

The Company has formulated various welfare schemes for the employees and implementing the same with full satisfaction of the employees.

Apart from the above, in fulfilment of its social responsibilities, the company has implemented a Scheme for Upliftment of Weaker Sections wherein free Text Books & Note Books are distributed to the first 3 meritorious Male & Female students of Class IX, X & XII belonging to SC, ST & OBC Communities of a Government school in the nearby Village. This scheme has been in vogue from the academic session 1998-99 for which an amount of Rs.20,000/- per annum has been allocated.

Statistical information of employees including SC/ST & others may be seen at Table on Page 56.

SPONGE IRON INDIA LIMITED (SIIL)

Reservation of SC/ST/OBC Candidates:

The directives issued by Govt. from time to time to the matter of reservation of posts for SC/ST/OBC have been complied with our Company. There was no backlog of vacancies reserved for SC/ST/OBC candidates in both Executives and Non-Executive cadre.

Scheme for development of SCs, STs and OBCs:

In the matter of recruitment and promotions to various posts, SC/ST candidates are being given the benefits as per the Presidential Directives.

Social Activities:

A small cell headed by the Company's Medical Consultant looks after the peripheral developmental activities in the nearby areas. Recognising its social responsibilities, the Company undertakes programmes from time to time, which are for the benefit of the people in the local areas.

A medical camp was organised on 19.11.1999 in connection with the former Prime Minister Smt. Indira Gandhi's Birth day and distributed "Belladona" pills for brain fever to the employees and other poor and weaker sections people.

SIIL participated under Clean and Green Programme called by A.P. State Govt. on 20.11.1999 at Sanjay Nagar. Also observed National Polio Day on 21.11.1999 and distributed Polio vaccine in 20 centres. Participated in the second phase of Pulse Polio Immunisation Programme on 16.1.2000 and coordinated in vaccinating 200 children.

Training:

SIIL being situated predominantly in a Tribal area and in view of dearth of qualified SC/ST candidates, freshers from the Institute are being recruited in different disciplines and in order to bring them to the required standards, on the job training is being given to the SC/ST/OBC employees so as to enable them to acquire skill for possible absorption in regular posts after the training. Besides this, apprenticeship training is also being imparted to the ST candidates being sponsored by Integrated Tribal Development Authority (ITDA), Bhadrachalam as a part of Special Drive, which is in addition to the candidates sponsored by local ITI. Apart from the above 65 employees participated in inhouse training programme which was conducted by SIIL.

Information of employees including SC/ST & others may be seen at Table on Page 59.

HINDUSTAN STEEL WORKS CONSTRUCTION LIMITED (HSCL)

(a) HSCL had been assisting in providing schools in areas where SC/ST/OBC & Physicially Handicapped employees mostly reside.

(b) Assitance is given for supply of drinking water.

(c) Plots had been allotted to workers for making hutments in the land allotted at sites of client with free electricity, water supply and sanitation arrangement etc.

(d) Children of SC/ST, OBC & Physically Handicapped employees get due preference in the matter of schooling at Projects.

(e) Directives of the Central Govt. with regard to recruitment and promotion in respect of SC/ ST, OBC & Physically Hándicapped employees arae implement. However, it is intimated that during the year 2000-01 no recruitment/ promotion have taken place.

(f) All along the above points had been followed in HSCL, but due to presently prevailing critical ways and means situation, austerity measures are being followed and avaoidable expenditure is being curtailed.

MECON LIMITED

Concern for welfare of weakersection is upper most in MECON's agenda. MECON has adopted some villages which are away from the developmental activities. The inhabitants, mostly tribals, are still deprived of basic facilities like drinking water, health and schooling. MECON has prepared a road map of their all-round development under which besides developing infrastructure like link road, water wells, school building, MECON is helping artisans to hone their traditional skills through scientific training for their sustainable livelihood. Arrangements have also been made for formal education, games & sports in the villages. MECON is actively involved in managing the local centre of Cheshire home where deprived and helpless are being provided graceful sustenance.

MECON also gives a number of scholarships to children of weaker sections who are unable to pursue their studies for want of money.

BHARAT REFRACTORIES LIMITED (BRL)

(a) In one of the units, Bhandaridah Refractories Plant, a Health Centre has been constructed and handed over to the State Govt. Weaker Sections are getting medical facilities fromthis Health Centre.

(b) Most of the BRL Units have provided drinking water facility for nearby villages in which 70% to 80% are Weaker Sections of Society.

(c) Free vaccination facilities are provided to SC/ ST/OBC people of nearby villages as and when required.

(d) Electric Transformer has been provided by IFICO Refractories Plant for extending power supply to the nearby villages in which most of the inhabitants are SC/ST/OBC.

ACTIVITIES AND ACHIEVEMENTS OF VIGILANCE UNIT OF MINISTRY OF STEEL

The Vigilance unit of this Ministry is headed by a Chief Vigilance officer (CVO) of the rank of Joint Secretary appointed on the advice of the Central Vigilance Commission (CVC). The CVO with one Deputy Secretary and one Under Secretary and supporting staff, functions as the nodal point in the vigilance set-up of the Ministry. The vigilance unit is inter-alia responsible for the following in respect of the Ministry of Steel and the PSUs under its administrative control.

(i) identification of sensitive areas prone to malpractices/ temptation and taking preventive measures to ensure integrity/ efficiency in Government functioning;

(ii) taking suitable action to achieve the targets fixed by the Deptt. of personnel & Training on anti-corruption measures;

(iii) scrutiny of complaints and initiation of appropriate investigation measures;

(iv) inspections and follow-up action on the same;

(v) furnishing the comments of the Ministry of the Central Vigilance Commission on the investigation reports of the Central Bureau of Invistigations;

(vi) taking appropriate action in respect of departmental proceedings on the advice of the CVC or otherwise;

(vii) obtaining first and second stage of the CVC, wherever necessary;

(viii) obtaining advice of the Union Public Service Commission in regard to the nature and quantum of penalty to be imposed, wherever necessary;

(ix) Examiniation of Complaints regarding allegations against the officials/ officers of the PSUs under this Ministry for appropriate action;

(x) Maintenance and scrutiny of immovable property returns of officers and staff working in this Ministry.

2. 11 PSUs and one attached office, namely Office of Development Commissioner of Iron & Steel, Kolkata function under the administrative control of this Ministry.

3. During the year 2000-01 (upto November, 2000) in all 81 complaints were received in the Ministry. Out of these 32 Complaints have disposed off after examining them in consultation with the CVC wherever necessary. The remaining 49 Complaints are under various stages of investigation/ examination.

GRIEVANCE REDRESSAL MECHANISM

Ministry of Steel has a well laid out three-tier grievance redressal mechanism which ensures fast disposal of grievances. In the Ministry, time limits have not been fixed for grievance redressal because the cases are very few and are mostly settled within a period of 3 months. Computerisation of grievance redressal has been done.

The overview of status of public grievance redressal machinery in the office of DCI&S, Kolkata, a subordinate office of Ministry of Steel and PSUs is as under: -

Development Commissioner for Iron & Steel (DCI&S)

The Public Grievance Redressal Machinery in DCI&S Office consists of a Director of Public Grievances assisted by a Deputy DCI&S who is also the Staff Grievances Officer. He prescribes guidelines for public grievance redressal which are being followed satisfactorily.

Steel Authority of India Ltd. (SAIL)

Effective Grievance Redressal exists in all plants/ units of SAIL. Grievance Committees and Officers have been designated both at the Zonal level and at the Central level to redress grievances. The Grievance Committees are functioning satisfactory and the machinery is bi-partite. Other guidelines relating to staff grievance redressal are being followed in SAIL, such as, periodicity of meetings with staff associations, nominations of Grievance Officers, fixing time norms for disposal of grievances, maintenance of registers/computerisation of grievances received and their disposal.

Rashtriya Ispat Nigam Ltd. (RINL)

RINL has a well laid down procedure for handling staff grievances through committees like Area Grievance Handling forum and Central Grievance Handling Forum. Apart from these, there is a system of "ACCESS" under which any employee can meet the Chief Executive on a scheduled day to present his / her grievance. The redressal of staff grievances are coordinated by the Zonal Personnel Executives, who send monthly progress report on the number of employees' grievances received and redressed etc. for compilation, computerisation and monitoring.

In line with Govt. instruction, this system of redressing Public Grievances was streamlined. The scope of Public Grievance was broadened to include complaints of Suppliers, Customers etc., and systematic recording of receipt and disposal of such grievances have started w.e.f. 3.11.2000. As per the revised system, one Senior Executive in the rank of Dy. General Manager has been nominated as Officer on Special Duty (OSD) to handle and monitor the public grievances within the given time frame. All Heads of the Department have been advised to accord due priority for redressal of public grievances as per the time frame. In each department, one executive in the rank of Dy.Chief Manager / Asst. General Manager has been nominated to coordinate redressal of grievance.

National Mineral Development Corporation (NMDC)

The Grievance Redressal Machinery in NMDC is headed by an Executive Director in the Head Office and by Executive Director/ General Manager in each of the 4 production projects. The machinery is working satisfactorily. However, the volume of grievances handled is very low, as such, computerisation has not been done. Public dealing in the organisation being minimal, no time norms etc. have been fixed. However, as and when any Public grievance (including in the press) is received, the same is promptly attended to.

Kudremukh Iron Ore Company Ltd. (KIOCL)

The Public Grievance Redressal Machinery is being looked after by Executive Director (P&A). Procedures for disposal of grievances have been worked out and given due publicity. CMD is also personally monitoring the grievances. In view of the volume of grievances being small, no computerisation has been taken up.

Whenever any Public Grievances are received by the Company in writing, the same are acknowledged promptly. The Grievances so received are carefully examined in detail and analysed for taking quick and prompt action. A senior official of the Company in the rank of an Executive Director, who is in-charge of Public Relations, attends to public Grievances

Manganese Ore (India) Ltd. (MOIL)

The PGRM in MOIL is working satisfactorily. A Grievance Officer has been nominated in all units of the Company. Government guidelines relating to disposal of grievances are being followed both at the Corporate Office and in the units. As the volume of grievance is small, computerisation has not been done. Time norms for disposal of grievances have been fixed. The Company does not have much public dealing.

MSTC Ltd.

A Public Grievance Cell has been constituted with 3 senior and middle level executives to deal with any grievance of any member of the public relating to the functioning of the company. Constitution of this Cell has been widely circulated to all the offices of MSTC. Grievance received is examined by the Cell in consultation with the HOD concerned. MSTC being a very small organisation having maximum 20 to 30 staff in each department/ office, the staff have easy access to the HODs and even CMD. Therefore, no necessity has been felt for setting up of formal machinery for redressal of employee grievance. Personnel Department addressees all formal/informal grievances received in consultation with the HOD concerned and sometimes with the staff union if the grievance is of collective nature. Besides in line with the Supreme Court judgement, a Committee has also been constituted for prevention of sexual harassment of women at work place.

Sponge Iron India Ltd. (SIIL)

The Committee headed by General Manager(P&A) has been constituted to redress all public and staff grievances. As the number of complaints/grievances is small, GM (P&A) is monitoring the grievances on a monthly basis. Other guidelines relating to designation of Grievance Officer, display of name and room numbers of Grievance Officer, installation of complaint box etc. are being followed.

MECON Ltd.

Public dealing in this PSU is minimal. However, guidelines regarding grievances are being followed and 3-tier system is in place for employee grievances to be handled at Section level, General Manager level (for officers) and Director level Apex Committee. Director(Grievance) & Grievance Officer have been duly appointed. Complaint/ Suggestion boxes are in place.

Hindustan Steelworks Construction Ltd. (HSCL)

A Principal Grievance Redressal Officer at AGM's level and a Staff Grievance Officer at DGM's level are in position. Government's guidelines relating to displaying of names Grievance Officers, Complaint Box, Scrutiny of newspapers for picking up grievances are all being followed. Norms have been fixed for disposing off employees' grievances only. Grievance Redressal Machinery is being followed in all the units and a grievance procedure has been drawn up and circulated to all units.

Bharat Refractories Ltd. (BRL)

Public Grievance Officer and Staff Grievance Officer have been designated. Departmental/Unit Heads have also been empowered to redress public grievances as and when received. No Officer has yet been nominated as Director for Grievances, since there is no public interaction. Computerisation has not been done. Other guidelines relating to installation of complaint box and scanning of newspapers for grievances etc. are being followed.

Status of Public Grievances in respect of Ministry of Steel, its subordinate office and its PSUs was as under:-

1. For the quarter ending 31.3.2000

S. No.	Name of the PSUs and subordinate office	No. of Grievances outstanding	No. of Grievances received	Nof. of cases disposed off	No. of cases pending as on 31.3.2000
1.	M/o Steel	1	5	3	3
2.	DCI&S, Kolkata	Nil	Nil	Nil	Nil
3.	SAIL	232	1189	1317	104
4.	RINL	Nil	Nil	Nil	Nil
5.	MECON Ltd.	Nil	2	Nil	2
6.	NMDC	Nil	Nil	Nil	Nil
7.	BRL	Nil	Nil	Nil	Nil
8.	KIOCL	Nil	Nil	Nil	Nil
9.	MOIL	Nil	Nil	Nil	Nil
10.	HSCL	Nil	Nil	Nil	Nil
11.	SIIL	Nil	Nil	Nil	Nil
12.	MSTC Ltd.	Nil	1	Nil	1
13.	FSNL	Nil	Nil	Nil	Nil

2. For the quarter ending 30.9.2000

S. No.	Name of the PSUs and subordinate office	No. of Grievances outstanding	No. of Grievances received	Nof. of cases disposed off	No. of cases pending as on 30.09.2000
1.	M/o Steel	Nil	Nil	Nil	Nil
2.	DCI&S, Kolkata	Nil	Nil	Nil	Nil
3.	SAIL	89	940	893	136
4.	RINL	Nil	Nil	Nil	Nil
5.	MECON Ltd.	2	Nil	Nil	Nil
6.	NMDC	Nil	Nil	Nil	Nil
7.	BRL	Nil	Nil	Nil	Nil
8.	KIOCL	Nil	Nil	Nil	Nil
9.	MOIL	Nil	Nil	Nil	Nil
10.	HSCL	Nil	Nil	Nil	Nil
11.	SIIL	Nil	Nil	Nil	Nil
12.	MSTC Ltd.	Nil	Nil	Nil	Nil
13.	FSNL	Nil	Nil	Nil	Nil

STATUS OF IMPLEMENTATION OF PERSONS WITH DISABILITIES ACT, 1995

In pursuance of a legislation enacted by Ministry of Social Justice & Empowerment viz., "Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995", Ministry of Steel has been advising the PSUs under its administrative control to abide by the provisions of the said Act in letter and spirit. Section 33 of the Act provides for reservation of not less than 3% for persons with disabilities of every establishment. Of this 3%, 1% each has to be reserved for persons suffering from (1) Blindness or low vision, (2) Hearing impairment and (3) Locomotor Disability or Cerebral palsy in posts identified for each disability.

As on 1.1.2000, there were 1148 disabled persons employed in the Public Sector Undertakings of Ministry of Steel. Most of the jobs in the PSUs of the Ministry are of a continuous and labour intensive nature. Secondly, in the case of mining operations, in view of statutory regulations under the Mines & Minerals (Regulation and Development) Act, 1957 and the rules framed thereunder, it has not been possible to recruit handicapped persons. However, most of the PSUs under the Ministry of Steel are presently facing problems of surplus manpower and efforts are on to downsize the staff either by way of Voluntary Retirement Scheme (VRS) or by re-deployment, consequently no new recruitment is taking place, which could enable implementation of the PWD Act more vigorously.

The company-wise position in respect of the PSUs under the Ministry of Steel is as under:

(For the purpose of this chapter the following short forms are used:

BL : Blindness or low vision

HI : Hearing Impairment

LD : Locomotor disability or cerebral palsy)

Steel Authority of India Limited (SAIL)

Status of implementation of the Persons with Disabilities Act, 1995 during the year 2000-2001(as on 30.09.2000.)

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons therefor	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD				
A	17947	1	7	23	31	0.17	*	*
B	42717	12	52	251	315	0.73		
C	119720	39	64	559	662	0.55		
D	2010	-	-	03	03	0.14		
Total	**182394**	**52**	**123**	**836**	**1011**	**0.55**		

* Columns 5 & 6: There has been no recruitment in SAIL, except in certain critical categories during the last two years.

Bastar Iskpat Nigam Limited(BINL)

The status of the Implementation of persons with Disability Act, 1995 during the year 2000-2001 upto September, 2000 was as under:

Group	Total No. of Employees appointed after the act came into force (i.e. 7.2.96)	Out of Col.1 Number of disabled persons			Total BL+HI+LD	%age of disabled persons (Col.3 & Col.1)	In case figure in Col.4 is less than 3% reasons therefor*	Action taken of fill up the short fall
		BL	HI	LD				
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
A	27@	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-	-
C	121	-	1	1	2	1.65	*	#
D	51	1	1	1	3	5.88	-	-
Total	**199**	**1**	**2**	**2**	**5**	**7.53**		

@ Post identified for disabled.

* Due to 1 unfilled post.

\# A post of "Junior Assistant" reserved for the category of "Low Vision" has been notified and it is expected to fill up shortly.

Status of implementation of the Persons with Disabilities Act, 1995 during the year 2000-2001.(as on 30.9.2000)

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons (Col.3 & Col.1)	In case figure in Col.4 is less than 3% reasons there for *	Action taken of fill up the short fall ©
1		2			3	4	5	6
Group		BL	HI	LD				
A	1025	0	0	5	5	0.48	*	*
B	1236	0	0	11	11	0.88		
C	2579	0	0	20	20	0.77		
D	1773	1^	2	6	9	0.50		
Total	**6613**	**1**	**2**	**42**	**45**	**0.68**		

^ partially blind

* The company mostly recruits persons for technical posts in our mines. Due to the provisions of the Mines Act and other Mining Regulations, it is not possible to appoint handicapped persons in the mines.

© Efforts will be made to recruit Physically Handicapped candidates in non-technical areas as & when such recruitment takes place in NMDC.

Kudremukh Iron Ore Company Limited (KIOCL)

Status of implementation of the Persons with Disabilities Act, 1995 during the year 2000-2001

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons therefor	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD				
A	35	-	-	1	1	2.85	N/A	N/A
B	147	1	-	6	7	4.76		
C	151	2	4	10	16	10.59		
D	77	1	1	3	5	6.49		
Total	**410**	**4**	**5**	**20**	**29**	**7.07**		

Manganese Ore India Limited (MOIL)

Status of implementation of the Persons with Disabilities Act, 1995 during the year 2000-2001

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons therefor**	Action taken of fill up the short fall **
1		2			3	4	5	6
Group		BL	HI	LD				
A	41	-	-	1	1	2.44	**	**
B	98	-	-	-	-	-		
C	1858	3	1	5	9	3.25		
D	5724	3	3	2	8	8		
Total	**7721**	**6**	**4**	**8**	**18**	**3.50***		

* Percentage with regard to total strength of 514.

** Col. (5) & (6): There is no direct recruitment since last two years. MOIL being a Mining Company and major activities carried out are in Under Ground Mines situated in remote places, it is not possible, due to statutory restrictions under Mines Act & Metalliferous Mines Regulations and because of safety reasons, to deploy disabled persons on the jobs which are of strenous nature at our mines. However, whenever vacancies arise the reserved quota will be taken care of.

MECL LIMITED

Status of implementation of the Persons with Disabilities Act, 1995 during the year 2000-2001 (As on 30.9.2000)

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons (Col.3 & Col.1)	In case figure in Col.4 is less than 3% reasons therefor	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD				
A	122	-	-	1	1	0.8	**	**
B	96	-	1	1	2	2.1	***	
C	35	-	-	1	1	2.9		
D	26	-	1	-	1	3.8		
Total	**279**	**-**	**2**	**3**	**5**	**1.8**		

** Some posts of Management Trainees have been advertised, of which 1 post has been reserved for physically handicapped(HI) person.

*** No recruitment in Group B

Status of Implementation of the Persons with Disabilities Act 1995 during the year 2000-2001 (As on 30.9.2000)

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons therefor	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD				
A	153	-	-	-	-	-	As stated at (a) below	As stated at (b) below
B	294	-	-	-	-	-		
C	867	-	-	-	-	-		
D	4	-	-	-	-	-		
Total	**1318**	**-**	**-**	**-**	**-**	**-**		

(a) FSNL is a scrap processing company, rendering services to the integrated steel plants. The activities of FSNL Operations are carried out in open area in all the seasons. Further, heavy equipments such as Balling Cranes, Magnetic Separators, Dozers, Dumpers, etc. are the main equipments used in carrying out operational activities. Thus the atmosphere/working conditions of FSNL is not conducive for the persons with disabilities and hence engagement of disabled persons for carrying out jobs in field will not be safe for them.

(b) Wherever possible, such persons are being accommodated by FSNL in office work in Group 'C'. Further keeping in view the enactment of Equal Opportunities, Protection of Right and Full Participation Act, 1995, Company has identified and reserved 3 posts in Non-works Department for persons with disabilities in Group 'A' post also.

Sponge Iron India Ltd. (SIIL)

Status of Implementation of the Persons with Disabilities Act 1995 during the year 2000-2001

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons therefor *	Action taken of fill up the short fall*
1		2			3	4	5	6
Group		BL	HI	LD				
A	62	NIL	NIL	NIL	NIL	NIL	*	*
B	46	-	-	1	1	1.66%		
C	144	-	-	4	4	2.48%		
D	135	-	1	-	1	0.84%		
Total	**392**	**-**	**1**	**5**	**6**	**1.76%**		

* In the year 1996, the total number of PHC persons in Group C&D were 11 out of 397 employees, which comes to 3%. After introduction of VRS in SIIL, 5 persons (1C & 4D) were left under VRS and the posts were abolished and no recruitment made from 1995 onwards.The company has introduced VRS to reduce existing surplus manpower.

Status of Implementation of the Persons with Disabilities Act 1995 during the year 2000-2001 (as on 31.3.2000)

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons there for	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD			**	**
A	2450	1	2	1	4	0.15		
B	170	1	-	3	4	2.35		
C	452	3	2	3	8	1.77		
D	20	-	-	1	1	5.00		
Total	**3092**	**5**	**4**	**8**	**17**	**0.55**		

** Efforts will be made to increase the % age of disabled persons who may join the company in future. However, at present no fresh recruitment is envisaged.

Hindustan Steel Works Construction Limited

Status of Implementation of the Persons with Disabilities Act 1995 during the year 2000-2001 (as on 31.12.99)

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons there for	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD			**	**
A	1310	-	-	5	5	0.38		
B	713	-	-	9	9	1.26		
C	10207	-	-	23	23	0.23		
D	741	-	-	8	8	1.08		
Total	**12971**	**-**	**-**	**45**	**45**	**0.35**		

** Col. 5&6: There are huge surplus and redundant workforce in the Company at present, due to acute shortage of work in SAIL (Steel Plants) locations where more than 80% employees of the Company are posted. As a result there is a general ban on recruitment for more than a decade and Govt. approved VR Scheme is in operation to weedout the surpluses. Further Govt. approved financial restructuring & assistance package also provide ban on all recruitments for next ten years and separation of more than 6000 employees through VRS for which Company is likely to get loan of Rs.318.36 crores from the bank under Govt. guarantee and interest subsidy.

As per the policy of the Govt. communicated vide letter No. 13(8)/89-Coordn. dated 18.8.89 any post from which an employee is permitted to opt VR has been abolished and not filled in, irrespective of SC, ST, OBC and other employees.

Status of Implementation of the Persons with Disabilities Act 1995 during the year 2000-2001.

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons therefor	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD				
A	349	-	-	1	1	0.28	*	*
B	369	-	-	-	-	-		
C	1309	2	-	9	11	0.84		
D	1496	-	1	12	13	0.86		
Total	**3523**	**2**	**1**	**22**	**25**			

* Col. 5&6: BRL being a sick company, was referred to BIFR in the year 1992. BIFR cleared the revival package for the company during August,1996. It would not be out of place to mention here, that the company is passing through acute financial hardship and is not in a position to meet the expenses even for statutory and other obligations. The recruitment due to the above constraints was very scanty and limited to only such area which were very crucial for survival. Under the circumstances the company is unable to draw elaborate plans for recruitment at this point of time. As and when the financial health of the company improves, due attention shall be given to take care of disabled persons to comply with the legal provisions.

Development Commissioner For Iron & Steel

Status of Implementation of the Persons with Disabilities Act 1995 during the year 2000-2001(as on 30.9.2000).

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons there for	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD			-	-
A	12	-	-	-	-	-	*	N.A.
B	27	1	-	-	1	3.7	-do-	-do-
C	146	1	-	4	5	3.4	-do-	-do-
D	66	1	-	-	1	1.5	-do-	-do-
Total	**251**	**3**	**-**	**4**	**7**	**2.78**		

* Recruitment is made through UPSC/ Depuatation.

Ministry Of Steel

Status of Implementation of the Persons with Disabilities Act 1995 during the year 2000-2001(as on 30.9.2000).

Number of Employees		Number of Disabled Persons			Total BL+HI+LD	%age of disabled persons	In case figure in Col.4 is less than 3% reasons there for	Action taken of fill up the short fall
1		2			3	4	5	6
Group		BL	HI	LD			£	-
A	39	-	-	-	-	-	@	-
B	76	-	-	-	-	-	-	**
C	94	-	1	-	1	1	-	-
D	69	-	-	1	1	1		
Total	**278***	**-**	**1**	**1**	**2**			

* Sanctioned strength excluding Minister's personal staff.

£ Recruitment is made through DoPT.

@ No reservation.

** With respect to direct recruitment one vacancy of LDC is reserved for persons with disabilities. With respect to direct recruitment one vacancy of peon is reserved for persons with disabilities and this has been filled.

PROGRESSIVE USE OF HINDI

The Ministry of Steel continued its efforts towards greater use of Hindi in official work during the year 2000-2001 keeping in view the Annual Program prepared and issued by the Department of Official Language (Ministry of Home affairs) for implementation of the Official Language policy of the Union.

The work relating to the Progressive use of Hindi in the Ministry is under the administrative control of a Joint Secretary and is looked after by a Director. The Hindi Section consists of a Deputy Director, an Assistant Director, a Senior Translator, three Junior Translators and two Lower Division Clerks.

There are 59 Devnagari typewriters including 33 bilingual electronic typewriters and computers in the Ministry. Adequate reading material in Hindi is also available. A number of measures have been taken for the promotion of Progressive use of Hindi in the Ministry, its attached office and PSUs under its administrative control.

Some salient features of the Official Language implementation programme are as under.

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 regularly. Two such meetings have been held upto 30th September, 2000.

Hindi Salahakar Samiti

Hindi Salahakar Samiti of this Ministry is under reconstitution.

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

In pursuance of the Official Language Policy of the Government of India, almost all documents 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 Region "A", "B" and "C" check points have been identified in the Ministry to ensure compliance of the Official Language Policy.

Rajbhasha Shield/Trophies

In order to encourage the use of Hindi in the offices and undertakings under the administrative control of the Ministry of Steel, a Chal Vaijayanti (Running Shield), a Rajbhasha Shield and two trophies have been instituted. A Rajbhasha Shield for the PSUs located in Region "C" have also been instituted. These are given every year to the office/undertakings on the basis of their annual performance in progressive use of Hindi. Besides a medal is also awarded to the officer/employee whose work in Hindi is rated the best in the Ministry.

Incentive scheme for original work in Hindi

The cash incentive scheme for original work in Hindi introduced by the Department of Official Language is being implemented in the Ministry.

Cash prize scheme for dictation in Hindi

An incentive scheme for officers for giving dictation is in operation in this Ministry. Under this scheme two cash prizes of Rs.1000/- each are given to the officers who give maximum dictation in Hindi.

Award for writing original books in Hindi

A scheme for awarding cash prizes for writing technical books in Hindi on various disciplines related to the Steel industry and its allied subjects is also in operation in the Ministry. An amount of Rs. 15,000/-, Rs. 10,000/- and Rs. 7,500/- each is awarded for the first, second and third prizes respectively. During the year under review above prizes were also awarded.

Hindi Divas/Rajbhasha Swarn Jayanti varsh

In order to encourage use of Hindi in official work amongst officers/employees of the Ministry an appeal was made by the honorable Minister on 14th September, 2000. As per the orders issued by the Department of Official Language (Ministry of Home Affairs) to organize Rajbhasha Swarn Jayanti varsh from 14.09.99 to 14.09.2000 various programs were organized during this period.

Prati Din Ek Shabd

Prati Din Ek Shabd scheme launched in the Ministry four years back is being continued during the year. Under this scheme one word/phrase in Hindi and its English equivalent are written daily on the black boards installed on all the three floors of the Ministry. These words/phrases are generally administrative and technical in nature which are being used in the day to day official work.

"Hindi Day" on every Wednesday

Wednesday has been designated as "Hindi Day" in the Ministry and all officials & staff are expected to carry out their entire official work in Hindi on Wednesday.

Training in Hindi/Hindi Typewriting/ Hindi Stenography

A program has been drawn up for imparting training in Hindi/Hindi Typing/Hindi Stenography to those employees for whom in-service training is obligatory. Out of a total of 177 officers and staff (except group "D" employees) 168 possess working knowledge of Hindi. So far as Hindi typing and Hindi Stenography is concerned, out of 24 LDCs and 38 Stenographers 10 and 27 know Hindi typing and Stenography, respectively.

The progressive use of Hindi in the Public Sector Undertakings is as under:

Steel Authority of India Ltd.

The Company continued its efforts in the implementation of Official Language Policy of the Government of India. Emphasis was given to create an environment in which employees voluntarily adopt Hindi in their office work. SAIL Headquarters and its quarterly journal on Official Language ISPAT BHASHA BHARTI were awarded 1st and 2nd prizes by the Town Official Language Implementation Committee of Delhi. SAIL-H.Q., Raw Materials Division, Calcutta, CET-Ranchi and Bokaro Steel Plant were awarded prizes by the Deptt. for Official Language, Ministry of Home Affairs for noteworthy implementation of Hindi.

Indian Iron and Steel Company Ltd. (IISCO)

During the year the Company continued to pursue vigorously the implementation of Official Language Policy of the Government. Employees were encouraged to carry out their official work in Hindi and Liberal incentives for such work were given. Official Language fortnight celebrations, Hindi Workshops and Seminars on technical writing in Hindi and computer training programmes for doing work on Hindi software were organised during the year. Rajbhasha shields and cash prizes were awarded in various competitions to encourage the employees. Town Official Language Implementation Committee, Chaired by MD, IISCO was awarded third prize at Eastern Regional Level at Guwahati for the year 1998-99 by Official Language Deptt. of Government of India.

Rashtriya Ispat Nigam Ltd. (RINL)

During the period from April 1999 to March 2000, two hundred and fifty eight employees were trained in Hindi Prabodh and Praveen courses and 6 employees were trained in Hindi Stenography. 4 Hindi Workshops were organized in which 71 employees were trained. Directives of the Government of India for implementing official language are complied with.

Kudremukh Iron Ore Company Ltd. (KIOCL)

The Company follows the directives issued from time to time by the Dept.of Official Language , Government of India for the progressive use of Rajbasha In addition to grant of cash awards and increments, other incentives are also given to the employees passing Hindi examinations. Hindi workshops and Training programmes are conducted at regular intervals. All the stationary of the Company is in bilingual form. The Annual Report, Magazines, MoU etc., are also printed in Hindi. Some of the correspondence with the Govt. of India are also made in Hindi. Company's officials attend the TOLIC meetings regularly and coordi-nate in conducting various programmes. Hindi week was celebrated in September at all locations at Kudremukh, Mangalore and Bangalore.

In appreciation of Company's efforts in the progressive use of official Language, the Rastriya Hindi Academy, Calcutta has conferred Millenium All India Official Language Shield to the Company. The Shield was presented by Hon'ble Surface Transport Minister Shri Hukumdev Narayana Yadav to our Chairman-cum Managing Director Shri S Murari on 02-10-2000 at Tirupati.

Manganese Ore India Ltd. (MOIL)

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.

To encourage use of Hindi at all levels various competitions are organised during "Hindi Fortnight" and the winners are suitably rewarded. Facilities for learning Hindi have been made available to

employees who are not proficient in the language. The Company has been receiving First Prize from the Ministry of Steel for the last 7 years as a result of which "CHAL VAIJAYANTI" Award has been given permanently to the Company. This year the Company is also celebrating the "Rajbhasha Swarna Jayanti"

Ferro Scrap Nigam Ltd. (FSNL)

The Company ensures strict adherence of all directives of the Government on implementation of Official Language Policy. With a motive of encouraging employees to show interest in carrying out their day-do-day jobs in Hindi, Hindi Diwas is celebrated in the company and various Hindi competitions like Hindi Essay writing, Hindi Gyan pratiyogita, Hindi Prashnottari pratiyogita, etc. are conducted and the winners are given away prizes.

In recognition of exemplary work done by FSNL in implementation of Hindi, the company has been awarded the prestigious "Indira Gandhi Rajbhasha Shield" the highest award given away among the public sector undertakings for implementation of official language policy.

Sponge Iron India Ltd.

From 01.04.2000 to 30.09.2000, 48 documents were released in bilingual form in accordance with Section 3(3) of Official Languages Act, 1963. 'Learn Hindi Sentences' and 'Hindi Noting, Drafting' Schemes are under progress. SIIL attended the TOLIC Meeting held on 26.05.2000 and received a Trophy for best implementation of Official Language during 1999. Official language Hindi Golden Jubilee Year was observed from 14.09.1999 to 14.09.2000 on the occasion Hindi Essay writing competition for employees and school children were conducted month of Hindi correspondence was observed. Hindi workshop was organised, reference literature was distributed. Vedectory programme of official language Hindi golden jubilee year as well as Hindi day celebration was organised on 14.09.2000 and prizes were distributed among the winners in the above competition.

MECON Ltd.

Various activities to motivate the employees of the company for use of Hindi in official work were organized during the year. Official Language Policy of the Government of India is being implemented in MECON with full vigor. In addition to the coaching classes, workshops and training programs, quiz competition and debate were also organised for encouraging the employees to do their work in Hindi. MECON received a Shield (First Prize) for propagating Official Language Policy of the Govt. of India, from Ministry of Home Affairs, Deptt. Of Official Languages. As the Chairman of the Town Official Language Implementation Committee (TOLIC), Ranchi, MECON successfully organised an All India Rajbhasha Banking Seminar in Hindi on "21 vin Sadi Men Banking Paridrishya : Chunautiyan Evam Samadhan".

Hindustan Steel Works Construction Limited (HSCL)

With a view to comply with the provisions of Official Language Act and Official Language Rules, the following efforts in implementing the Official Language Policy and Programmes of the Department of Official Language have been made. All letters, appeals, representations etc. which were received in Hindi were invariably replied in Hindi. In compliance of Section 3(3) allmost all circulars orders, notices, tender notices, press release, advertisements etc. were issued in bilingual form. Proceedings and Minutes of the performance review meeting/co-ordination meeting were issued both in Hindi and English. On "Hindi day" and 'Hindi Fortnight' various Hindi competitions were organised and winners were given awards and mementos. A good number of employees were nominated to acquire training of Hindi Language/ Hindi Typing and Stenography at the Centres of Hindi Teaching Scheme, Government of India and on passing the prescribed examinations with higher marks employees were granted incentives in the form of cash awards and personal pay as per rules of the company. The company actively participated in the activities of official language Implementation Committee (PSUs) at Corporate Office and Units and was awarded Scroll of Honour for its excellent performance at town level activities.

Bharat Refractories Ltd. (BRL)

The Company continued to vigorously pursue its efforts in implementing the Official Language Policy of the Government. To improve the use of Hindi Workshop, Rajbhasha Seminars, Competitions, meeting and Training Programmes were conducted from time to time. Golden Jubilee year of Rajbhasha Hindi were observed in the HO and all the units of the company during the reported period.