



ANNUAL
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1995-96

MINISTRY OF STEEL

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Annual Report 1995-96

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YEAR'S Highlights

- ❖ SAIL achieved highest ever pre-tax profits of Rs.1163 crores during 1994-95. The pre-tax profits for 1995-96 were Rs.1,329.00 crores.
- ❖ SAIL recorded a turnover of Rs.14,509 crores during 1994-95, a growth of 18.8%. The turnover for 1995-96 was Rs.15,404 crores.
- ❖ SAIL achieved best ever production of Hot Metal (10.87 MT), Crude Steel (9.82 MT) and Saleable Steel (8.84 MT) during 1994-95. In 1995-96 production was 10.90 MT, 9.98 MT and 9.155 MT of Hot Metal, Crude Steel and Saleable Steel respectively.
- ❖ SAIL incurred capital expenditure of Rs.2,703.54 crores on modernisation and other capital schemes in 1994-95, and Rs.2,725.64 crores during 1995-96 funded without any budgetary support.
- ❖ SAIL undertook improvement of major techno-economic parameters with energy consumption being the lowest since inception in 1994-95 improvement was also maintained in 1995-96.
- ❖ SAIL achieved highest ever net mobilisation of deposits (Rs.370 crores) under the Company's Public Deposit Scheme in 1994-95. In 1995-96 net increase in deposits was approximately Rs.154.61 crores. The company also issued Bonds valuing Rs.400 crores.
- ❖ SAIL successfully launched and completed a GDR issue of US \$125 million in March, 1996. The issue was fully subscribed indicating high level of confidence of international investors in SAIL.
- ❖ VSP's Crude Steel production increased by 43% in 1994-95 and 23% in 1995-96 as compared to preceding year, while saleable steel production increased by 32% in 1994-95 and 37% in 1995-96.
- ❖ VSP recorded a significant improvement in techno-economic norms of performance during 1994-95 and 1995-96 as compared to the preceding year.
- ❖ VSP for the first time had signed Memorandum of Understanding with Ministry of Steel for the year 1995-96.
- ❖ National Mineral Development Corporation Ltd., (NMDC) produced 14.31 Million Tonnes of Iron Ore during 1995-96, which is an all time record. The company paid dividend of 20% on paid-up capital (amounting to Rs.26.43 crores) for 1994-95 the fifth year in succession.
- ❖ Metallurgical & Engineering Consultants (India) Ltd. (MECON) paid dividend @40% for 1994-95. This is the 16th consecutive year MECON has paid dividend.
- ❖ Manganese Ore (India) Ltd. (MOIL) achieved the highest Sales during 1995-96 in terms of quantity and value since the inception of the Company.
- ❖ Kudremukh Iron Ore Company Ltd. (KIOCL) declared dividend for 1994-95 at the rate of 3% as in earlier years. This was the third year in succession for payment of dividend.

Production of Steel

Production of saleable steel in the five integrated steel plants of Steel Authority of India Limited during 1995-96 was about 9.18 million tonnes as against the production of 8.96 million tonnes in 1994-95, representing an increase of 2.5 percent.

Production of saleable steel by Visakhapatnam Steel plant was 2.14 million tonnes in 1995-96 as against 1.56 million tonnes in 1994-95. TISCO produced 2.70 million tonnes of saleable steel in 1995-96 as against 2.45 million tonnes in 1994-95. Production of saleable steel by the secondary producers was 5.50 million tonnes as against 4.57 million tonnes in 1994-95.

Total production of saleable steel in 1995-96 was about 19.77 million tonnes as compared to 17.74 million tonnes in 1994-95, representing an increase of 11.4 percent.

Demand and Availability of Steel

Total demand for finished steel (including requirement for export) in 1995-96 was about 22.12 million tonnes. Against this, the domestic production during the year was about 20.75 million tonnes, leaving a gap of 1.37 million tonnes. In the case of pig iron, the domestic production was about 2.79 million tonnes against an estimated demand of 2.79 million tonnes. The import of finished steel in 1995-96 was about 1.57 million tonnes.

Performance of SAIL

The production of saleable steel in the four integrated and special steel plants of SAIL for 1995-96 was 9.155 million tonnes representing an increase of 3.44% over the production during the corresponding period in 1994-95. Production of crude steel in the four integrated plants of SAIL was 9.98 million tonnes as against 9.82 million tonnes achieved during the corresponding period in 1994-95.

❖ IISCO

Production of saleable steel in IISCO, a subsidiary of SAIL, in 1995-96 was 0.302 million tonnes which was 75% of the target. Production of crude steel in IISCO was 0.329 million tonnes as against 0.344 million tonnes achieved during the corresponding period in 1994-95.

❖ Working Results of SAIL

The profit before tax of SAIL for the period ended 31.3.96 was Rs.1,329 crores (Prov.) as compared to Rs.1,163 crores in 94-95. The gross margin i.e. profit before depreciation & interest for 1995-96 was Rs.2,721 crore as against Rs.2,397 crore in 1994-95. The company recorded a sales turnover of Rs.14,710 crore in 1995-96 as against Rs.13,867 crore in 1994-95.

Major Projects of SAIL**Capital Schemes**

The Company incurred capital expenditure of Rs.2,816 crores in 1994-95 on Fixed Assets and Capital Work-in-progress, which was financed through internal accruals and borrowings without resorting to any budgetary support from the Government of India and approx. Rs.2,451 crores during the period April-March, 1996.

At present there are three steel plants where modernisation works are in progress viz. Durgapur Steel Plant, Rourkela Steel Plant and Bokaro Steel Plant. The position of the modernisation work in these plants and progress of major capital schemes in Bhilai Steel Plant as on 31.3.96 are given below:

Durgapur Steel Plant

Emphasis was given on early commissioning and stabilisation of modernisation schemes at Durgapur Steel Plant (DSP). A number of production units like new Sinter Plant, Basic Oxygen Furnace Shop and

Continuous Casting Plant were commissioned. During the period April-March, 1996 major emphasis was given on stabilisation of modernised units i.e. BOF Shop, Concast Shop, New Sinter Plant and Basic Oxygen Furnace etc. The Ore Processing Plant without Tailing Dam at Bolani was commissioned in January, 1996. The Coke Oven Battery No.3 with 'on-main charging' facility has been lighted up in March, 1996.

Rourkela Steel Plant

At Rourkela Steel Plant (RSP), five of Phase-II modernisation packages viz. Power Distribution, Mobile Equipment for RMHS-II, sizing plant at Satna, Tarkera intake facilities and make up water pump houses for Tarkera Works have been commissioned. As regards the global packages viz. Sinter Plant, BOF shop, Concast Shop-I & II, Plate Mill and Hot Strip Mill modification, the major Design and Engineering work is also over. Major emphasis was laid on expeditious implementation of Phase-II Modernisation Packages during 1995-96. The package of Relocation of Dividing Line and two part packages viz. Reheating Furnace for Plate Mill and Modification of Plate Mill have been commissioned during the year. Sinter Plant-II, BOF Shop and Concast Shops-I & II are in advanced stage of completion. Testing & trials are under progress for some of the units.

Bokaro Steel Plant

The work for modernisation packages is progressing as per schedule. The foundation work for concast machines and steel refining units has been completed ahead of schedule. The Reheating Furnace-4 in Hot Strip Mill is at an advanced stage of completion and is expected to be completed during early 1996-97. For Hot Strip Mill Modernisation, the basic engineering has been completed and the detailed engineering and equipment erection are in progress.

Bhilai Steel Plant

At Bhilai Steel Plant (BSP), the construction of Coke oven Battery No.10 is progressing as per schedule. The revamping of Wire Rod Mill has been completed. Two major schemes viz. new Sinter Plant III and expansion of Oxygen Plant-II have been taken up for implementation for which contracts were awarded during 1995-96. The Rail & Structural Mill modernisation (Phase-I, Stage-I) was completed in 1995-96.

With the completion of modernisation schemes at DSP, RSP and BSL substantial improvements would take place in quality of products and techno-economic parameters, specifically energy consumption, coke rate etc., besides increasing the production capacity of saleable steel in these three units by 1.7 MT.

**Rashtriya Ispat Nigam Limited
(Visakhapatnam Steel Plant)**

1995-96 is the third year of Integrated operation of Visakhapatnam Steel Plant (VSP). In the year 1994-95, the second full year of integrated operation, VSP has registered a cash Profit of Rs.51 crores.

Set to achieve 100% capacity utilisation by 1996-97, VSP has performed well during 1995-96, by achieving Capacity Utilisation levels of 94.5%, 79.4% and 80.4% as against 83%, 65% and 59% achieved in 1994-95 for Hot Metal, Crude Steel and Saleable Steel respectively. It has also achieved a Cash Profit of Rs.100 crores during 1995-96. For the first time, RINL has signed Memorandum of Understanding with the Ministry of Steel for the year 1995-96.

To focus on profitability, business orientation and accountability, RINL has envisaged restructuring of the Plant Units into Strategic Business Groups (SBGs). The Design and Construction Divisions of RINL,

with their rich expertise and experience of construction and commissioning of RINL, have been integrated into an SBG-"Project Engineering and Consultancy Services" (PECS) which commenced its operation from April'95, serving the needs of outside agencies also.

Similarly, the Coke Ovens and By Products Division of VSP has also commenced working as the Coke and Coal Chemicals Group from Nov'95, to bring in more focus on the Marketing and Revenue generation capabilities of the Coal Chemicals and By products Units.

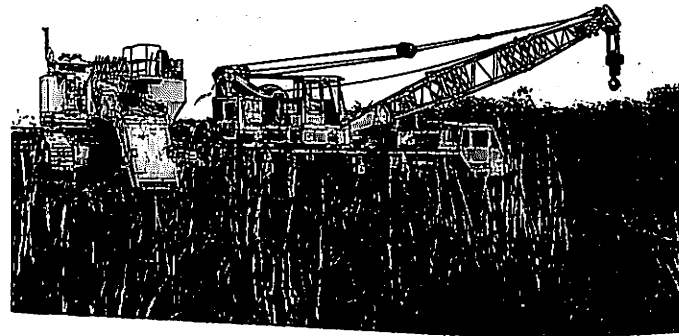
Considering the inability of APSEB for meeting the contractual demand of VSP and their suggestion to VSP to go in for additional in-house generation, VSP has installed the fourth Turbo-Generator (67.5 MW) in May, 1996 in addition to the existing facilities.

As a part of the Balancing facilities, identified to improve the production pickup in the Steel Melt Shop, a Ladle Furnace between Steel Melt Shop & Continuous Casting Department is being installed and targetted to be commissioned by the second quarter of 1996-97. This will meet the process need for raising temperature and fine tuning of the Chemical Composition of Liquid Steel.

National Mineral Development Corporation Limited (NMDC)

During the year 1995-96, NMDC produced 14.31 Million Tonnes of iron ore and 29,447 carats of diamond, the best performance since the inception of the Company. For the year 1994-95, the company paid a dividend of 20% on the equity capital amounting to Rs.26.43 crores, which was the fifth year in succession for payment of dividend.

In view of increasing domestic demand



for Bailadila Iron Ore, two new Iron Ore Mining Projects are being undertaken in this region at Deposits No.10/11A and 11/B, the latter in the Joint Sector. Each of these Projects is designed to produce 5 million tonnes run-of-mine (ROM) Ore.

Kudremukh Iron Ore Company Limited (KIOCL)

The company has exceeded all the targets that were set, achieving in the process several new records. The performance at the end of the first half of the financial year had exceeded all previous landmarks and the Company was confidently looking forward to scaling new heights in production and exports for the year as a whole. In November 1995, however, the Company was faced with severe cuts in power supply from the State Electricity Board. The power situation in the State was so grim that energy cut of 30% and demand cut of 25% were clamped on KIOCL. The effect on the operations was drastic and the Company had to close down the Concentrate plant for 5 days and Pellet Plant for 15 days during Nov. 95.

The Company made efforts to overcome the crisis and made attempts to secure exemption/relaxation of the power cut, allocation of additional energy from the unallocated

Central quota of power, power from alternative sources, etc. The Company succeeded in securing allocation of 9 million units p.m. of energy from out of the unallocated Central quota. The KEB also permitted the Company to utilise the quota of power either at Kudremukh or at Mangalore in a manner convenient to the Company. Despite the severe constraints in power availability, it managed to achieve the highest level ever in respect of pellet production at 2.5 MT. In the process it also recorded the highest ever turnover of Rs.478.48 crores and also recorded an after tax net profit of Rs. 97.27 crores (Provisional).

Electric Arc Furnace Industry

There are 183 Electric Arc Furnace Units with a total installed capacity of 8.44 million tonnes. 92 of them are however, not in operation. In response to New Industrial Policy, prospective entrepreneurs have shown keen interest in setting up additional steel making capacity for the production of steel ingots/billets/slabs.

Production of Ingots/concast billets by EAF units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last four years is given below:-

CATEGORY	(IN '000 TONNES)			
	1992-93	1993-94	1994-95	1995-96 (Prov.)
Mild Steel	1498.7	962.5	1130.1	1340.9
Medium/High Carbon Steel	293.1	297.1	434.0	629.3
Alloy Steel	585.0	693.3	818.0	974.9
Stainless Steel	152.1	210.3	291.1	264.9
Total Reported	2528.9	2163.2	2673.2	N.A.
Total Estimated	446.7	336.1	400.0	N.A.
GRAND TOTAL	2975.6	2499.3	3073.2	3210.0

** The figures are partly estimated. The above figures do not include production of steel by Casting Units registered with erstwhile DGTD.

Sponge Iron Industry

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

The installed capacity of sponge iron units in 1988-89 was only 3.3 lakh tonnes. This has increased to about 54 lakh tonnes in 1995-96. The production during 1995-96 has been at about 44 lakh tonnes (Prov.) from 15 coal based and 3 gas based units.

Pig Iron Industry

Pig iron is the basic raw material for the foundry and casting industries. The major source of supply of pig iron until recently had been the Integrated Steel Plants of SAIL and RINL, which produce mainly basic grade pig iron, thereby necessitating import of foundry grade pig iron. However, in recent years, there has been a significant development of pig iron industry in the secondary sector, which is also producing foundry grade pig iron.

Already 12 new units with a total capacity of 13.49 lakh tonnes per annum have been commissioned (based on the mini/small blast furnace route) in the

secondary sector, as of 31st March, 1996. Further, including the old unit of M/s Kalinga Iron Works (capacity of 1.40 lakh tonnes per annum), pig iron unit of Sponge Iron India Limited (a public sector unit) based on sponge iron route (capacity of 0.45 lakh tpa), and the unit of M/s VISL, Bhadravati, (capacity of 0.75 lakh tpa) the total capacity of the existing units (i.e. excluding the Integrated Steel Plants), as in March, 1996 is 16.09 lakh tonnes per annum.

In addition, several more units with a total projected capacity of 16.18 lakh tpa are in various stages of implementation.

Iron Ore Export

In the year 1994-95, India exported around 31.75 Million Tonnes of Iron Ore. The exports during the year 1995-96 is 31.77 MT.

Export of Other Minerals

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

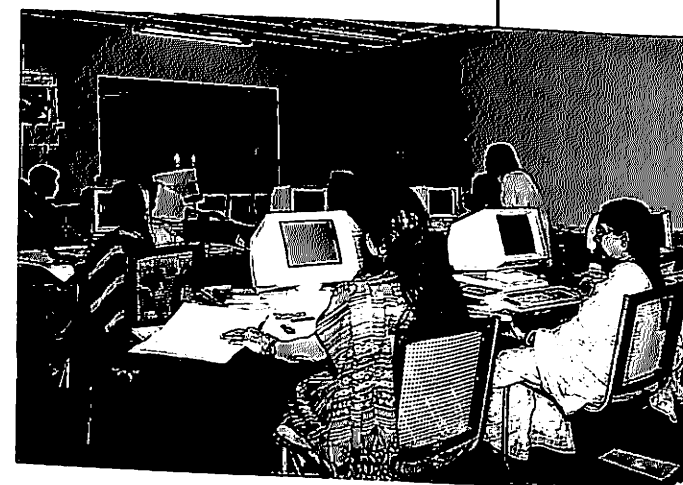
Steel Consumers Council

The Steel Consumers Council was constituted on 31.1.86 under the chairmanship of Minister for Steel and Mines (now Minister for Steel) to provide a forum for interaction between Government and various sections of steel consumers. The main function of the Council is to advise and assist the Central Government on matters relating to availability of steel materials, quality and the market trend in the iron and steel industry in

the country. The last meeting of the Steel Consumers Council was held at Madras on 27th June, 1995.

Management Information System

The Computerised MIS developed for the Ministry of Steel with the assistance of National Informatics Centre is functional in the areas of Accounting & Budgeting, Section Activity Monitoring System and Industrial Entrepreneurs Memoranda System(IEMs). An integrated MIS is being developed with the assistance of National Informatics Centre for Steel Wing in the areas of categorywise Production and Export of Main and Secondary Producers, Import duty and Prices and Performance Monitoring of Public Sector Undertakings. The Computer Centre in the Ministry is equipped with latest Hardware and Software tools and is linked with NICNET for usage of NICMAIL facility. Terminals and independent PCs/PC-XTs/PC-ATs & 486-SX based machines have been provided to Senior Officers and various Sections/Divisions in the Ministry. In-house Training Programmes for the staff in computer usage are also being organised by NIC-Computer Cell from time to time.



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. Emphasis was on improving the quality of the steel products, utilisation of wastes, reduction of energy consumption and cost of production. SAIL have developed digital control system for Electricity Operated Trolley (EOT) Cranes at Bokaro Steel Plant. They have also developed sg Iron at Kulti Works using HBI/Steel Scrap and Low Phosphorus coke in cupola furnace. Tata Iron and Steel Co. Ltd. has been able to improve clean coal yields by optimisation of operating parameters in Froth Floatation Cell of West Bokaro and Jamadoba Collieries. The ash content has dropped to 14% from 17%. Usha Martin Industries Ltd., Calcutta has been able to develop Aluminium killed fine grain steel and lead bearing free cutting steel through Billet caster Route.

Energy Conservation

Iron & Steel plants both in the Public and Private Sectors, continued to give thrust on reduction of consumption of energy.

In SAIL plants, the consumption of energy in four integrated steel plants has been 8.70 G Cal (including electricity consumption) per tonne of crude steel during 1994-95 and was even lower during 1995-96. SAIL has designed and tested a high velocity burner in combustion research unit. It can be used for drying refractory lining uniformly and efficiently in Hot Blast Stoves, Blast Furnace proper and Coke oven Batteries. Bokaro Steel have introduced post heating facilities for ladle in Steel Melting Shop and this has resulted in reduced skull formation, reduction in steel tapping temperature and improvement in ladle lining life.

TISCO has consumed 8.935 G Cal per tonne of crude steel in 1994-95 and 8.673 G Cal per tonne of crude steel during 1995-96. In order to reduce energy consumption, TISCO has provided cold blast oxygen enriched facility at 'G' Blast Furnace, commissioned the rebuilt half Battery with Stamp charge facilities for better coke quality, commissioned new by-product plant at Coke Ovens, maximised steel production through LD route, cut down steel making through Open Hearth Furnaces, and increased liquid steel processing through continuous casting route by 14% over 1994-95.

Mukand Ltd., Bombay, in order to reduce energy consumption, has installed directional porous plug in Ultra High Power (UHP) furnace for faster melting and for reducing tapping temperature, reduced circulation time of ladles to avoid preheating of ladles, saved electrical energy by tapping at a lower temperature, and installed energy efficient horizontal ladle preheating station to reduce fuel oil consumption.

Welfare of Scheduled Castes, Scheduled Tribes And Minorities

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.

Environmental Management And Pollution Control

The Iron & Steel Plants have drawn up

short term and long term action plans for expeditious achievement of pollution control norms.

- SAIL plants and mines, during 94-95, further consolidated their thrust on environment management and pollution control activities to bring the pollution level within norms. After identifying the areas needing attention, 115 schemes on Pollution Control Action Plan costing about Rs.410 crores was drawn up in 1992 and implementation taken up vigorously. 90 schemes have already been commissioned and balance 25 are in different stages of implementation. An expenditure of approx. Rs.11 crores is envisaged of which Rs.7.3 crores is for the on going schemes. As on date the effluent discharges from SAIL Plants are within the statutory norms. Air emissions from about 70% of the stacks are within limits and there are plans to bring the remaining also under control by 1996.

- TISCO has made considerable progress in the area of environment protection. Till date, Rs. 68.16 crores has been spent for installation of pollution control measures like dust catcher at 'G' Blast Furnace, CGC car at Battery No.5 which will provide clean oven top during coal charging, secondary fume extraction facility at LD 2, gas cleaning facilities at SMS 3 and 3 Open Hearth Furnaces, DE system at coal handling plant at power plant and refractories production shop, fly ash ponding facility at power generation plant etc.

- Visakhapatnam Steel Plant (VSP) has taken up elaborate measures to combat air and water pollution due to discharge of emissions, effluent etc. from the plant. VSP has been awarded the prestigious INDIRA PRIYADARSHINI VRIKSHAMITRA AWARD in 1994 for its efforts in afforestation and waste land development.

- While the compliance by the ministeel plants as a whole is not upto the mark, some units like Bihar Alloy Steels Ltd., Patratu, Bihar, Mukand Ltd., Bombay, Usha Martin Industries Ltd., Calcutta, Kalyani Steel Ltd., Pune, Essar Gujarat Ltd., Hazira, Gujarat and Panchmahal Steel Ltd. are by and large complying with the specified pollution control norms.

Implementation of Official Language Policy

The progressive use of Hindi in the Ministry, its attached and subordinate offices and Public Sector Undertakings has been actively encouraged. A Hindi fortnight was organised in the Ministry from 7th September to 21st September, 1995. During the year, the Hindi Salahkar Samiti of the Ministry of Steel held its third meeting under the Chairmanship of the Minister of State for Steel on 29.6.95 at New Delhi.

The awards for encouraging the writing of original books in Hindi on subjects related to the Ministry of Steel and its allied subjects were raised to Rs.15,000/-, Rs.10,000/- and Rs.7,500/- for First, Second and Third prizes respectively from the award year 1993-94.

1. Global Scenario

1.1 The international steel industry bounced back from recession in the recent past. It enjoyed a fairly good growth in production of crude steel in 1995 at 2.5% over the previous year, while apparent consumption of finished steel grew at a slightly more modest rate of 1.7% over the same period. In European Union, the output of hot rolled steel products rose by 3.6% in 1995. Towards the end of 1995, however, there was a slowdown in rolled steel output in EU as a result of production cutbacks because of

will reach 660 million tonnes in 1996, up by 5 million tonnes from the 1995 level. The driving force behind this rise will be the fast-growing economies in Asia (excluding Japan and mainland China), restructured East European countries, Russia and the Latin American countries. As a result, prices, which have recently been on a downswing, may recover and there is likely to be a strong growth in the demand for raw materials for steel making. World Steel Dynamics predicts a world-wide metallics shortage as a result of a large number of EAF units coming on stream and, consequently, good prospects for the scrap substitutes like DRI.

1.3 The share of world trade in steel as a percentage of total world production has risen from 28.6% in 1990 to 38.4% in 1993. Around 281 million tonnes of steel was traded in 1993. The volume of ocean trade outside regional blocks went up from 43 million tonnes to around 90 million tonnes from 1990 to 1993.

1.4 India has recently opted for a predominantly market-driven economy.

It is, therefore, strategic for the Indian steel producers to claim a share of the world market by entering the vast and complex trading network. By concentrating on exporting steel products in which it has a comparative advantage in production, India can carve out a niche for itself in the world market and add to the foreign exchange reserves.

1.5 The domestic demand within the country



sluggish demand. This trend has continued in EU during 1996 with crude steel production down by 8.4% in the first two months of 1996 over the corresponding period in 1995.

1.2 The slow growth in demand in the Western World is expected to be compensated by high growth in demand from the developing countries. The International Iron and Steel Institute (IISI) predicts that the world apparent consumption of finished steel

is projected to rise to 30.66 million tonnes of finished steel by 2001-02; the apparent consumption for 1995-96 (provisional) was 21.0 million tonnes. Such an increase seems to be justified given the strong growth rates for GDP at 6.3% in 1994-95 and 6.2% for 1995-96, respectively, as well as the close link between growth of GDP and the apparent consumption of steel.

2. Domestic Scenario

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

- removal of iron and steel from the list of industries reserved for the public sector;
- exemption of iron and steel industry from the provisions of compulsory licensing;
- inclusion of iron and steel in the list of high priority industries for purposes of foreign investment;
- de-regulation of pricing and distribution of iron and steel;
- reduction of duty on import of capital goods; and
- liberalisation of import and export policy.

2.2 The private sector has responded positively to these changes and a number of new units are coming up in various parts of the country. Considerable additional capacity is already being implemented in the private sector with units like Lloyd Steel

and Nippon Denro in Maharashtra, Essar Gujarat in Gujarat, Jindal Strips in Madhya Pradesh, Jindal Vijaynagar Steel Ltd. in Karnataka and Malvika Steel in Uttar Pradesh firmly on track in their development plans. In addition, steel units are also coming up in Karnataka and Orissa. Many other entrepreneurs have also shown keen interest in setting up steel production facilities at various locations.

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

2.4 The great potential for growth of the steel industry in India is borne out by the current low consumption figures. India is currently producing about 21 million tonnes of finished steel annually while its per capita steel consumption was only 17.9 kg. in 1993, one of the lowest in the world. In comparison, the world average per capita consumption was 116 kg. in 1993. In countries like USA, EC, and China, the per capita steel consumption was 351 kg., 267 kg. and 88 kg. respectively.

2.5 The projections of increase in domestic steel demand to 30.66 million tonnes by 2001-02 are based on moderate estimates of growth of GDP (6.05% per annum). Similar growth rates have also

been predicted by National Council of Applied Economic Research (NCAER) and Centre for Monitoring of Indian Economy (CMIE). These projections are conservative considering the rapid increase in the rate of urbanisation, change in the consumption pattern as well as the growth of the rural market.

3. Export Perspective

3.1 Trade in steel is also expected to increase significantly all over the world. India is taking necessary steps to position itself in the global market and according to the Steel Ministry, India has a potential of exporting 6 million tonnes of steel by the turn of the century. These predictions have been justified by the spurt in the export of iron and steel to over 2.0 million tonnes in 1995-96 from 0.37 million tonnes in 1991-92.

3.2 Undoubtedly, India's position in the global perspective will depend upon the cost competitiveness of the Indian industry. There must be an increasing focus on quality and cost consciousness so that efficiency and productivity levels are constantly targetted for improvement. At the same time, the country has to improve its infrastructural facilities so as to invite more foreign investment in the country and reduce export costs. Though India has a distinct comparative advantage in labour costs, improvement of labour efficiency and productivity must also be targetted by the industry. Technological improvement and conformity to worldwide standards of environmental safety and control should also be addressed on priority.

3.3 The 9th Five Year Plan will begin in

1997-98. The projections of domestic demand and domestic availability of finished steel and pig iron by the terminal year of the 9th Plan, are as given in the table below:-

(In Million Tonnes)				
Financial Year	Total Demand Projection	Estimated Production*		Total
		Main Producers	Secondary Producer	
1. FINISHED STEEL				
2001-02	30.66	15.23	18.57	33.80
2. PIG IRON				
2001-02	4.80	1.45	3.20	4.65

*Includes production of exports.

3.4 Producerwise breakup of the production levels indicated above are given in the Table below :-

(In Million Tonnes)		
	FINISHED STEEL	PIG IRON
	2001-02	2001-02
SAIL	10.85	1.04
TISCO	1.97	0.41
VSP	2.41	-
TOTAL MAIN PRODUCERS	15.23	1.45
SECONDARY PRODUCERS	18.57	3.20
TOTAL	33.80	4.65

3.5 Actual production of finished steel in 1993-94, 1994-95 and 1995-1996 (Prov.) was as under :-

(In '000 Tonnes)			
	1993-94	1994-95	1995-96 (Prov.)
MAIN PRODUCERS	8768	9566	10587
SECONDARY PRODUCERS	6431	8255	10163
TOTAL	15199	17821	20750

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

4. Performance during 1995-96

4.1 The estimated demand and domestic availability of finished steel and pig iron for 1995-96 are as follows:-

(In Million Tonnes)				
ESTIMATED PRODUCTION				
	Total Demand	Main Producers	Secondary Producers	Total
1. FINISHED STEEL	21.40	10.59	10.81	20.75
2. PIG IRON	2.81	1.73	1.06	2.79

5. Sources of Finished Steel

(in '000 Tonnes)		
	Finished Steel 1995-96	Pig iron 1995-96
SAIL	7414	964
TISCO	1833	—
VSP	1340	771
TOTAL MAIN PRODUCERS	10587	1735
SECONDARY PRODUCERS	10163	1060
TOTAL	20750	2795

6. Standing Committee for The Steel Industry

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

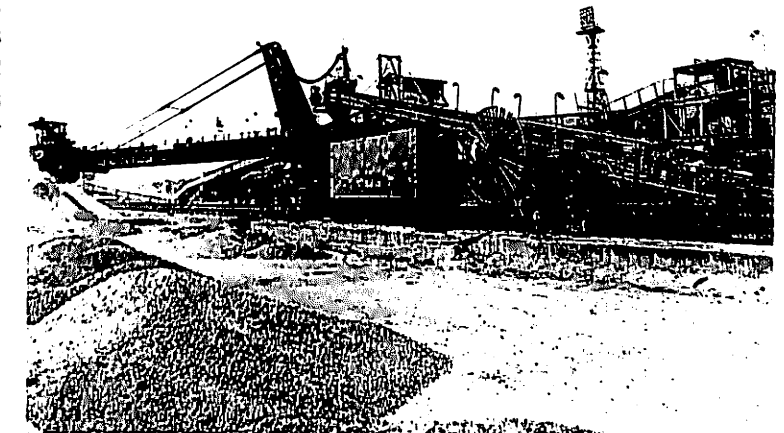
6.2 The functions of the Standing Committee are to review the status of the domestic steel industry periodically and recommend to the Government various policy measures required to achieve the targeted levels of production and to make the Indian Steel Industry internationally competitive. It will also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

1. Iron Ore

1.1 Reserves

As per mineral inventory prepared by the Indian Bureau of Mines (IBM), the recoverable reserves of Iron Ore, i.e. haematite and magnetite as on 1.4.90 are placed at 9,602 and 3,143 million tonnes respectively, distributed over

five zones in the country. The gradewise distribution of haematite and magnetite ores in different states/zones is given in the table below:-



RECOVERABLE RESERVES OF IRON ORE (HAEMATITE) AS ON 1.4.90.						
(In Million Tonnes)						
Sl. No.	Zone/State	High Grade (+65%)	Medium Grade (62-65%)	Low Grade (-62%)	Unclassified	Total
1.	2.	3.	4.	5.	6.	7.
1.	Zone A					
	Bihar	85	1792	903	187	2967
	Orissa	322	1288	752	305	2667
2.	Zone B					
	Madhya Pradesh	630	483	516	416	2045
	Maharashtra	-	35	15	126	176
3.	Zone C					
	Karnataka	221	438	73	197	929
4.	Zone D					
	Goa	14	153	465	130	762
5.	Zone E					
	Andhra Pradesh	7	5	32	3	47
	Rajasthan	-	-	7	2	9
		7	5	39	5	56
TOTAL INDIA		1279	4194	2763	1366	9602

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

RECOVERABLE RESERVES OF IRON ORE (MAGNETITE) AS ON 1.4.90 (In Million Tonnes)					
Sl. No.	State/Grade	Metallurgical grade	Coal Washery grade	Foundry grade	Unclassified Total
1.		2.	3.	4.	5. 6.
1.	Andhra Pradesh	37.9	-	-	380.0 417.9
2.	Bihar	-	5.0	-	- 5.0
3.	Goa	98.3	-	-	66.2 164.5
4.	Karnataka	1298.9	-	-	1219.3 2518.2
5.	Kerala	35.4	-	-	- 35.4
6.	Rajasthan	-	-	0.5	- 0.5
7.	Tamil Nadu	1.1	-	-	- 1.1
TOTAL INDIA		1471.6	5.0	0.5	1665.5 3142.6

NOTE :

- i) Metallurgical Grade: (a) Fe-38% minimum (b) should be in oxidised state.
 ii) Coal Washery Grade: (a) Magnetite content: 70 to 75% minimum or as used by the industry.
 iii) Recoverable reserves include proved, probate and possible reserves.

1.2 Production of Iron Ore

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

These can be broadly grouped under three categories :

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

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

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

1.2.2 Production and Despatches

Production of iron ore (including concentrates) during the year 1995-96 was 66.2 million tonnes (Prov.) as against 60.7 million tonnes (Prov.) in the previous year. Statewise figures indicate that Madhya Pradesh would be the chief iron ore producing State accounting for 17.1 million tonnes (25.6%) of the total production during 1995-96, followed by Goa with 15.0 million tonnes (22.7%), Bihar and Karnataka with 12.7 million tonnes each (19.2%) and Orissa with 8.3 million tonnes (12.5%). The remaining production of about 0.4 million tonnes would be from Andhra Pradesh, Maharashtra, Rajasthan and Haryana.

Despatches of iron ore (including concentrates) for 1995-96 were around 61.5 million tonnes. The share of despatches for internal consumption and exports was about 36.5 million tonnes and about 25.0 million tonnes respectively.

Production and despatches of iron ore from 1990-91 to 1995-96 is given below :-

tonnes during 1994-95. Orissa, Karnataka, Madhya Pradesh and Maharashtra would be

(In Million Tonnes)					
Production			Despatches		
Year/ Period	Qty.	Value	Total	For internal consumption	For Exports
	(MT)	(Rs.crores)	(MT)	(MT)	(MT)
1990-91	55.6	587.32	54.4	23.0	31.4
1991-92	58.5	749.95	57.7	25.9	31.8
1992-93	57.1	908.82	55.9	28.2	27.7
1993-94	59.7	1039.39	58.5	28.6	29.9
1994-95(P)	63.0	1081.28	60.6	33.5	27.1
1995-96(E)	66.2	1153.97	61.5	36.5	25.0

(P) : Provisional

(E) : Estimated (comprises recorded figures upto December, 1995 and estimates for January to March, 1996).

(MT) : Million Tonnes.

2. Manganese Ore**2.1 Reserves**

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

2.2 Production

Production of manganese ore during 1995-96 was about 1.71 million tonnes as against the recorded figure of 1.64 million

the principal producing States accounting for 33%, 24%, 24% and 19% respectively of the total production of manganese ore in 1995-96.

2.3 Despatches

Despatches of manganese ore are of the order of 1.65 million tonnes during 1995-96 of which 1.39 million tonnes would be for internal consumption and 0.26 million tonnes for exports.

Production and despatches of manganese ore from 1990-91 to 1995-96 are indicated below :-

Production			Despatches		
Year/ Period	Qty.	Value	Total	For internal consumption	For Exports
	('000T)	(Rs.crores)	('000T)	('000T)	('000T)
1990-91	1,492	75.24	1,459	1,254	205
1991-92	1,640	103.86	1,641	1,454	187
1992-93	1,903	154.76	1,675	1,559	116
1993-94	1,696	134.87	1,448	1,251	197
1994-95	1,643	134.67	1,721	1,488	233
1995-96*	1,736	145.34	1,649	1,385	264

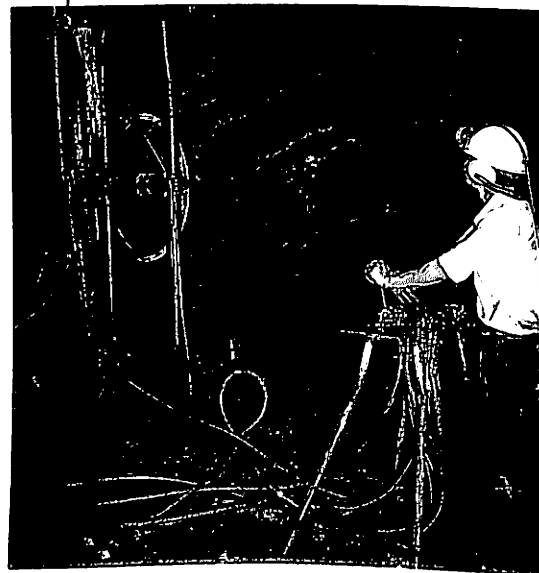
* Comprises recorded figures upto December, 1995 and estimated for January to March, 1996.

2.4 Exports

Because of limited reserves of high grade ore, only limited quantities of certain grades are permitted for export. Along with this, effort is also made to replace the export of ores with export of value added items. From the year 1993-94, a 3-year Export Policy has been decided upon by Govt. so as to enable the exporters to establish their presence in the international market. The maximum ceiling of manganese ore for the year 1995-96 are as under :-

MANGANESE ORE	
ITEM	Ceiling for 1995-96 (in lakh tonnes)
i) Medium Grade Manganese Ore/ blended ore containing 38% to 44% manganese and more than 0.15% Phos.	1.00
ii) Low grade manganese ore/blended ore containing less than 38% manganese.	3.00
iii) Manganese ore fines below 12mm in size containing less than 44% manganese.	1.5

For export of manganese ore grade mentioned above i.e. medium grade manganese ore, the export ceiling of 1 lakh tonnes



would be divided equally between MMTC and MOIL. MOIL would continue to be direct exporter for this grade ore out of its own production upto a maximum ceiling of 0.50 lakh tonnes. Exports during the last 2 years are given below:

Year	Quantity (in lakh tonnes)	Value (Rs. in crores)
1994-95	4.16	50.0
1995-96 (Provisional)	2.85	35.0

3. CHROMITE ORE

3.1 Reserves

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

3.2 Production

Production of chromite in 1995-96 was at 16.99 lakh tonnes as against 11.39 lakh tonnes in 1994-95. Orissa continues to be the leading producing State accounting for 16.44 lakh tonnes (96.8%) of the total production.

3.3 Despatches

Despatches of chromite during 1995-96 are about 14.67 lakh tonnes of which about 10.34 lakh tonnes (70.5%) were for internal consumption and about 4.33 lakh tonnes (29.5%) for exports.

Production and despatches of chromite

ore during the years 1990-91 to 1995-96 are given below :

Year / Period	Production		Despatches	
	Qty.	Value	Total	For internal Consumption
	(‘000T)	(Rs.crores)	(‘000T)	(‘000T)
1990-91	940	155.82	595	336
1991-92	1082	205.69	985	614
1992-93	1071	205.72	1055	634
1993-94	1065	228.31	1002	685
1994-95	1139	261.20	1052	605
1995-96*	1699	378.02	1467	1034

* Comprises recorded figures upto December, 1995 and estimated for January to March, 1996.

3.4 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 years 1993-94, a three year Export Policy has been decided upon by Govt. so as to enable the exporters to establish their presence in the international market. The maximum ceiling of export of chromite ore for 1995-96 are as follows :-

Exports during last 2 years are given below:

Year	Quantity (in lakh tonnes)	Value (Rs. in crores)
1994-95	3.39	73.0
1995-96 (Provisional)	3.09	110.0

4. Coking Coal

4.1 Reserve

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

4.2 Consumption

During 1994-95, the consumption of coking coal

ITEM	Ceiling for 1995-96 (in lakh tonnes)
i) Low silica friable/fine chromite ore with Chromium oxide not exceeding 52% & Silica exceeding 4%.	3
ii) Chromite lumps containing Chromium Oxide not exceeding 30%.	1
iii) Beneficiated chromite concentrates (Feed grade to be less than 33%)	No ceiling

in SAIL steel plants (including IISCO), TISCO and VSP was as under :

(Million Tonnes)			
	SAIL	TISCO	VSP
Indigenous sources	8.83	2.22	0.92
Imports	5.03	0.62	2.13
Total	13.86	2.84	3.05

The consumption during 1995-96 (prov.) by these plants was as under:-

(Million Tonnes)			
	SAIL	TISCO	VSP
Indigenous sources	9.50	2.40	0.74
Imports	5.50	0.87	2.85
Total	15.00	3.27	3.59

5. Non-Coking Coal

During the year 1994-95, SAIL steel plants (including IISCO) consumed 4.00 million tonnes of non-coking coal produced from domestic sources. The consumption in 1995-96 was 4.125 million tonnes (Prov.).

During 1994-95, TISCO consumed 1.45 tonnes of non-coking coal. Consumption during 1995-96 was 1.44 million tonnes (Prov.). During 1994-95, VSP consumed 0.99 million tonnes of non-coking coal. Consumption during 1995-96 was 1.21 million tonnes (Prov.).

6. Refractories

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

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

The aggregate requirement of refractories is declining even with the increased production of steel along-with gradual increase in the demand of sophisticated high performance refractories like Magnesite Carbon Bricks in converters, VAD and VOD ladles, use of low cement castables in Blast Furnace Trough and Anhydrous mudgun mass in Blast Furnace Tapholes, use of slide gate plates and accessories in continuous casting operation, Dense and Superdense coke oven silica refractories for Tall Coke Oven batteries etc.

Over the last 4 or 5 years there is a growing appreciation in overseas markets that the Indian refractory industry is a reliable supplier of high quality products. Some members have obtained ISO 9000 accreditation for their special products. A target of Rs.100 crores of export is expected to be achieved by 1996-97.

Cost-effective refractory products, supportive technical services and international quality in a wide range of products now characterise the Indian refractory industry as it faces the global economy in liberalised regime.

Production in last four years is given in the following Table :-

	(in MT)			
	1991-92	1992-93	1993-94	1994-95
Fireclay	234347.00	214563.00	222852.00	265758.00
High Alumina	138710.00	152380.00	136985.00	182962.00
Silica Brick & Shapes	19051.00	26925.00	22316.00	27615.00
Basic Burnt Bricks & Shapes	92345.00	87961.00	83102.00	84814.38
Basic Unburnt Bricks & Shapes	71869.00	69761.00	60462.00	64440.15
Basic Ramming Mass Castables	47360.00	32540.00	32892.79	58013.47
Dead Burnt Magnesite	126826.00	105467.00	22042.00	17649.22
Electrocast (AZS)	1400.00	1539.00	1628.00	1620.00
Slidegate Refractories	4747.00	5546.00	5145.21	4102.66
Low Cement Castables	9071.00	7145.00	7938.00	4003.04
Zircon/Zircon Mullite	2099.00	1670.00	1470.00	1203.14
Ceramic Fibres	1336.00	1620.00	2325.00	3191.16
Total (-DBM Prod.)	749161.00	601655.00	577116.00	697723.00

Exports

The refractory industry has achieved export of refractories worth Rs. 31 crores in 1994-95 and Rs. 48 crores in 1995-96 (Provisional).

1. Availability of Iron & Steel

The table below gives the availability of iron and steel in the domestic market during 1994-95 and estimated availability during 1995-96.

Item	(IN '000 TONNES)			
	Finished Steel		Pig Iron	
	1994-95	1995-96	1994-95	1995-96
		(Prov.)		(Prov.)
1. Production				
(a) Main Producers	9566	10587	2005	1735
(b) Secondary Producers	8255	10163	780	1060
2. Import	1706	1566	1	08
3. Total (1+2)	19527	22300	2786	2803
4. Export	873	1125	466	503
In addition, export of semis was 3.39 lakh tonnes in April-95 - March-96 and 3.95 lakh tonnes in April-94 - March-95				
5. Interplant transfers	121	141	-	-
6. Net Availability	18533	21034	2320	2300

2. Pricing and Distribution

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

2.2 The Development Commissioner for Iron and Steel continues to make allocation of pig iron to the designated consumers and the main producers supply the material on the basis of such allocations. In the case of

Steel items allocations by the Development Commissioner for Iron and Steel are made to the Small Scale Industries Corporations. Small Scale Units which were drawing their materials directly from the main producers continue to do so. The Development Commissioner also issues

release orders for supplies to exporters of engineering goods and makes annual supply plans for the North Eastern Region. The requirements of Defence and Railways are met by the main producers directly.

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

2.4 The levy on account of the Steel Development Fund (SDF) which ranged from

Rs. 350/- to Rs. 500/- per tonne on different products of integrated steel plants was discontinued w.e.f. 21/22.4.1994. The levy on account of Engineering Goods Exports Assistance Fund (EGEAF) which was Rs.110/- per tonne on pig iron and Rs.300/- per tonne on specified categories of steel produced by the main producers (excluding IISCO) was discontinued with effect from 19.2.1996. The JPC cess of Rs. 3 per tonne of steel of certain categories produced by the main producers (excluding IISCO) continues to be added to their ex-works prices.

2.5 After the withdrawal of the Freight Equalisation Scheme the main producers, viz. SAIL, VSP and TISCO, are charging either the actual freight upto stockyard or freight element as existed prior to deregulation (now Rs.1510/- per tonne in case of steel and Rs. 945 per tonne in case of pig iron)

whichever is lower. By this, the freight disadvantage to the States/areas located nearer the steel plants of main producers has been removed. At the same time the interest of distant States/areas has been protected. The extra cost on this account is borne by the main producers.

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

2.7 The open market prices of steel products have shown an increase between 2% to 6% in general, during 1995-96. A few items like channels and plates have shown marginal decline in the price during the same period. The increase in prices is

due to increase in railway freight, cost of inputs and incidence of excise duty on account of increase in ex-works prices.

3. Import and Export of Iron and Steel

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

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

all items of iron and steel is now freely allowed.

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

3.4 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. The import of finished steel during 1995-96 was of the order of about 1.86 MT (prov.).

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

Category	(Quantity in '000 tonnes)				(Value in Rs. crores)	
	1993-94		1994-95		1995-96(Prov.)	
	Qty	Value	Qty	Value	Qty	Value
Saleable Steel	1153.1	1603.30	1932.6	2535.62	1864.4	3175.08
Pig Iron	20.9	9.58	1.1	1.07	7.7	6.19
Steel Scrap	754.1	380.35	1416.5	758.26	973.8	618.03

4. Export from Iron and Steel Sector

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

4.1 Export of steel from India started in 1964. However, steel exports have been sporadic. In the year 1976-77, India exported a record 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 crores. 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, the export of iron and steel showed a quantum jump to 22.2 lakh tonnes valued at Rs.1,678 crores in 1993-94. However, in 1994-95 export of iron and steel declined to 17.86 lakh tonnes valued at Rs. 1,438 crores, showing a decline of 20% in quantity terms and 14.3% in value terms. The decline was mainly due to increase in domestic demand. In 1995-96, the export has been of the order of 2.0 MT valued at Rs.1,939 crores showing an increase of 12.3% in quantity terms and 35% in value terms.

4.2 India has been one of the major exporters of iron ore in the world, ranking fourth after Brazil, Australia and CIS, with export of around 30 to 32 million tonnes annually earning foreign exchange worth about Rs. 1500 to 1700 crores.

4.3 Total export of iron, steel and iron ore during 1993-94, 1994-95 and 1995-96 are indicated below :-

Item	(Quantity in lakh tonnes)			(Value in Rs. crores)		
	1993-94	1994-95	1995-96*	1993-94	1994-95	1995-96*
Iron Ore	315.37	317.5	317.70	1622.46	1561.49	1781.57
Iron and steel products	22.21	17.86	20.06	1678.00	1438.00	1939.5
* (Prov.)						

5. Functions of the Office of Development Commissioner for Iron and Steel

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

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

(a) Collection, processing and dissemination of basic information relating to the Iron and Steel Industry and to act as the data bank of the Ministry of Steel.

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

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

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

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

(f) Allocation of materials to the State Small Scale Ind. Corporations.

(g) Allocation of materials to remote areas like North-Eastern States.

(h) Assistance to Engineering Goods Export Units through priority allocations and monitoring thereof.

(i) Survey of various segments of Steel Industry.

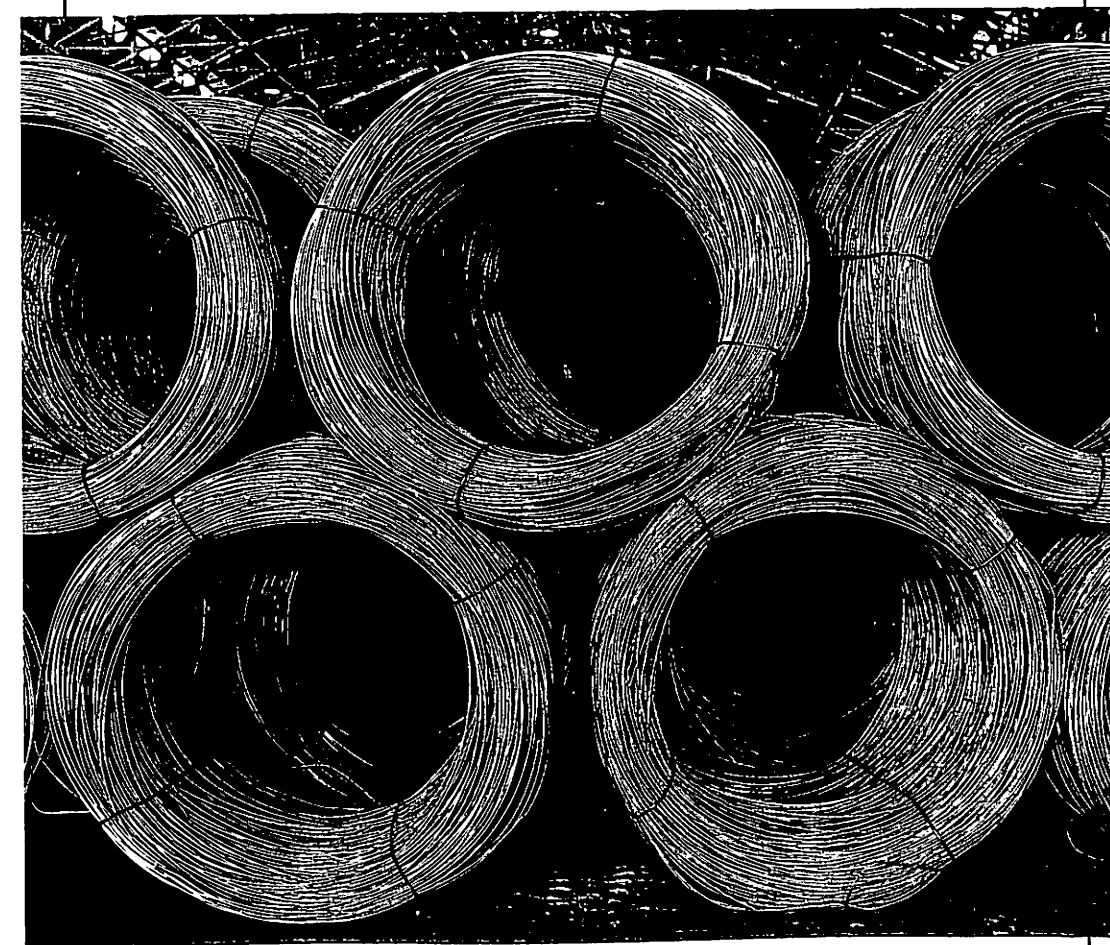
(j) Rendering assistance to the EAF units and the secondary sector, by way of capacity assessment, assistance in

procurement of indigenous/imported raw materials and import substitution measures aimed at overall development of the sector.

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

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

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



1. General

Steel Authority of India Ltd. (SAIL) is a Company registered under the Companies Act, 1956 and is an enterprise of the Government of India. It operates and manages five integrated steel plants at Bhilai (Madhya Pradesh), Bokaro (Bihar), Durgapur (West Bengal), Rourkela (Orissa) and Burnpur (West Bengal), a plant of the Indian Iron and Steel Co. Ltd., which is a wholly owned subsidiary of SAIL. SAIL has also four special and Alloy Steels and Ferro-alloys units at Durgapur (West Bengal), Salem (Tamil Nadu), Chandrapur (Maharashtra) and Bhadravati (Karnataka). The plants at Chandrapur and Bhadravati belong to the Maharashtra Elektrosmit Limited and Visvesvaraya Iron and Steel Limited respectively which are also subsidiaries of SAIL. The IISCO-Ujjain Pipe and Foundry Company Ltd., a subsidiary of IISCO, manufactures Cast Iron Spun Pipes at its works at Ujjain (Madhya Pradesh). 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. The marketing of products of SAIL plants is done through the Central Marketing Organisation (CMO), Calcutta which has a countrywide distribution network.



Steel Authority of India Limited (Excluding Subsidiaries)

2. Finance

2.1 Turnover and Profit

The Company recorded the highest ever sales turnover of Rs. 14,710 crores (Prov.) in 1995-96 as against Rs.13,866.54 crores during 1994-95. The net profit for the year 1995-96 was Rs.1,329 crores (Prov.) as against Rs.1,108.00 crores in 1994-95. The Company had declared a dividend of 6% on the paid-up equity share capital for the year ended 31st March, 1995 subject to deduction of tax, if applicable.

2.2 The authorised capital of SAIL is Rs.5000 crores. The paid-up capital of the Company was Rs.4,130.00 crores as on 31st March, 1996, which was held to the extent of 89.04% by the Government of India and the balance 10.96% by the financial institutions/banks/employees/individuals etc. In January 1996 Government communicated approval for raising of funds by SAIL through issue of additional equity shares upto 10% of the existing paid-up capital in



domestic market and/or in the international market through Global Depository Receipts (GDR) route, subject to a ceiling of US \$ 350 million, including share premium amount. SAIL, based on the recommendations of the Lead Manager, made a GDR offering of US \$ 125 million which was priced in London on the 6th March, 1996. This GDR issue of SAIL was fully subscribed, and has resulted in issuance of new shares to the extent of 3.63% of paid up capital before the issue, thereby reducing the Government holding in SAIL to 85.82%. The paid-up capital of the company as a result of issue of GDR, as on 31.3.1996 is Rs.4,130.00 crores.

Further issue in domestic/international market of the balance equity shares may be made after lock-in-period depending upon company's need for funds and market conditions.

2.3 The year saw all-round improvement in

the working of SAIL plants and units. The improvement in physical performance parameters, i.e. higher production and sales volume, better product-mix, improved productivity and operating parameters, low energy consumption and other measures have enabled the company to improve its gross margin over last year's level. The improvement was in spite of escalations in input prices and higher provision for salaries and wages which could not be fully neutralised by increase in steel prices. During the year, Steel Development Fund levy was discontinued which

also contributed to the enhanced profits. Further, interest costs could be curtailed by substituting high interest bearing borrowings with low interest bearing borrowings.

During 1994-95, bonds valuing Rs.305 crores were issued to various financial institutions, banks, trusts etc. through private placement for financing Company's modernisation and other capital schemes. The Company further issued bonds valuing Rs.400 crores during April-March, 1996.

2.4 Under the Public Deposit Schemes of the Company, the net deposits (i.e. net of repayments and renewals) as on 31st March, 1995 stood at Rs.1,497.95 crores compared to Rs.1,127.77 crores at the close of the previous year. Net increase in deposits during the year was Rs.370.18 crores. The net deposits as on 31st March, 1996 stood at Rs.1,652.56 crores approximately.

2.5 Capital Expenditure

The Company incurred capital expenditure of Rs.2,816 crores on Fixed Assets and Capital Work-in-progress in the year 1994-95 which has been financed through internal accruals and borrowings without resorting to any Budgetary support from the Government of India and approx. Rs.2451 crores during the period April-March, 1996.

3. Production Performance

The four integrated steel plants of SAIL at Bhilai, Durgapur, Rourkela and Bokaro ended the year 1994-95 with record output of 10.87 million tonnes of hot metal, 9.82 million tonnes of crude steel and 8.63 million tonnes of saleable steel achieving a growth of 7%, 3% and 4% respectively over previous year. Salem Steel Plant recorded best ever production of saleable steel registering a growth of 22%. The details of production plan and achievement during 1995-96 are as follows:-

Item	Target (MT)	Actual (MT)	Fulfilment (%)
Hot Metal	11.45	10.90	95
Crude Steel	10.80	9.98	92
Saleable Steel	8.85	9.15	103

There was continued thrust during the year on improvements in techno-economic parameters. The coke rate per tonne of hot metal declined by 18 kg over the previous year to 646 kg/thm. Overall blast furnace productivity went up by 5%.

3.1 Production Performance 1995-96

The details of production plan and achievement during April-March, 1996 was as follows :-

(in Million Tonnes)			
Item	Annual Target	Actual	Fulfilment (%)
4 Integrated Steel Plants			
Hot Metal	11.450	10.901	95
Crude Steel	10.850	9.982	92
Saleable Steel	8.850	8.920	101
Alloy Steel Plants			
Saleable Steel	0.250	0.235	94

4. Energy Conservation

The continued emphasis on energy conservation measures helped further in reducing energy consumption per tonne of crude steel for the eighth successive year and has reached a level of 8.7 G.cal/tcs, over the previous year's record of 8.8 G.cal/tcs. During the period April-March, 1996 energy consumption per tonne of crude steel was below the level of 8.7 G.cal/tcs.

4.1 Development of Small Scale/Ancillary Industries.

The Company continued to give encouragement to the development of Small Scale and Ancillary Industries. During 1994-95, value of stores and spares items purchased from these units was of the order of Rs.180 crores as compared to Rs.165 crores during the year 1993-94. During the period April-March, 1996 value of stores and spares items purchased from these units was of the order of approx. Rs.205 crores.

4.2 Captive Power Generation

Captive Power generation in SAIL during 1994-95 stood at 406 MW which met 56% of the Company's total power requirements. Captive power generation during the period April-March, 1996 stood at 391 MW which met 53% of the Company's total power requirements.



4.3 Environment Management

Management of Environment & Pollution Control in Steel Plants and Mines continued to get priority attention in Company's activities during the year. Out of the pollution control action plan comprising of 115 schemes, 95 schemes have already been completed upto March, 1996 and balance are under implementation. Extensive afforestation work was undertaken at plants and mines. Further, a major thrust was given on Environmental Awareness Campaign through observance of World Environment Day and Environment Month. All efforts were made to generate environmental awareness amongst its employees at Plants/Units. During 1995-96, in-principle clearance from environmental angle has been obtained from MOEF for Rowghat Iron Ore Project.

5. Sales and Marketing Performance

5.1 Marketing Strategies

The upswing in growth of industrial production and improved investment climate has led to increased demand for steel in the country. To exploit this opportunity, number of strategic measures were taken by the Company. Primary focus was on seg-

ment marketing. Marketing and production efforts were directed towards specific segments which helped SAIL in developing long term relationship with major customers. To improve customer satisfaction, amongst others, customer contact/feedback systems were intensified, order booking and aftersales procedure simplified and production customised.

5.2 Domestic Sales

The Company marketed about 9.03 million tonnes of iron and steel in domestic and international markets during 1994-95. This was the highest ever quantity of iron and steel marketing in a year and was about 11 % more than the sales in 1993-94. SAIL has been focussing on marketing of special steel. Out of above quantities, about 0.15 million tonnes of steel were alloy and stainless steel products from Alloy Steel Plant and Salem Steel Plant. The Company marketed about 8.93 million tonnes of iron and steel in domestic and international market during the period April-March, 1996.

5.3 Exports

The Company has been focussing on exports to quality conscious markets including USA, Japan, Europe, Australia and Nepal. As a result of the continuous thrust,

the Company exported a record Rs.629 crores worth of goods during the year 1994-95, registering about 12 % growth over previous year. The Company exported a total quantity of around 402 thousand tonnes of Mild Steel and Alloy Steels during April-March, 1996.

6. Working Results of SAIL

The profit before tax of SAIL for the period ended 31.3.96 was Rs.1,329 crores (Prov.) as compared to Rs.1108 crores in 1994-95. The gross margin i.e. profit before depreciation and interest for 1995-96 was Rs.2,721 crores as against Rs.2,397 crores in 1994-95. The Company recorded a sales turnover of Rs.14,710 crores in 1995-96 as against Rs.13,866.54 crores in 1994-95.

7. Capital Schemes

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

7.1 Durgapur Steel Plant

Emphasis was given on early commissioning and stabilisation of modernisation schemes at Durgapur Steel Plant (DSP). A number of production units like new Sinter Plant, Basic Oxygen Furnace Shop, Continuous Casting Plant were commissioned. During the period April-March, 1996 major emphasis was given on stabilisation of modernised units i.e. BOF Shop, Concast Shop, New Sinter Plant and Basic Oxygen Furnace etc. The Ore Processing Plant without Tailing Dam at Bolani was commissioned in January, 1996. The Coke Oven Battery No.3 with 'on-main charging' facility has been lighted up in March, 1996.

7.2 Rourkela Steel Plant

At Rourkela Steel Plant (RSP), five of Phase-II modernisation packages viz. Power Distribution, Mobile Equipment for RMHS-II, sizing plant at Satna, Tarkera intake facilities and make up water pump houses for Tarkera Works have been commissioned. As regards the global packages viz. Sinter Plant, BOF shop, Concast Shop-I & II, Plate Mill and Hot Strip Mill modification, the major Design and Engineering work is also over. Major emphasis was laid on expeditious implementation of Phase-II Modernisation Packages during 1995-96. The package of Relocation of Dividing Line and two part packages viz. Reheating Furnace for Plate Mill and Modification of Plate Mill have been commissioned during the year. The progress of work for Sinter Plant-II, BOF Shop, Concast Shop-I & II is in advanced stage of completion. Testing & trials are under progress for some of the units.

7.3 Bokaro Steel Plant

The work for modernisation packages is progressing as per schedule. The foundation work for concast machines and steel refining units has been completed ahead of schedule. The Reheating Furnace-4 in Hot Strip Mill is in an advanced stage of completion and is expected to be completed during early 1996-97. For Hot Strip Mill Modernisation, the basic engineering has been completed and the detailed engineering and equipment erection is in progress.

7.4 Bhilai Steel Plant

At Bhilai Steel Plant (BSP), the construction of Coke oven Battery No.10 was progressing as per schedule. The revamping of Wire Rod Mill has been completed. Two major schemes viz. new Sinter Plant III and expansion of Oxygen Plant-II have been taken up for implementation for which contracts were awarded during 1995-96.

The Rail & Structural Mill modernisation (Phase-I, Stage-I) was completed in 1995-96.

7.5 With the completion of modernisation schemes at DSP, RSP and BSL substantial improvements would take place in quality of products and techno-economic parameters specifically energy consumption, coke rate etc. besides increasing the production capacity of saleable steel in these three units by 1.7 MT.

7.6 Salem Steel Plant

The Hot rolling facilities at SSP were inaugurated by Minister of Steel in November, 1995 and are under stabilisation.

8. Research & Development

8.1 Research and Development Centre of the Company pursued 176 projects during the year to accomplish developmental activities aimed at reduction of cost, improvement in quality and development of new and value added products. About 70 per cent of these projects were aimed at incremental improvement of plant performance indices and the other projects were oriented towards basic & scientific research and development of major technologies.

8.2 The R&D Centre has been awarded the ISO-9001 certification. It will significantly help RDCIS accomplish its ultimate objective to satisfy both internal & external customers and establish itself as a peer in the R&D organisations of units of international repute. During the period April-March, 1996 R&D Centre of the Company also pursued many more projects for reduction of cost, improvement in quality and development of new value added products.

9. Raw Materials Division

The Company meets almost total requirement of its iron ore and half of fluxes

requirements from captive sources. SAIL Captive Mines produced 17.45 MT of iron ore lumps and fines during 1994-95. Fluxes production was 2.87 MT with a growth of 6% over previous year. During 1995-96 the Captive Mines produced 18.29 million tonnes approx. of iron ore lumps and fines and fluxes of 2.88 million tonnes.

10. In-house Engineering and Services

10.1 Centre for Engineering & Technology (CET) continued to provide Design & Engineering support to plants/units for modernisation and technological upgradation schemes. Some of the major projects implemented with in-house design and engineering expertise included Modernisation of Blast Furnace No.3 of Bokaro and No.4 of Rourkela, Stove modification of Durgapur Blast Furnace No.4 for high temperature of hot Blast and 530 cu.m. Blast Furnace at VISL etc. During the year CET has also taken up jobs for steel industry outside SAIL both in India and abroad.

10.2 SAIL Consultancy Division (SCD) has made substantial strides both in India and abroad, particularly in the developing countries in the Middle-east and South-east Asia region. SCD operations are spread-over India and overseas particularly in the developing countries like Philippines, Nepal, Iran, Egypt, etc. i.e. in the Middle-East and South-East Asian region. To intensify market penetration with quality services, SCD has concluded MOUs for participation in third party assignments jointly with leading world players viz. Paul-Wurth S.A. (Luxembourg); Hoogovens Technical Services BV (HTS) (Netherlands); GIPROMEZ (Russia); Voest Alpine Industrial Services (VAIS) (Austria); China Iron and Steel Industry & Trade Group Corp. (GSGC) (China), and Centrodromaremont Tyazhpromexport.

11. Human Resources Management

All efforts were made for development of human resources and to ensure that these were geared towards meeting the challenges thrown up in the new economic environment. The thrust has been on achieving the goal of higher productivity through optimum utilisation of manpower.

11.1 Manpower Utilisation

The manpower strength as on 31st March, 1995 was 1,89,506 comprising 20,117 executives and 1,69,389 non-executives. The manpower productivity increased to 90 tonnes crude steel per man year in 1994-95 as compared to 88 tonnes crude steel per man year achieved during 1993-94. The manpower strength as on 31st March, 1996 was 1,87,504 comprising of 19,730 executives and 1,67,774 non-executives. The Works manpower productivity was 92 tonnes crude steel per man year.

11.2 Training

The endeavour to make training more effective with business imperatives continued. The emphasis was on application oriented Training modules like Action Leadership, Micro Planning, Total Team Working etc. During 1994-95 99,165 employees were trained under various schemes. 1,03,395 employees were trained under various schemes during 1995-96.

11.3 Employees' Welfare

Various welfare measures for the benefits of the employees, like free medical services (including extending medi-claim schemes to retired employees), housing, education for children, facilities of co-operative societies as well as providing avenues for socio-cultural activities were undertaken. On this account, the Company spent an amount of Rs.381 crores during 1994-95 and Rs.430 crores in 1995-96.

11.4 Sports

A number of initiatives were undertaken to promote sports activities in SAIL and improve sporting standards in the country. SAIL sponsored a number of sports events during the year viz. the Durand Cup Football Tournament, the Indian Davis Cup Team, SAIL Federation Cup Hockey Tournament, SAIL-Nehru Champion Colleges Hockey Tournament, and the ASIA OCEANA Swimming Meet.

11.5 Industrial Relations

With a pro-active approach and effective use of Bipartite Forum, a healthy and co-operative industrial relations atmosphere, conducive for production and growth was maintained at steel plants and other units.

11.6 Safety

The thrust towards Safety and Occupational Health also continued during the year. 'National Safety Award (Mines)' 1993-94 was awarded to Dalli Iron Ore Mines for lowest injury frequency rate among the mechanised group of mines. Salem Steel Plant bagged First prize of Tamil Nadu State Award for highest reduction in injury frequency ratio and longest accident free period.

11.7 Official Language Policy

The Company continued to vigorously pursue its efforts in implementing the Official Language Policy of the Government. SAIL was adjudged the Best Public Sector Undertaking in the area of implementation of Hindi and was awarded Indira Gandhi Rajbhasha Shield. Rashtriya Hindi Academy also awarded shield to SAIL for best implementation of Hindi. Hindi Diploma Course and Hindi Computer Training Programmes conducted by the Company have gained appreciation from other Public Sector Undertakings and Hindi Organisations.

11.8 Scheduled Castes and Scheduled Tribes

The Presidential Directives on Scheduled Castes/Scheduled Tribes continued to be implemented during the year. As on 31st December, 1994, Scheduled Caste and Scheduled Tribe employees were 14 per cent and 10 per cent respectively of the total manpower and as on 31st March, 1996 the Scheduled Castes and Scheduled Tribes employees were 13.9% and 9.5% respectively.

11.9 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 the surrounding villages. A sum of Rs.425 lakhs was spent on peripheral development during 1994-95. A sum of Rs.514 lakhs approx. was spent on peripheral development during 1995-96.

11.10 Suggestion Scheme

To tap the creative potential of the employees thrust continued to be given to Company's suggestion scheme. The number of suggestions received during 1994-95 had gone up to more than two lakhs. The number of suggestions received further went up considerably during 1995-96.

11.11 Awards

SAIL employees bagged two prestigious Prime Minister's 'Shram Awards' during the year, including one in 'Shram Bhushan' category.

12. Total Quality Process

The thrust to achieve Total Quality Process continued in the Company. ISO-9000 Quality Assurance Standards were implemented in more areas of SAIL. Seven more units of the Company viz. Plate Mill of RSP, Hot Dip Galvanising Complex of

BSL, Merchant Mill of DSP, Alloy Steels Plant, Management Training Institute, Centre for Engineering and Technology and Research and Development Centre for Iron and Steel achieved the stringent ISO-9000 standards during 1994-95. During 1995-96 two more units viz. Forged Route of VISL, Bhadravati and Galvanising Lines of RSP have achieved ISO-9002 Certification.

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 and IISCO became a wholly owned subsidiary of SAIL on 30th March, 1979. As a part of the physical restructuring of IISCO, the management of Kulti works and also the collieries and ore mines of the Company were taken over by SAIL in January, 1990 in terms of the Power of Attorney executed by IISCO.

1. Production Performance

The Company produced 819.0 thousand tonnes of Hot Metal, 402.5 thousand tonnes of Pig Iron, 344.2 thousand tonnes of Crude Steel and 331.9 thousand tonnes of Saleable Steel during 1994-95. Compared to previous year (1993-94), Hot Metal output and crude steel production went up by 2.9 percent and 6.9 percent respectively. Pig Iron and Saleable Steel production were

almost at the same level. Production of structurals registered a growth of 14% over the previous year. The plant further produced 838.5 thousand tonnes of hot metal, 421.3 thousand tonnes of pig iron, 320.7 thousand tonnes of ingot steel and 302.4 thousand tonnes of saleable steel during 1995-96.

2. Capital Schemes

The Company incurred expenditure of Rs.27.43 crores (on cash basis) on various capital schemes including additions, modifications and replacements during 1995-96 as against Rs.48.13 crores during the previous year.

2.1 Burnpur Works

The project for 50 tpd Oxygen Plant for steel melting shop has been completed. Two pollution Control Schemes-Dust Extraction System for Lime and Dolomite Plant and Stack Emission Control in A&B Boilers at Power Plant-undertaken during the year are also in progress. 50 tpd Oxygen Plant for SMS Complex was commissioned on 21.11.95. Projects for augmentation and betterment of Water Supply System at river-side Water Works and for augmentation of power supply system for Burnpur township are progressing.

2.2 Kulti Works

Major facilities for augmenting production of C.S.Slag Cups at SMS,Burnpur were completed. Pollution Control Scheme for installation of Fume/Dust Extraction System in Electric Arc Furnace at Steel Foundry undertaken during the year is in progress. Work relating to augmentation of facilities at SMS pitside, Burnpur and extension of SPP-3 for R-28 IM production were completed during 1995-96. Scheme for continuous sand mixture and spectrometer at SF is in progress.

2.3 Collieries

Development of 12 Seam and Experi-

mental Longwall Panel in Chasnalla Deep Mine are continuing. In respect of reconstruction and Development of Jitpur Colliery, second phase Drivage for construction of Pump House, Sub-Station And Lodge-ment etc. is in progress.

3. Financial Performance

The turnover of the Company in 1994-95 at Rs.943.66 crores was higher by 11.7 percent over the previous best of Rs.844.48 crores. The net loss for the year was Rs.6.27 crores as compared to Rs.76.19 crores during 1993-94. The appreciable improvement in financial results was mainly due to higher volume of output, better product-mix, improvement in techno-economic parameters and higher sales realisation. In spite of escalation in input prices and higher provision for employees' remuneration, cost control, waste management measures and better financial management had also contributed to improved performance. The turnover of the Company during the financial year 1995-96 was approx. Rs.1,038.54 crores and loss was approximately to the tune of Rs.49.05 crores.

The authorised share capital of the company including preference share is Rs.550 crores. The paid-up share capital at the year end was Rs.387.67 crores. SAIL provided Rs.5.59 crores for capital schemes and 54.00 crores for working capital during 1995-96. SAIL waived interest of Rs.98.20 crores on loans granted by it to the Company.

4. Sales & Marketing Performance

4.1 Domestic Sales

The demand for Steel improved during 1994-95. The Company sold 308.8 thousand tonnes of Steel in addition to 352.0 thousand tonnes of Pig Iron. Sales of 28.3 thousand tonnes of Spun Pipes and 45.6

thousand tonnes of Castings were higher by 50.5 per cent and 35.6 per cent respectively than the previous year. During 1995-96, 328.9 thousand tonnes of Saleable Steel and 401.2 thousand tonnes of pig iron were sold. 21.9 thousand tonnes of Spun Pipes and 61.7 thousand tonnes of Castings were also sold.

4.2 Exports

The Company exported 603 tonnes of Pig Iron to Bangladesh, 1068 tonnes of Structurals to Nepal, 277 tonnes of Castings to Australia and the Philippines and 415 tonnes of Spun Pipes to Nepal during 1994-95. In addition, during 1995-96, 189 tonnes of saleable steel, 420 tonnes of pig iron, 546 tonnes of spun pipes and 215 tonnes of castings were also exported.

5. Environment Management

Environment Management continues to be a thrust area for operations at Plants, Mines and Collieries. Two Pollution Control Schemes at Burnpur Works and one at Kulti Works have been undertaken during the year. Afforestation on a large scale has been undertaken in the Mines area. At Burnpur Works Dust Extraction System for Lime and Dolomite plant was installed and commissioned on 27.12.95. Schemes for Fume Extraction System for EAF at SF, Kulti works was completed during 1995-96. However, minor finishing work is in progress. EIA/EMP study for Chasnalla Colliery was also completed. As regards stack emission control for 'A' and 'B' Boilers at Power Plant, the system at 'B' Boiler was commissioned on 15.12.1995 and the trial run of the system at 'A' Boiler started from 29.3.1996.

6. Human Resources Development

Industrial relations during the year remained normal and peaceful. Emphasis continued on human resource development to

improve efficiency and achieve higher productivity. The manpower strength as on 31st March, 1995 was 31,270 comprising 1,492 Executives and 29,778 non-executives. Manpower productivity of Burnpur Works in terms of per tonne of Ingot Steel per man year went up by 8.01 percent in 1994-95 over 1993-94. 1,500 executives and 4,707 non-executives were trained in various fields during the year. 9 executives were trained abroad. The manpower of IISCO as a whole as on 31.3.1996 was 30,237 with a reduction by 1,033 during the period April-March, 1996.

Scheduled Caste and Scheduled Tribe employees constituted 15.7 per cent and 19.8 per cent respectively of the total number of employees. Intake of SC and ST candidates was 21.2 per cent and 11.5 per cent respectively of the total recruitment during the year 1995-96.

The Company continues to pursue its efforts in implementing the Official Language Policy of the Government. Employees are encouraged to carry out official work in Hindi and liberal incentives are given. Official Language Week Celebrations and Workshops were organised. The Company was adjudged as second best amongst Public Sector Undertakings in 'C' Region for its sustained efforts in progressive use of Hindi.

7. Status on Rehabilitation

At the hearing held on 17th August, 1994 the Board for Industrial and Financial Reconstruction (BIFR) declared the Company a sick industrial company within the meaning of Section 3(1)(O) of the Sick Industrial Companies (Special Provisions) Act, 1985 and appointed the Industrial Development Bank of India (IDBI) as the Operating Agency for preparation of a rehabilitation report. The Company submitted to IDBI a revival package costing Rs.3,486 crores in November, 1994. Messrs. M.N. Dastur & Co. Ltd.,

who were appointed by IDBI to undertake a techno-economic and commercial viability study of the proposal, submitted their report in May, 1995. This package inter alia involved budgetary support and other financial reliefs from the Govt. of India. As it had not been possible for the Central Govt. to extend the requisite support, Government informed the BIFR that it has been decided that SAIL will consider entering into a Joint Venture with a private partner for the revival/modernisation of IISCO. The choice of partner and the modalities for the proposed Joint Venture could be finalised after receipt of offers by the BIFR. In the BIFR hearing on 15th March, 1996, SAIL was asked by the BIFR to indicate within one month whether it would be willing to take up IISCO modernisation on its own or in association with a copromoter to be identified by it.

IISCO-Ujjain Pipe and Foundry Company Limited

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

1. Production Performance

Production of Cast Iron Spun Pipes continued to remain suspended throughout 1994-95 and 1995-96; the stock of finished pipes as on 1.4.95 and 31.3.1996 was 295 MT and 141 MT (Barrels only) respectively.

2. Financial Performance

During 1994-95, the turnover of the Company was Rs.43.38 lakhs (including Rs.34.96 lakhs from sale of pig iron, scrap, coke etc.). The net loss for the year was Rs.298.25 lakhs as compared to previous year's net loss of Rs.353.20 lakhs. During

the year 1995-96, the loss was approx. Rs.3.78 crores.

3. Sales & Marketing Performance

Sales despatches of 70 tonnes were made from the available stock during 1994-95. 154 MT of pipes and barrels were also sold during 1995-96.

4. Industrial Relations

The industrial relations, barring a few incidents of which the local authorities were kept informed regularly, remained cordial during 1995-96.

Manpower position as on 31.3.1996 was 191. 66 employees were relieved during the year upto 31.3.1996 under Voluntary Retirement Scheme.

5. Use of Hindi

Company continued to pursue its efforts in implementing the Official Language Policy of the Government during the year.

6. Status on Rehabilitation

At the hearing held on 7th July, 1994 the Board for Industrial and Financial Reconstruction (BIFR) declared the Company a sick industrial company within the meaning of Section 3(1)(0) of the Sick Industrial Companies (Special Provisions) Act, 1985 and appointed the Industrial Reconstruction Bank of India (IRBI) as the Operating Agency for preparation of a rehabilitation report. However, as it had not been possible to work out a feasible rehabilitation proposal by the operating agency, the BIFR came to the prima-facie opinion that the company would not be viable without infusion of substantial funds which were not forthcoming. Accordingly, the BIFR directed that a show cause notice be issued to the company as to why it should not be wound up. However, after considering the submissions made by the workers' representatives, the

BIFR in its hearing on 13th February, 1996 directed the workers' representatives to submit their proposal for revival of the company through a workers' cooperative in case they are interested, by 31st March, 1996. The matter is pending before the BIFR.

Maharashtra Elektros melt Limited

Maharashtra Elektros melt 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.

1. Financial Performance

The Company achieved sales turnover of Rs.11830.35 lakhs during 1994-95 as against Rs.9897.36 lakhs during 1993-94. The Company during the year recorded a net profit of Rs.156.77 lakhs after providing for interest and depreciation of Rs.274.27 lakhs and Rs.172.21 lakhs respectively. The authorised capital of the Company is Rs.10 crores and the subscribed and paid-up capital is Rs.5 crores. SAIL holds approximately 96% of the paid-up capital. The turnover and profit of Company for the year 1995-96 was approx. Rs.164.75 crores and Rs.1.49 crores respectively.

2. Production Performance

The production performance during 1994-95 was satisfactory in the background of general recession in demand for Ferro Alloys throughout the year. However, demand picked up during 1995-96. Production of Ferro Alloys during 1993-94, 1994-95 and 1995-96 was as under:-

	(Tonnes)		
	1993-94	1994-95	1995-96
High Carbon Ferro Manganese	47918	49097	58736
Silico Manganese	8081	18496	30939
Medium Carbon Ferro Manganese	1841	362	1473

3. Research & Development

Dephosphorisation of molten High Carbon Ferro Manganese using various reagents on laboratory scale was carried out with the active support of RDCIS, SAIL and technological parameters were optimised. Using the results obtained from laboratory scale investigation, industrial scale trials were carried out with success. Further trials have been planned for next years.

Trials on production of Low Carbon Silico Manganese were undertaken by using available resources. Low Carbon Silico Manganese with Carbon content less than 0.5% was successfully produced. Trials on use of CO gas in place of furnace oil in Sinter Plant-I were completed as planned. Duplex Burner System comprising of oil and gas burners was commissioned at MEL under R&D activities during 1995-96. A number of other projects were also under various stages of implementation

4. Environment

To keep the environment clean for ecological protection, thrust was given in the areas of green belt development in and around the plant premises, solid waste management, stock emissions control and monitoring of various environmental parameters. A gas clearing plant for SAF-II is on the verge of commissioning.

Pelletisation of GCP sludge project has been taken up with RDCIS. In addition to a drive for developing a green belt, under which 500 saplings of various species have been planted, solid waste management, stock emission monitoring and control and appreciation for disseminating knowledge for environment protection have also been taken up.

5. Sales & Marketing Performance

To face the changed economic scenario, vigorous efforts to find markets outside SAIL were made. Emphasis has been laid on meeting customer satisfaction by extending various commercial facilities.

The sales of different grades of Ferro Alloys during 1994-95 amounted to 72,497 tonnes as against 61,053 tonnes in 1993-94. The sale of by-products and other secondary items resulted in the accrual of Rs.969.81 lakhs to the total turnover of the Company. Sales of various grades of Ferro Alloys during 1995-96, reached 93159 T which was 28% higher than the sales of the previous year.

6. Human Resources Management Review

The Industrial Relations throughout the year remained normal. The manpower strength as on 31st March, 1995 was 1101 comprising of 172 Executives and 929 Non-Executives. The number of Scheduled Castes and Scheduled Tribes were 141 and 50 respectively. In order to enrich Human Resources, a total of 204 Executives and 931 Non-executives have been trained. Three Executives have been trained abroad. The total manpower at MEL stood at 1080 as on 31st March, 1996. This comprises of 917 non-executives and 163 executives.

7. Official Language Policy

The Official Language implementation has been done successfully and MEL bagged RAJBHASHA SHIELD during 1994-95 a prestigious award under the Ministry of Home Affairs, Government of India.

Visvesvaraya Iron and Steel Limited

Visvesvaraya Iron and Steel Limited situated at Bhadravati, Karnataka is a subsidiary of Steel Authority of India Ltd. It is a major producer of special and alloy steels, mild steel and ferro alloys.

subsidiary of Steel Authority of India Ltd. It is a major producer of special and alloy steels, mild steel and ferro alloys.

1. Financial Performance

The authorised capital of the company as on 31st March, 1995 was Rs. 150 crores of which subscribed and paid-up capital was Rs. 126.92 crores; out of the paid-up capital, 60 percent was held by SAIL and the balance 40 percent by the Government of Karnataka. During 1995-96, the authorised capital of the company was increased from Rs.150 crores to Rs.200 crores and additional share capital of Rs.73.08 crores were issued to SAIL and Government of Karnataka to avoid net worth of the company becoming negative. Due to non-contribution by Government of Karnataka in VISL's part of the equity, SAIL's shareholding has gone up to 66%, while Government of Karnataka's holding has come down to 34%.

During 1994-95, the Company recorded a turnover of Rs.209 crores as against Rs.202 crores during 1993-94. The loss for the year was Rs.27.05 crores after providing for depreciation and interest. The trend of increase in input costs, power tariff and wage bill continued to be the major factors responsible for loss. The company earned a sales turnover of Rs.211.19 crores (approx.) during the year 1995-96 and the loss for the same period was to the tune of Rs.37.38 crores (approx.).

2. Production Performance

During 1994-95, 58,029 tonnes of saleable steel comprising of 57,686 tonnes of alloy and special steel, 343 tonnes of mild steel were produced. Though there has been a growth of 5.43% in alloy and special steel, there was a decline in mild steel by 94.28% due to non-availability of billets. Production of ferro silicon also declined by about 5.40% due to shutting down of one furnace for modernisation.

Production of various saleable items during 1995-96 was as under :

Item	Production (T) (Apprx.)
Pig Iron	77539
Saleable Alloy and Special Steel	62516
Ferro Silicon	10435

VISL has registered a growth of 8.4% in production of saleable alloy and special steels as compared to 1994-95.

3. Sales & Marketing Performance

There has been improvement in alloy and special steels sales by 8.7%. For the first time, Company's products were exported to Zambia and China through Export agencies. Total sales during 1995-96 reached approximately 64,000 tonnes of Alloys & Special Steels, 9,431 tonnes of Ferro Silicon and 63,132 tonnes of Pig Iron. The Company registered a growth of 8.6% in alloys and special steel sales as compared to corresponding period of previous year.

4. Capital Schemes Review

The overall expenditure on the various capital schemes incurred during 1994-95 was Rs.43.67 crores. The newly installed Blast Furnace was blown-in during the year. 6 MW DG set meant solely for the operation of BF also had been commissioned during the year. Modernisation of one of the two 12 MVA ferro silicon furnaces was completed and commissioned during July, 1994. Preparatory work for modernisation of the other furnace is also in progress. The erection and commissioning of Pollution Control equipments at an estimated cost of Rs.8.9 crores under World Bank Technical Assistance Scheme and measures taken for Energy Savings resulted in VISL bagging the prestigious "Jawahar Lal Nehru Memorial National Award, 1994" for excellence in environment protection and energy savings.

5. Human Resources Management Review

Industrial Relations continued to be cordial. Total manpower strength as on 31st March, 1995 was 6,261 comprising of 532 executives and 5,729 non-executives. The manpower strength was 6,174 as on 31st March, 1996 comprising of 5,676 non-executives and 498 executives. Percentage of SC/ST to total employment was 12.91 approx. For enhancing efficiency and skill of workforce, the Company continued to give stress on imparting training to both executives and non-executives and accordingly about 2,756 employees were given training under various Training Programmes. Executives and non-executives were trained at Bhilai Steel Plant for operating the newly commissioned Blast Furnace at VISL. The company has also taken vigorous steps to implement the Official Language Policy of the Government.

6. Developmental Activities

VISL has achieved success in producing high alloy grades of steels viz. ferritic stainless steel (AISI 410 series), low and medium carbon case hardening steels, hot working and cold working tools steels (AISI - H11, AISI-H12, AISI D2, AISI W320, etc.), and other stringent grades for Defence, through BOF-LRF-VD/VOD route.

7. ISO-9002

VISL has been accredited with ISO-9002 for its products through forge route. This will go a long way in establishing VISL in the export and domestic markets.

8. VISL a Potential Sick Company

Under section 23 of the SICA, the company has been registered as a potential sick industrial company on 8th September, 1995. The BIFR in its first hearing held on 26th February, 1996, directed VISL to submit a detailed report on the company's past and the current financial position alongwith its future plans, and also directed Government of Karnataka to resolve the issues/requests of VISL for concessions.

RASHTRIYA ISPAT NIGAM LIMITED (VISAKAPATNAM STEEL PLANT)

1.0 Introduction

Visakhapatnam Steel Plant, the country's first shore-based Plant and sixth Public Sector Integrated Steel Plant, has been built with a capacity to produce 3 mtpa of Liquid Steel. VSP was commissioned in August 1992 and dedicated to the nation by the Hon'ble Prime Minister of India.

The Plant has been built to exacting international standards in design and engineering and incorporates extensive Energy Saving and Pollution Control Measures. The Plant has been well conceived with an excellent plant layout which would allow expansion of the plant to over 10 mtpa capacity.

2.0 Production Performance

2.1 Growth in Production & Capacity Utilization

The Production, Growth and Capacity Utilization (CU) have registered a sustained and impressive growth over the years. Details of production during 1994-95 are as under:

Item	Rated capacity	1994-95		
		Production	%Growth	%Cap.utilisation
Hot Metal	3400	2836	20	83
Crude Steel	3000	1940	43	65
Saleable Steel	2656	1560	32	59
Pig Iron	556	848	-	153

2.2 However, against the above production targets, the actual production during 1995-96 has been as follows:

Item	Target	1995-96			
		Actual	% Ful.	%Growth over 1994-95	%cap.
Hot Metal	3200	3213	100.4	13.3	94.5
Crude Steel	2500	2381	95.2	22.7	79.3
Saleable Steel	2247	2136	95.1	36.9	80.4
Pig-Iron	603	771	127.9	-	138.7

3.0 Techno-Economic Performance

There has been consistent improvement in the Techno-economic performance. Performance with respect to some of the important Techno-Economic Parameters are as under:

Parameters	Unit	DPR Norm	Actual 1994-95	Actual 1995-96
COKE RATE (DRY) SPECIFIC ENERGY CONSUMPTION	KG	625	544.21	532.73
AVG.CAPTIVE POWER GENERATION	G.CAL/TLS	7.78	7.8	7.60
LABOUR PRODUCTIVITY	MW	163	190.81	192.10
	T/M YR	231	156	185.35

3.1 Against an installed capacity of 180MW, 173MW of power was generated at the Captive Power Plant during 1994-95, achieving a Plant load Factor of 96%. The total inhouse generation was of the order of 191 MW, considering generation of 18 MW from Back Pressure Turbine Station (BPTS)

and Gas Expansion Turbine Station (GETS). On an average, VSP has made a net export of 6.12 MW of Power to APSEB during 1994-95. During 1995-96 also, VSP has been a net exporter of Power to APSEB.

4.0 Marketing

Sales turnover for 1994-95 and 1995-96 have been Rs.2215 crores, including Rs.6 crores pertaining to Trial Run Account, and Rs.3044 crores respectively. VSP has been continuously increasing its Sales in the domestic market, overcoming steep competition. The sales of Iron and Steel products in the domestic market have increased from 1.43 MT in 1993-94 to 1.62 MT in 1994-95 and to 1.84 MT during the year 1995-96 registering a growth of 13.6% in terms of volume and 37% in terms of value. During 1994-95, 7.66 lakh tonnes of iron and steel products worth Rs.452.60 crores were exported. During 1995-96, 10.23 lakh tonnes of iron and steel products worth Rs.701.46 crores have been exported, which is more by 55% in terms of value over the previous year 1994-95. RINL has been awarded "Star Trading House" status in 1994.

The Market share of Steel products in VSP's range of products among main producers in the Domestic Market has gone up to 27% in 1995-96 as compared to 25% in 1994-95.

5.0 Financial Performance

During 1994-95, the second year of integrated operations of 3 MT stage, VSP achieved Cash Profits for the first time. Cash profits of Rs. 51 crores were achieved compared to Cash Losses of Rs.232 Crores during 1993-94 registering a growth of 122%. The financial performance during 1994-95 and 1995-96 has been :

	Rs. Crores					
	1993-94	1994-95		1995-96		
	Actual	Actual	%Growth over 93-94	Budget	Actual	%Growth over 94-95
Sales Turnover	1751.04	2208.57	26	3077.44	3038.57	37
Gross Margin	114.04	416.34	265	548.70	636.80	53
Cash Profit	-232.82	50.37	122	120.35	230.15	357
Net Profit/Loss	-572.66	-364.28	36	-328.65	-199.95	45

6.0 Energy Conservation

6.1 There has been continuous thrust on Energy conservation in VSP, which has helped in continuous reduction in the Sp.energy consumption over the years. Details are as under:

Year	Plan	Actual Performance
	(GCal/TLS)	(GCal/TLS)
1993-94	8.82	8.32
1994-95	8.15	7.80
1995-96	7.78	7.60

6.2 Expenditure on Energy Conservation has been as follows:-

Year	Amount (Rs.crores) spent on EC measures	Percentage of Total Investment
1993-94	1.72	0.81
1994-95	1.99	0.80
1995-96	0.85	0.60

7.0 Pollution Control & Environment Management

VSP has taken elaborate measures to combat air and water pollution due to discharge of emissions, effluents etc. from the integrated steel plants. The Cost of

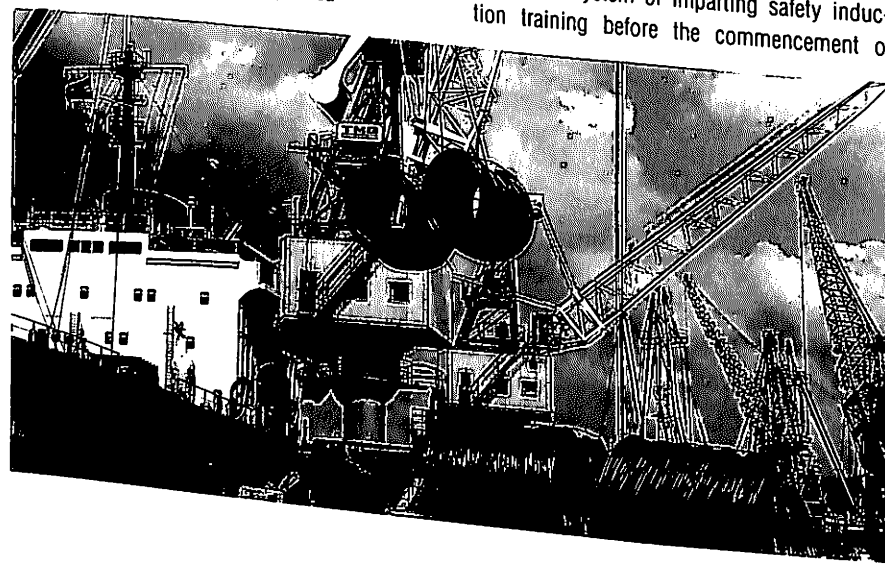
Pollution Control facilities is of the order of 8% of the total equipment cost.

Air and Water quality is being monitored as per the stipulation of State and Central Pollution Control Boards and it is ensured that ambient Air Quality in and around VSP remains well within the stipulated standards. The stacks are being monitored as per the frequency laid down by State Pollution Control Board. All the emissions from the stacks are within the standards. Water effluents are being monitored daily. Effluent quality is generally within the standards.

8.0 Afforestation

To create a healthy environment for the inhabitants of Steel Township and the surrounding neighbourhood, VSP has assigned top priority to tree plantation. Conservation of environment has been one of the objectives of VSP and a comprehensive plan for afforesting 8,895 acres of land has been envisaged. Salient features of afforestation activities are:

1. 39% of total land of VSP earmarked for afforestation
2. Block plantation inside the plant and also within the township area



3. Development of peripheral greenbelt on VSP boundary
4. Hill afforestation, reclamation of eroded and saline areas
5. Shelter belt plantation in coastal sandy area

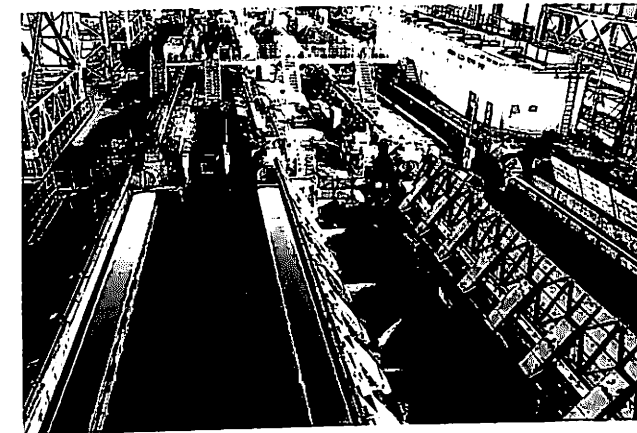
Starting from 1986 till date, three million trees have been planted over 5,906 acres.

Due to the massive afforestation work, VSP area has become a microclimatic zone by itself with the temperature being much less than in the Visakhapatnam Town.

9.0 Safety

Safety has always been accorded high priority in VSP. The policy on "Occupational Safety & Health" had been formulated in 1990 itself, when commissioning of major units was commenced. A number of activities are being undertaken continuously for propagation of safety consciousness among the employees as well as contract workers. Intensive training is being imparted to inculcate safe working habits.

For safety of contractors' workmen, there is a system of imparting safety induction training before the commencement of



any work. Height-passes are also issued to workmen, who are required to work at heights after giving them suitable training. Further, a comprehensive training programme on "Safety in Steel Plant for contractors' workers" is also being organised regularly.

10.0 Industrial Relations

During 1995-96, Industrial Relations, by and large, were cordial and a climate of good understanding between the management and the workforce prevailed. As a result, the mandays lost have been kept all time low in the recent past. In recognition of the excellence of the Management in maintaining harmonious industrial relations, the "National Convention on Industrial Relations Strategies for the 21st Century" organised by AP Productivity Council has awarded VSP the runner-up prize for the year 1994.

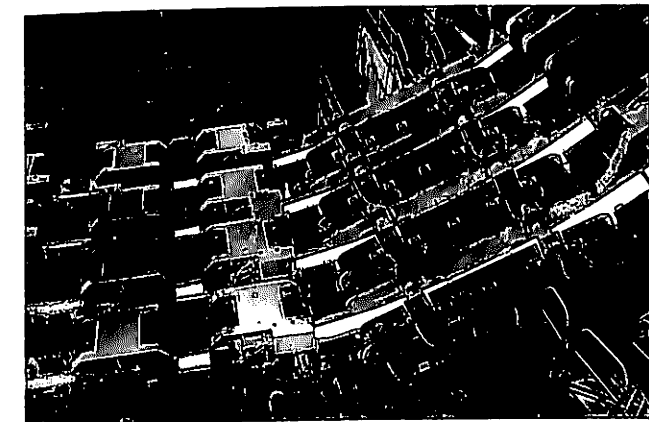
A special feature of the Industrial Relations during the period under review was the signing of two tripartite settlements with the recognised Union regarding wage and other related issues. The agreement

inter-alia includes a number of work related clauses under which the Union has committed to improve Production, Productivity and Total Quality. During this period, the recognised Union carried out production campaign in all major production departments wherein the Management and the Union interacted with the workmen. Be-

sides this, the thrust was also on meaningful interaction with representatives of workmen through established forums of participation, viz. Corporate Business Information Forum, Shop floor cooperation Committees, Safety Committees etc. All these have helped in gradual emergence of a symbiotic relationship between Management and the Union, which has promoted and sustained peaceful Industrial Relations climate in VSP.

11.0 Perspective View

In order to decrease the coke rate in blast furnaces and reduce consumption of imported coking coal, VSP is taking up Coal Dust Injection. VSP is also envisaging combined blowing to increase lining life of Converters and improve quality of steel.



KUDREMUKH IRON ORE COMPANY LIMITED

1.0 General

1.1 The Kudremukh Iron Ore Company Limited (KIOCL), a Government of India Undertaking and the country's largest 100% EQU, was established in April, 1976 to meet the long term requirements of Iran. An Iron Ore concentrate Plant of 7.5 million tonnes capacity was set up at Kudremukh. This project was to be financed in full by Iran. However, as Iran stopped further loan disbursements after paying US \$ 255 million, the project was completed as per schedule with the funds provided by Government of India.

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

2.0 Production

A target of 6.2 million tonnes and 2.3 million tonnes was set for production of Iron Ore concentrate and Iron Ore pellets respectively during the year 1995-96. As against this, 6.06 million tonnes of Iron Ore concentrate and 2.5 million tonnes of pellets was produced which represents an achievement of 98% and 109% of the targets respectively and capacity utilisation of 89% in respect of concentrate plant and 83% in respect of Pellet Plant. Production of pellets includes generation of 68,000 tonnes of pellet fines.

3.0 Exports

3.1 For the year 1995-96, a target of 3.6 million tonnes of concentrate and 2.3 million tonnes of pellets was fixed. As against this, actual shipments were 3.65 million tonnes of concentrate and 2.58 million tonnes of pellets, representing 101% and 112% of the targets respectively. Shipment of pellets includes 68,000 tonnes of pellet fines which were exported to China and Australia.

3.2 Total sales for the year 1995-96 were Rs.478.48 crores, against a target of Rs.414.78 crores, and represents 115% of the target.

3.3 The export earnings during the last 5 years from 1991-92 are detailed below:

Year	(Rs.in lakhs)		
	Concentrate	Pellets	Total
1995-96	20676	27172	47848
1994-95	16729	20205	36934
1993-94	21022	20647	41669
1992-93	18551	12839	31390
1991-92	18882	20389	39281

4.0 Financial Performance

An overview of the financial performance of KIOCL during the year 1995-96 together with the actuals for the previous three years, is indicated below:

Particulars	(Rs. in Crores)			
	1995-96 (Prov.)	1994-95	1993-94	1992-93
1	2	3	4	5
Total value of sales	478.48	369.34	416.69	313.90
Gross margin	142.66	97.66	125.39	129.35
Operating profit	109.32	68.09	98.55	102.94
Inventories (excluding finished stock)	101.12	99.40	96.22	95.95

5.0 The physical and financial performance during the current financial year upto October, 1995 had exceeded the targets on almost all fronts.

5.1 The State Electricity Board imposed 30% energy cut and 25% demand cut on KIOCL with effect from 3.11.95. This jeopardised mining and beneficiation activities of the company. At the instance of the Ministry of Steel, the Karnataka State Electricity Board allocated 9 million units per month from the Central Power Generating Stations with effect from 1.12.95, bringing the total availability to 41 million units per month to the company, as against a minimum requirement of 50 million units per month. The reduced availability of power adversely affected the production of concentrates and pellets.

6.0 Workers' Participation in Management

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

7.0 Safety Measures

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

8.0 Progressive use of Official Language

8.1 The Company follows the directives issued by the Government of India regarding progressive use of Hindi for official purposes. Hindi teaching programmes for the employees

are a part of training programme of the company. Cash awards and increments are given to those who perform well in these programmes. The Company's house magazine is published in English, Hindi and Kannada languages.

9.0 Manpower Position

As on 31st March, 1996, the total number of employees in KIOCL were as follows:

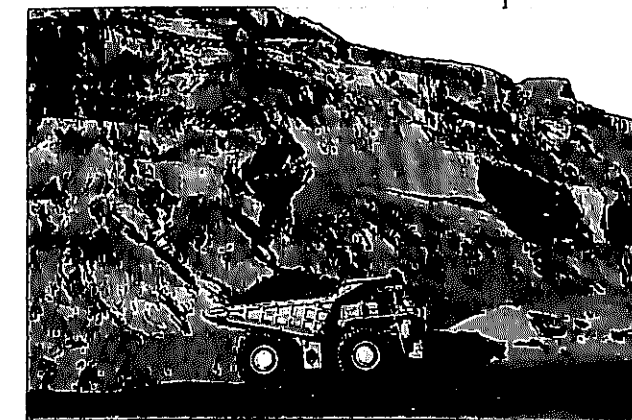
Group	Total No. of Employees	SCs	STs
1	2	3	4
'A'	497	48	14
'B'	200	11	01
'C'	1523	208	42
'D'	205	45	29
'D' (Sweepers)	45	38	04
Total:	2470	350	90

10.0 R & D Projects

During the year, the company undertook three R&D projects.

a) Recovery of iron values from tailings

A project to recover iron values from tailings in the tailing dam was undertaken during the year in consultation with M/s Mineral Technologies Division, Australia.



The firm submitted a draft feasibility report in June 1995. Discussions were held with them and their final report is awaited.

b) Application of synthetic organic binder peridur/ perispray for producing low silica pellets

Test results indicate that Bentonite addition to pellet mix can be reduced upto 50% by adding peridur without affecting physical properties of pellets. However, variation on moisture content in concentrate has a very adverse effect on green pellet formation.

c) Beneficiation of iron ore and synthesis of high quality soft ferrites in consultation with M/s NML, Jamshedpur.

Studies in this regard were completed during the year and the results are encouraging. Final report from M/s NML has also been received. They have also submitted a proposal for synthesis of prototype ferrites. This is under consideration.

11.0 Ecology and Afforestation

Efforts towards environmental protection and maintenance of pollution free environment are continuing. The massive afforestation and horticulture programme which started at the inception of the project has further been strengthened. The company is also supporting research schemes in these areas, being conducted by Mangalore University, the State Forest deptt. and other agencies. As a result of research programme, the Mangalore University has already identified certain species of plants particularly suited for plantation in the Kudremukh area. This, coupled with the scheme of planting saplings in areas where mining is completed, would actually result in extending the forest area. The company is also committed to funding environment development works in the Kudremukh National Park area to the extent of Rs.5 crores out of which it has already

released a sum of Rs.86.67 lakhs.

12.0 Prospecting of Nellibeedu

After receipt of prospecting licence for exploration of Nellibeedu iron ore deposits, M/s Mineral Exploration Corporation Ltd., Nagpur, were entrusted with the work of drilling to estimate the actual extent of ore reserves available. The work involved is drilling of about 4000 mtrs. Work commenced in November 1995. While drilling is scheduled to be completed in December 1996, their report is expected by March 1997. Estimated cost of this work order is Rs.1.5 crores.

13.0 Capital Schemes

Some of the major capital schemes under implementation are described below:

13.1 Relocation of Crusher No.1

Consequent upon depletion of ore on the east and west pits to below benches 16 and 19 respectively, it has become necessary to shift either Crusher No.1 or 2 to a lower level. Accordingly, it was decided to dismantle and relocate the existing Crusher No.1. While major portion of the civil works on this project has been completed, dismantling of equipment at Crusher No.1 and the refurbishment work are nearing completion. The project is expected to be completed by December 1996.

13.2 Captive Power Plant

Two DG Sets of 9.36 MW each for which orders have been placed during the previous financial year have been delivered and their erection has also been completed. These units were inaugurated on 16-02-1996 and performance tests are currently under way. Commercial operation of these generators is expected to commence shortly. The 3rd DG set for which order was placed during

December 1995 is expected by end of August 1996.

13.3 Shaft Pelletising Furnace

To meet the growing demand for pellets, it was also decided during the year to instal a 0.5 MT shaft pelletising module at an estimated cost of Rs.40 crores. LOI for this work has been already issued to M/s.Maume Research & Engineering Inc., USA. Work on the project has already commenced and commissioning is expected by third quarter of 1997.

13.4 In addition to the above, the company has also schemes on hand to effect improvement in the quality of its concentrate by introduction of two additional Ball Mills and also floatation and floatex equipment. Estimated to cost Rs.32 crores, this project is likely to be completed during 1996.

14.0 Joint Ventures by the Company

14.1 Pig Iron and DISP Project

A new Company under the name of Kudremukh Iron & Steel Company Ltd. was incorporated during June 1995 in joint venture with two other PSUs namely MSTC and MECON to implement the pig Iron and DISP project. The project which is scheduled for

commissioning in two phases - Pig Iron in the first phase and DISP in the second - will, when commissioned, produce 1,55,000 tonnes of low phosphorous, low sulphur pig iron and 50,000 tonnes of Ductile Iron Spun Pipes. Basic infrastructure facilities for this project, such as, land, power & water are already available. Orders for supply of major equipment and civil works for Pig Iron Project have already been planned. To finance the project, the Company would also be entering the capital market shortly after firming up the term loan component from financial institutions/commercial banks.

14.2 Among other joint ventures being planned by the Company is one with M/s. Bharat Earth Movers Ltd. (BEM) for carrying out gold mining in Ghana and another with M/s. SAIL and RINL for setting up a shipping company.

15. Energy Conservation

There is significant reduction in energy consumption as compared to the previous year, which is evident from the following:-

	1995-96	1994-95
In KWH per tonne of concentrate production	75.07	78.02
per tonne of Pellet prodn.	29.36	32.50

MANGANESE ORE (INDIA) LIMITED

1. Background

1.1 Established in 1962, MANGANESE ORE (INDIA) LIMITED (MOIL), is the largest producer of Manganese Ore in India. At the time of inception 49% shares were held by the Central Province Manganese Ore Co. Limited (CPMO) and the remaining 51% in equal proportion by Govt. of India and the State Governments of Madhya Pradesh and Maharashtra. Subsequently, in 1977 the shares held by CPMO in MOIL were acquired by Govt. of India and MOIL became a wholly owned Government Company with effect from October 1977. As on 31.3.1996 the Government of India held 81.57% shares in MOIL with State Governments of Maharashtra and Madhya Pradesh holding 9.62% and 8.81% shares respectively.

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

- a) High Grade Ores for production of Ferro Manganese
- b) Blast Furnace grade ore required for production of Hot Metal and
- c) Dioxide Ore which goes into production of Dry Battery Cells.

1.3 MOIL has set up a plant based on indigenous technology to manufacture ELECTROLYTIC MANGANESE DIOXIDE. This product is also used for the manufacture of dry battery cells.

2. Finance

2.1 The Authorised Capital of the Company is Rs.30.00 crores and the Paid-up Capital was Rs.15.33 crores as on 31st March, 1996.

3. Performance

3.1 Operating and Financial Results

The physical and financial performance of the Company during 1994-95 and

1995-96 (provisional) are given below:-

	1994-95 (Actuals)	1995-96 (Provisional)
1. Production (Lakh Tonnes)	6.09	6.59
2. Turnover (Rs. in Crores)	80.02	103.66
3. Profit Before Tax (Rs. in Crores)	10.73	18.90

3.2 Productivity

The productivity (output per manshift in tonnes) during 1995-96 improved to 0.295 as compared to 0.292 in 1994-95.

3.3 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 taken to conserve energy and minimise power consumption.

3.4 Repayment of Government Loans

The Company repaid to Govt. of India Rs. 56.22 lakhs towards principal of plan loans and Rs. 46.25 lakhs towards interest as per approved repayment schedule for 1995-96.

4. Progress of Capital Schemes/Implementations of Projects

- The work of Phase II deepening of Holmes Shaft upto 93 metres at Balaghat Mine has since been completed.

- The work relating to Sinking of Vertical Shaft at Beldongri Mine has been completed and the Cross-cutting at 193 metres level has been taken up to reach the ore body. The shaft has been commissioned and this level is being developed for ore extraction.

5. Research & Development and Technology Upgradation

5.1 MOIL has undertaken several Research & Development Schemes for technology upgradation and conservation and optimum utilisation of valuable mineral resources. These schemes, detailed below, were undertaken to cut down cost of production, improving productivity and safety:

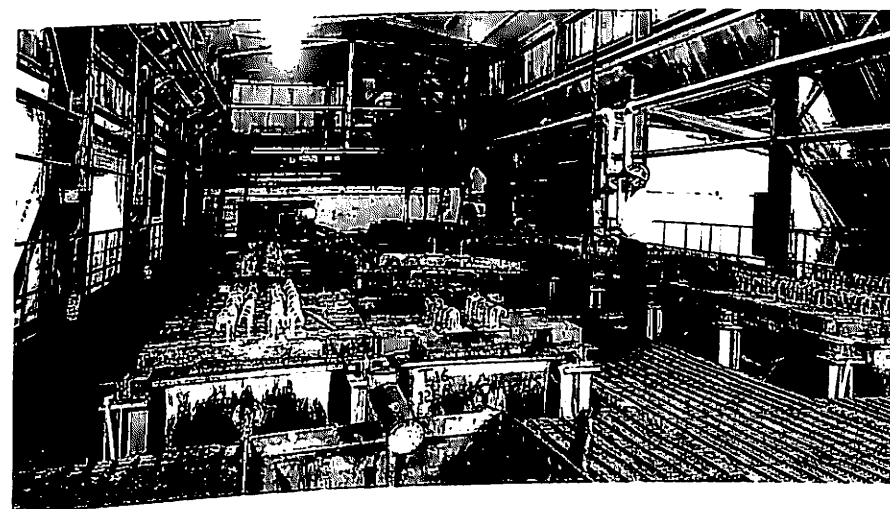
1. Use of Cable Bolting and Steel Roof Support in Underground Mines.
2. Use of Sand Stowing in Underground Mines in place of manual filling.
3. Use of long hole drilling and blasting for improving slope productivity.
4. Improvement in Underground Mining support methods including Geotechnical investigation and cavability studies.
5. Diamond drilling to locate new Manganese bearing areas and prove further reserves in the existing leasehold areas.
6. Beneficiation of medium and low grade ores as well as medium grade dioxide ore to battery grade.
7. Introduction of Air Decking System in Opencast heavy blasting.

8. Introduction of rock bolting in underground mines in conjunction with cable bolting to eliminate timber support altogether.

6. Diversification Plans

6.1 MOIL has plans to diversify into the following activities to meet the future challenges.

1. Upgradation of the existing EMD Plant to enhance its capacity from 700 TPA to 800 TPA.
2. Setting up of another plant to manufacture Electrolytic Manganese Dioxide (EMD)-1200 TPA at a cost of Rs.9 Crores in the year 1997-98.
3. Setting up of a Plant to manufacture Manganese Sulphate at a cost of Rs. 50 lakhs.
4. MOIL has plans to set up its own plant to manufacture 10,000 TPA Silico Manganese/Ferro Manganese at Balaghat Mine using Balaghat fines at a cost of about Rs. 4.80 Crores.
5. Setting up of another High Intensity Magnetic Separation Plant at a cost of Rs. 90 lakhs.



6. Setting up of a Mechanised Jigging Plant at Balaghat Mine at a cost of Rs. 1.00 Crore.

7. Cost Reduction Plans

7.1 The Company has introduced several cost reduction measures, some of which are as follows :

1. Improvement in Productivity.
2. Proper manpower planning and introduction of Voluntary Retirement Scheme (without replacement) to reduce surplus manpower.
3. Judicious mechanisation of various mining operations.
4. Avoidance of wasteful expenditure.

8. Safety Measures

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

8.2 The Company has won the Winners Prize under the National Safety Award (Mines) Scheme for the year 1993 instituted by Govt. of India for achieving the Lowest

Injury Frequency Rate at its Ukwa Mine. The Company has also put up good performance in Regional Safety Competitions and won 44 prizes including the best overall prizes in Underground and Semi-mechanised opencast Mines for the year 1994-95.

9. Workers Participation in Management

9.1 The Company has set up a mechanism for the association of workers representatives from the grassroot 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 a continuing effort to strengthen this arrangement. In addition, Works/Canteen/Grievance Committees are functioning satisfactorily at each Unit. The members of these Committees are from different sections of employees.

10. Environmental Protection

10.1 The Company is conscious of its responsibility towards protection of environment in its leasehold areas. During 1995-96, 69,000 saplings were planted at different Mines with a survival rate of about 75%. The sericulture project at Gumgaon Mine has been further extended to make it commercially viable.

11. Progressive Use/Awards for Implementation of Hindi

11.1 In order to ensure progressive use of Hindi and implementation of Official Language Act, effective steps have been taken by the Hindi Cell functioning at the Corporate Office of the Company.

11.2 To encourage the use of Hindi at all

levels various competitions are organised during "Hindi Week" and the winners are suitably rewarded. Facilities for learning Hindi have been made available to employees who are not proficient in the language.

11.3 The Company has also bagged the Indira Gandhi Rajbhasha Award for 1994-95 (2nd position) for "Kha" Region. The Award was presented by the Hon'ble President of India.

12. Social Commitment

12.1 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 part of their ongoing efforts to promote social welfare.

13. Personnel

13.1 The composition of the work force of the Company as on 31st March, 1996 was as under :

Group	S.C.	S.T.	OBC	Others	Total
A	15	4	15	183	217
B	17	6	24	138	185
C	325	395	464	649	1833
D	1173	1815	2249	1055	6292
Total	1530	2220	2752	2025	8527

Out of the total number of 8,527 employees 1389 are women.

BHARAT REFRACTORIES LIMITED (BRL)

1.0 Brief History

Bharat Refractories Limited (BRL), a Government of India Undertaking, was incorporated on 22nd July, 1974. At present it has the following three units:-

i) Bhandaridah Refractories Plant at Bhandaridah ;

ii) Ranchi Road Refractories Plant at Ramgarh; and

iii) Bhilai Refractories Plant at Bhilai

India Firebricks & Insulation

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

2.0 Capital Structure

2.1 The authorised share capital of the Company is Rs. 55.00 crores against which the paid-up capital as on 31st March, 1996 was Rs. 51.80 crores. Share money pending allotment as on that date was Rs. 97.00 lakh.

3.0 Production Performance

The production performance of the different units of the company as well as subsidiary company - IFICO Ltd. during

1994-95 and 1995-96 (provisional) was as follows :-

Name of Unit	Quantity in Tonne Value Rs. in lakh			
	1994-95 (Actual)		1995-96 (Prov)	
	Qty.	Value	Qty.	Value
Bhandaridah Ref. Plant (BhRP)	20852	2004.32	23334	2213.52
Ranchi Road Ref. Plant (RRRP)	5778	1444.40	6482	1873.82
Bhilai Ref. Plant (BRP)	23131	2600.01	34153	4169.10
Total of BRL	49761	6048.73	63969	8256.44
India Firebricks & Insu. Company Ltd. (IFICO)	19536	1582.63	21584	1591.66
Grand Total :	69297	7631.36	85553	9848.10

4.0 Financial Performance

During the year 1994-95, BRL earned profit before interest and depreciation of Rs.48.12 lakh, but after providing for interest and depreciation to the tune of Rs.1,058.13 lakh and Rs.348.10 lakh respectively, it incurred net loss of Rs.1358.11 lakh. During the year 1995-96, the Company recorded net loss of Rs.1227 lakh.

Its subsidiary, IFICO, incurred net loss of Rs.514.88 lakh during the year 1994-95. For the year 1995-96, the Company recorded net loss of Rs.597.88 lakh.

5.0 Foreign Collaboration

5.1 The Bharat Refractories Ltd. has been able to adapt successfully the technical know-how acquired from KRG 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, Slide Gate Refractories, Gunning Repair Materials and Cast Mixes for Steel Ladle have already stabilised. Consequently, the Company has emerged as one of the major suppliers of MCB to SAIL Steel Plants. The Company has also started commercial production of Coke Oven Silica Bricks, for which know-how was acquired from Shinagawa Refractories Co. Limited, Japan.

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

6.0 Research & Development

6.1 During the year 1995-96, in-house R&D was carried out in respect of the following areas :-

- 1) Resin bonded Mag-Carbon Masses
- 2) Bottom Jointing Mass
- 3) Mag-Carbon Refractories for Metal Line of Ladle Furnace and Slag Zone.
- 4) Zonal lining of Mag-Carbon bricks with fused magnesia.
- 5) Mag Chrome Quality Tab Hanger bricks.
- 6) Dry Ramming Mass
- 7) A12O3-Silicon-Carbide Bonded bricks for Torpedo Ladle

These R&D efforts led to the development of the following products :-

- a) Resin bonded Mag-Carbon Masses
- b) Bottom Jointing Mass
- c) Mag-Carbon Refractories for Metal Line of Ladle Furnace and Slag Zone
- d) Dry Ramming Mass

e) A12O3-Silicon-Carbide Bonded bricks for Torpedo Ladle.

The revenue expenditure on R&D during 1994-95 was Rs.23.16 lakh and Rs.42.16 lakh in 1995-96.

7.0 Energy Conservation

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

- a) Pre-heating of furnace oil
- b) Calibration of fuel pump and nozzle of engines at regular intervals.
- c) Adoption of appropriate setting pattern of green bricks.
- d) Usage of recommended lubricating oil for engines.
- e) Switching off of unwanted load for reducing electricity consumption.

8.0 Pollution Control

All the units of the company have obtained/applied for valid "Consent" from the concerned State Pollution Boards. Dedusting units have been installed at the plants to control air pollution. The norms prescribed by the State Pollution Boards are being strictly complied with.

9.0 Industrial Relations

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

10.0 Safety Measures

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

11.0 Manpower

The manpower on the roll of the Company as on 31st March, 1996 was 2,924 comprising of 362 and 399 employees belonging to Scheduled Caste and Scheduled Tribe Communities respectively. Besides, 63

employees belonging to ex-servicemen, 18 physically handicapped and 130 women employees were on the roll of the Company as on 31st March, 1996.

In the subsidiary company, IFICO Ltd., 1,002 employees were on the roll as on 31st March 1996. This included 44 employees from SC and 111 employees from ST Community.

12.0 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.

13.0 Implementation of Official Language

The Company has been vigorously pursuing implementation of the Official Language Policy of the Government. To improve the use of Hindi a number of workshops, competitions, meetings and training programmes were conducted from time to time. The Company has also been awarded Indira Gandhi Rajbhasa Shield for work done in Hindi in the 'A' Region for the year 1993-94 and 1994-95.

14.0 Reference to the BIFR

Saddled with sick companies from the very beginning, BRL had been incurring losses consistently. The net worth was eroded to an extent where it qualified for being a sick company under the Sick Industrial Companies (Special Provision) Act, 1985. Consequent to the amendment to the Sick Industrial Companies (Special Provision) Act, 1985 whereby public sector manufacturing companies were brought under the purview of SICA, a reference had to be made to BIFR in May, 1992 for BRL as well as IFICO. After assessing the future plans presented by the Company, BIFR appointed IDBI (Industrial Development Bank of India) as the operating agency in terms of Section 18(2) of SICA for working out a revival plan. IDBI has since submitted its revival plan to BIFR. The BIFR also published a draft scheme in February, 1995. BRL has, on the lines of the draft scheme of BIFR, reworked the reliefs, concessions and projections taking into account the performance of 1995-96. The proposal is under active consideration of the Government.

1. 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, other than coal, oil, natural gas and atomic minerals. Presently, its activities are concentrated on mining of iron ore and diamonds. NMDC operates the largest mechanised iron ore mines in the country at Bailadila (Madhya Pradesh) and Donimalai (Karnataka) and the Diamond Mine situated at Panna (Madhya Pradesh).

2. Iron Ore

2.1 Production

In 1994-95, NMDC produced 13.02 million tonnes of iron ore. During 1995-96, 14.31 million tonnes of iron ore has been produced.

2.2 Exports

Exports of iron ore produced by NMDC is canalised through the Minerals and Metals Trading Corporation (MMTC). Most of the iron ore is exported to Japan, South Korea and China. In 1994-95, NMDC exported 6.62 million tonnes of iron ore valued at Rs.374.01 crores approximately. Exports of iron ore in 1995-96 were 6.50 million tonnes for a value of Rs.395 Crores (approx.).

2.3 Domestic Sales

In 1994-95, NMDC's sales of iron ore to domestic units were around 6.44 million tonnes. In 1995-96, sale of iron ore to domestic consumers was 7.88 million tonnes.

3. Diamonds

In 1994-95, 24,804 carats of diamonds were produced. In 1995-96, the production was 29,447 Carats.

4. Finance

The authorised share capital of the company is Rs.150 crores. The paid up equity share capital as on 31.3.1996 was Rs.132.16 crores.

5. Disinvestment of Shares of NMDC

The Government of India 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 was disinvested, fetching the Government an average price of Rs.83.52 and maximum price of Rs.100/- per share against the face value of Rs.10/-. No further disinvestment was made in 94-95 and 95-96.

6. Operating Results

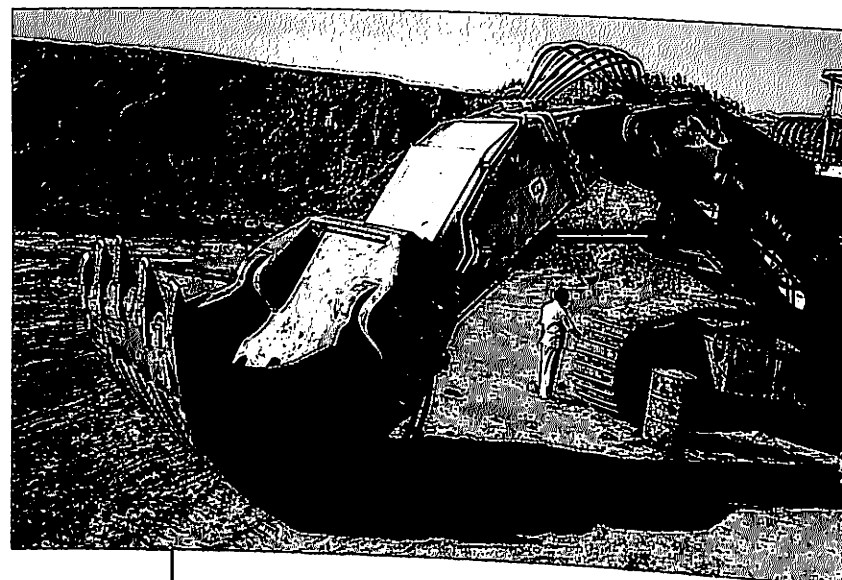
In 1994-95, the company recorded a profit of Rs.101.68 crores (before tax). The company declared a dividend of 20% totalling Rs.26.43 crores. Rs.48 crores was transferred to general reserve. The profit in 1995-96 is Rs.150.39 crores (before tax) (Provisional).

7. Major Highlights of Performance of NMDC during 1995-96

7.1 Iron Ore

7.1.1 Corporation as a whole has achieved 206.08 lakh tonnes of total excavation in the Iron Ore Mines, an increase of 12.1% over the previous best of 183.85 lakh tonnes achieved in 1994-95.

7.1.2 Production of 143.06 lakh tonnes of lump and fines was achieved during the year which is an increase of 9.9% over the previous best of 130.20 lakh tonnes achieved in 1994-95.



Rs.1,115 lakhs in the year 1993-94.

7.2 MOU Targets

MOU targets for Excavation, Production and Despatch of iron ore and Production of diamonds, were exceeded. The Company achieved the overall rating of EXCELLENT.

7.3 Profits

7.3.1 The Corporation has achieved Rs.150.39 crores as Profit before tax (Provisional) in 1995-96 as against the previous best of Rs.145.21 crores in 1991-92. This is the highest profit ever achieved by NMDC since inception.

8. Workers' Participation in Management

The Scheme of workers' participation in management is working satisfactorily at all the three levels viz. Shop, Plant (Project) and Apex (Corporate) level.

The meetings of the Joint Councils take place regularly and follow up action is taken.

9. Manpower Position

As on 31st March, 1996 the manpower position in different units of the company is as follows:

Group	Total No. of Regular Employees as on 31.3.96	No. of SC Employees out of Col.2	No. of ST Employees out of Col.2	No. of Women Employees out of Col.2
(1)	(2)	(3)	(4)	(5)
A	820	73	19	25
B	1185	99	54	63
C	2970	503	645	140
D	1827	424	434	250
TOTAL	6802	1099	1152	478

7.1.3 Despatch of 143.65 lakh tonnes of lump and fines was made during the year which is an increase of 10.0% over the previous best of 130.63 lakh tonnes achieved in 1994-95.

Diamonds

7.1.4 Diamond production reached 29,447 carats from Majhawan Mines of Panna Project, an increase of 18.7% over the previous best of 24,804 carats in the year 1994-95.

7.1.5 Tuff treatment of 2.26 lakh tonnes was achieved which is an increase of 17.1% over the previous best of 1.93 lakh tonnes in 1994-95.

7.1.6 Diamond bearing Kimberlite Ore (Tuff) mining of 2.93 lakh tonnes was achieved which is an increase of 4.3% over the previous best of 2.81 lakh tonnes in 1994-95.

7.1.7 The sale of diamond at Rs.1,834 lakhs was an increase of 64.5% over the previous best of

10. Memorandum of Understanding

NMDC has entered into a Memorandum of Understanding with Government of India for the year 1996-97 under which it has committed to produce 136 lakh tonnes of iron ore, 25,000 carats of diamonds and to earn a net profit (before tax) of Rs.129.18 Crores.

11. Research & Development

I. Objective/Thrust on R&D

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

II. Highlights of R&D Activities

A. New Technology/Process

(i) Development of a mineral Beneficiation process for production of High Grade Ferric Oxide from powdery type of Iron Ore known as Blue Dust.

A Demonstration plant is in operation, producing on an average 1000 tonnes of High Grade Ferric Oxide of different grades. These products are being supplied to various manufacturers of Ferrite components both in India and abroad for market development.

(ii) Commercial Plant for production of Ultra Pure Ferric Oxide from Blue Dust.

A commercial plant is being set up at Visakhapatnam with a rated capacity of 6000 TPY.

(iii) Development of hydrometallurgical processes for production of pigment grade Ferric Oxide from Blue Dust and Iron Ore Slimes.

A pilot plant is being set up with partial funding by DSIR, Ministry of Science and Technology under their PATSER scheme. The ultimate aim is to commercialise the process.

(iv) Development of Pyro-metallurgical processes for production of premium grade iron powder from Blue Dust concentrate for use in powder metallurgical industries.

A pilot plant is being set up at Hyderabad in association with Advanced Research Centre, DMRL with an objective to develop market for the product and generate engineering data required for a commercial set up.

B. Productivity Improvement

(i) With the implementation of Slime Beneficiation Plant, based on R&D studies, in the Iron Ore production mines, there is an increase in saleable Iron Ore Production to the tune of 5% to 6%, leading to increased productivity. With the implementation of Perm-Roll magnetic separation technique, based on R&D studies, in the Diamond Processing plant at Diamond Mining Project, Panna, there is a substantial increase in production and productivity.

(ii) Utilisation of Kimberlite waste for production of Masonary Bricks.

Based on laboratory findings, it is proposed to take up large scale laboratory studies for production of Masonary Bricks from Kimberlite waste material in association with National Council for Cement and Building Materials (NCBM) Hyderabad.

C. Development of New Products

(i) High grade Ferric Oxide for use in the manufacture of hard and medium soft Ferrite components.

(ii) Ultra Pure Ferric Oxide for use in the manufacture of soft Ferric components.

(iii) Ferrite Powder Mix - A value added ready-to-use material for manufacture of Ferrite Components.

(iv) Pigment Grade Ferric Oxide for use in Paint Industry.

(v) Premium Grade Iron Powder for use by powder metallurgical industries.

D. Quality Improvement Programme

Being a member of the Bureau of Indian Standards, the Company participates regularly in updating the testing procedures pertaining to Ores and Minerals.

III. R&D Expenditure

Year	Turnover (Rs.Crores)	Expenditure on R&D (Rs.Crores)
1993-94	273.48	4.08
1994-95	299.05	3.94
1995-96	581.23*	3.20

* Including Rs.197.83 Crores of Railway Freight.

12.0 Pollution Control & Environment Management

12.1 Air Pollution control

Regular ambient air quality monitoring studies are conducted at all the projects by reputed environmental consultants adopting the guidelines given by MOEF Govt. of India. Standards prescribed by different State Pollution Control Boards, Central Pollution Control Board and MOEF are being followed.

The air monitoring data indicated that the SPM (suspended particulate

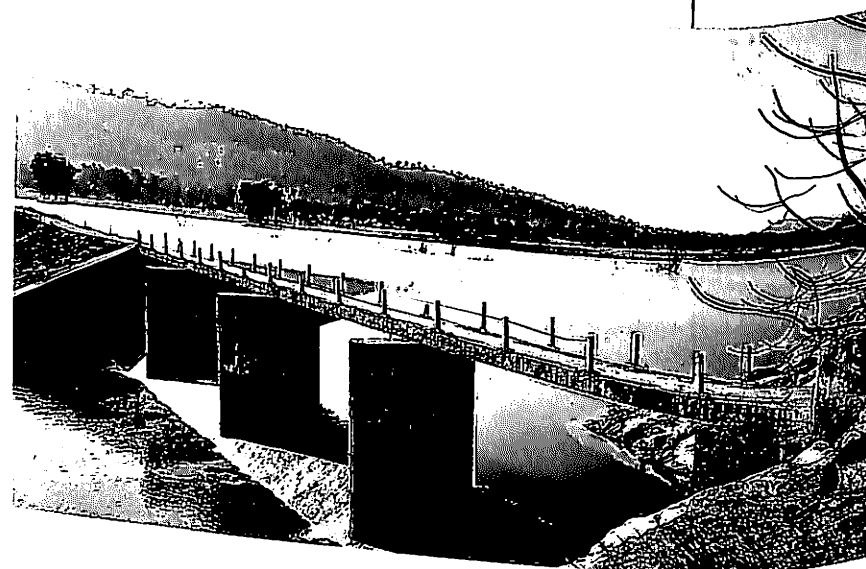
matter) level in the work zone was within 500 mcg/cum, the upper limit for industrial and mixed use category. The respirable dust survey conducted by Indian Bureau of Mines, Nagpur, indicated the level to be within the standards of DGMS. The oxides of nitrogen and sulphur, lead and carbon monoxide were either below detectable limits or in negligible concentrations and well below the limits set by CPCB, New Delhi.

The residential zones also recorded all the above parameters to be well within their respective limits as per "the Rural and residential" category of land use as per CPCB.

12.2 Water Pollution control

Monitoring for water includes both quality and quantity. Quality parameters were measured as per norms under GSR 422E/IS2296/IS 10500. Water flow measurements were done as per IS 1192. Monitoring was done in all the 4 seasons viz., Summer'95, Monsoon'95, Postmonsoon'95 and Winter'95.

To control the flow of the suspended solids from the screening plants of respective mines or run-offs, well designed tailing



dams have been constructed and are being maintained. A number of check dams have been constructed to arrest the fines and reduce the velocity of flow even before reaching the tailing dam. At the upstream of the tailing dam, conditions are created for discrete and quiescent settling of solids. The quality of water discharged from the tailing dams, which act as the pollution control structure, is observed to meet the standards prescribed in GSR 422E. For domestic waste water treatment, suitable oxidation ponds function effectively so that the discharge from the Oxidation pond is also within the limits of GSR 422E and IS 4764.

Additional control measures for environmental production & pollution were taken during the year 1995-96.

Drinking water quality in all the projects and for the supply to the neighbouring villages is maintained within the limits of IS 10500-1991.

All other toxic and carcinogenic parameters like phenols, cyanides, hexavalent chromium, etc. are observed to be either negligible or below their detection levels.

12.3 Solid Waste Management

The tailing dam is itself a pollution control facility where iron ore slime settles by physical means and clear water discharges down-stream. Hence, the recycling of tailings (solid waste) has not arisen at present. However, reclamation of tailings/afforestation of the area will be done after the life of the dam is over.

The waste material consisting of ferruginous shale, ochreous material and BHQ excavated along with iron ore are dumped separately at specified places away from nalla courses, thick vegetation and on flatter grounds or closed valleys.

Waste dumps presently active would

be reclaimed after they reach their peak accommodating capacities.

12.4 Afforestation

Systematic afforestation programme is being undertaken and the developments are being monitored regularly. About 16 lakhs of saplings have been planted since 1981 and the survival rate is found to be encouraging (+90%). In 1995-96, about 1.57 lakhs saplings have been planted with more than 20 species (including fruit bearing and flowering variety) selected considering the local conditions and its adaptability, bio-diversity, fast growing nature, etc. As a part of awareness programme, fruit bearing saplings were purchased and distributed in the township of Bailadila Dep-5, propagating the motto of growing "One man-One tree". The break-up of plantation done during the year is as follows :

Bailadila, Dep-14/11C	48,224
Bailadila, Dep-5	50,000
Donimalai	45,000
Panna	12,500
Chawandia	1,850
Total	1,57,574

12.5 Budget for Environmental Improvement and Revised Estimates

Funds of Rs.925 lakhs have been sanctioned for environmental improvement/protection measures for the VIII Five Year Plan. Care has been taken not to divert this fund for any other purpose, as a part of corporate policy. An expenditure of Rs.225 lakhs has been incurred during the year 1995-96 while a budget estimate provision of Rs.250 lakhs has been allotted for the year 1996-97 towards environmental protection and improvement works.

13. Mandovi Pellets Limited

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

During the year 1995-96, the Company's estimated production was 5.08 lakh tonnes of pellets and the estimated despatch was 5.31 lakh tonnes of pellets.

The company's total income for the year 1995-1996 is estimated at Rs.6,103.36 lakhs which includes miscellaneous receipts of Rs.32.84 lakhs. There will be write back of interest on account of OTS to the extent of Rs.3,748.53 lakhs during the year. After adjusting the operating expenditure of Rs.6,481.12 lakhs and depreciation of Rs.400.00 lakhs, the estimated profit for the year 1995-1996 will be Rs.2,970.77 lakhs. The estimated accumulated carry forward losses will be Rs.3,817.14 lakhs.

14. J&K Mineral Development Corporation Limited

J&K Mineral Development Corporation Limited (J&KMDC), a subsidiary company of NMDC, was incorporated on 19.5.1989

for development of various minerals in the State of Jammu & Kashmir. NMDC holds 74% of equity in J&KMDC, the remaining 26% is owned by J&K Minerals Limited (J&KML), a State Government Public Sector Undertaking. The equity subscribed till 31.3.95 by NMDC is Rs.396 lakhs and J&KML is Rs.78 lakhs. Upto March, 96 approximately Rs.5.00 crores have been spent on the Project. The entire expenditure at present is met by NMDC. This is appropriated as NMDC's share of equity in the Company. The Dead Burnt Magnesite (DBM) plant of 30,000 tonnes per annum capacity is the first Project being undertaken by J&KMDC. The Project was sanctioned at a cost of Rs.60.02 crores by Government of India during November 1992. However, as the viability of the Project, was affected due to reduction in customs duty on DBM in 1993-94 and fall in international price of DBM, the Ministry advised during April 1993 to hold further activities of the Project until the economic viability of the Project was established. The project is kept on hold since then and is essentially on care and maintenance. The Board of Directors have recommended for closure of the project and winding up of the company. Meanwhile steps have been taken to reduce the expenditure. NMDC is also exploring the possibility of revival of the project jointly with some private entrepreneurs.

Introduction

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

Activities

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

(A) Foreign Trade

This Division till February, 1992 largely undertook canalised import of carbon steel melting scrap, stainless steel, melting scrap, HBI/Sponge Iron, rerollable scrap, ships for breaking etc. for the secondary steel sector. After decanalisation, it arranges imports of scrap as per the needs of actual users.

(B) Domestic Trade

This Division is responsible for disposal of ferrous scrap from SAIL steel plants/RINL as well as disposal of scrap, surplus stores, etc. from other public sector enterprises and Govt. Departments.

The Company also has a Management Services Division which provides the operational divisions with regular feed back on market developments.

Foreign Trade Activities

MSTC has been dealing with import of only one product, i.e., Carbon Steel Melting Scrap (CSMS) for the last few years. This business is dependent on fluctuations in the fortunes of electric arc furnace and induction furnace sectors. Key determining factors are domestic and international prices of scrap, freight market, foreign exchange rate and domestic prices of finished products. The year 1995-96 started with an upward trend in international price of scrap at around US \$ 202 per tonne as against only around US \$ 160 a year earlier and this high level continued unabated and even went upto a level of US \$ 205 per tonne by end of August/beginning of Sept.'95. Taking into account domestic steel prices, prices prevailing during this period were not at all viable for the secondary steel sector. Over 50% of arc furnace units have been already closed. As a result of high prices of imported scrap and other inputs, total imports in the country were 1.4 million tonnes only during 1994-95 as against 2.5 million tonnes in 1992-93. During the current year 1995-96, shredded scrap imports have been around 1,68,000 tonnes against total imports of around 5,00,000 tonnes in the country. MSTC continues to be a premier importer of scrap.

There have been two significant developments recently - firstly, fluctuation in the Dollar-Rupee exchange rate and secondly, a sudden fall in the international prices of scrap with freight market going down and some major importing countries staying out of the market due to internal problems. However, landed cost of scrap has remained unchanged due to adverse Rupee-US Dollar rate. Imports of scrap have, therefore, been lower this year as compared to previous year.

MSTC is accordingly trying to widen the product range by including other items

required by secondary steel sector such as pig iron, billets, H R Coils, Metallurgical Coke etc. MSTC feels that it can play a useful role in meeting the requirements of this sector on a cost-effective basis, as it has been doing for the scrap user units. Although a number of organisations are already active in this field, MSTC's past experience will offset disadvantage of late entry. It has in fact already imported a trial consignment of HR Coils. Similarly, it has placed an order for Met Coke imports. This will compensate for the lower business in the scrap sector.

Domestic Sector

As against a sale of Rs.240.77 crores in 1993-94 and Rs.288.39 crores in 1994-95, MSTC achieved a volume of sales of Rs.399.67 crores in 1995-96. Domestic trade performance has, thus, again shown significant improvement during the current year over the last year.

Organisation Structure

The Company's registered and corporate office is located at Calcutta and it has four Regional offices at Calcutta, Delhi, Bangalore and Bombay. Besides, the Company has opened branch offices at Madras, Vizag, Bhopal, Rourkela and Bhavnagar.

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

The Company has formulated a corporate plan which has been approved by the Govt. While the Company will continue to give primary

emphasis to its trading activities in view of its longstanding experience and expertise in trade of scrap the Company has embarked upon diversification into related areas, through stakes/joint ventures in fields of iron & steel production, ship-breaking, manufacture of marine container castings, manufacture of ductile iron spun pipes, exports, financial services, information service, etc.

MoU with Government

During the year 1994-95 also, following the excellent MOU rating in 1992-93 & 1993-94 the Company has been awarded an MOU score which is equivalent to an excellent rating and for 1995-96 also composite score submitted to DPE is equivalent to an excellent rating.

Physical and Financial Performance

The physical and financial performance for the years 1993-94, 1994-95 and 1995-96 are given below :

	1993-94	1994-95	1995-96 (Prov.)
I. Financial Results. (Rs. in crores)			
(a) Turnover	157.12	188.50	151.42
(b) Operating Profit (before interest, depreciation and other provision)	8.65	9.69	3.90
(c) Interest and depreciation	2.13	0.64	1.19
(d) Profit before tax	8.16	8.52	3.08
II. Physical Performance			
(a) Foreign Trade			
Carbon Steel Melting	307	278	122.40
Scrap ('000 MT)			
(b) Domestic Trade			
Despatches of Ferrous scrap arising from steel plants and sale of ferrous scrap, MISC. items from other PSUs/Govt. Deptt. including auction sales for steel plants (store items) (Rs. in Crores)	240.77	288	399.67

For the year 1994-95 the Company declared a dividend of 30% on the paid-up Capital.

Manpower

Scheduled Castes/Tribes, Ex-Servicemen and

Physically handicapped employees as on 31.3.1996 were as follows :-

Group	Total	SC	ST	Physically Handicapped	Ex-Servicemen	OBC
A	118	12	3	0	1	5
B	53	10	3	2	3	-
C	88	21	3	2	-	1
D	26	11	1	-	-	-
Total	285	54	10	4	4	6

FERRO SCRAP NIGAM LIMITED

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. The MSTC Ltd. holds 60% of the equity shares and the remaining 40% are held by M/S Harsco Inc. of USA. The Company is thus a subsidiary of MSTC.

Activities and Objectives

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

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

Physical and Financial Performance

Physical Performance

The production performance of FSNL for the last two years and the projected performance for the year 1995-96 is given below:-

ITEM	1993-94	1994-95	1995-96 (Prov)
Recovery of scrap (Lakh Metric Tonnes)	11.54	11.88	12.47
Market Value of production (Rs. in crores)	508.00	522.7	623.56

Financial Performance

ITEM	1993-94	1994-95	1995-96 (Prov)
1. Total Turnover i.e Service charges realised including misc. income etc.	6140.00	6225.00	6354.00
2. Gross Margin before interest and depreciation	1233.00	1756.85	2070.00
3. Interest and Depreciation	679.00	670.54	835.00
4. Profit before tax	554.00	1086.00	1414.00

SALES REALISATION

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

	(Amount in Rs.)		
	1993-94	1994-95	1995-96 (Prov)
	478.00	498.00	501.00

The Employment statistics of the Company, including SC/ST as on 31/3/96 are given below:-

	EXECUTIVES	NON-EXECUTIVES	TOTAL
ROURKELA UNIT	21	213	234
BHILAI UNIT	21	312	333
BURNPUR UNIT	13	132	145
BOKARO UNIT	18	206	224
VIZAG UNIT	17	219	236
DURGAPUR UNIT	13	124	137
CORPORATE OFFICE	34	42	76
TOTAL	137	1248	1358

A. General :-

B. Scheduled Castes/Tribes, Ex-servicemen and Physically Handicapped Persons

various options for import of "state of art technology" with the help of their foreign collaborator so that recovery of scrap arisings at steel plants can be maximised and the quality of scrap recovered enhanced.

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

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

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

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

(d) To set up hydraulic balling press for processing sheet trimmings,

GROUP	NO. OF EMPLOYEES	S.C.	S.T.	EX-SERVICEMEN	PHYSICALLY HANDICAPPED
A	137	10	4	3	-
B	249	6	-	58	3
C	995	193	148	-	-
D	4	4	-	61	3
Total	1385	213	152		

turnings and borings.

Future Programmes

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

In order to meet the increased requirements of the SAIL plants, FSNL is considering

METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED (MECON)

1.0 Background

1.1 Metallurgical & Engineering Consultants (India) Ltd., (MECON), was set up mainly with the objective of rendering consultancy, detailed engineering and technical services to the Indian Iron and Steel Industry. Over the last three decades, MECON has been intimately associated with various facets of development of the country's fast changing industry. The organisation has played a significant role in the development and expansion of the country's Iron and Steel and other metallurgical industries. Today, it has emerged as one of the largest design, engineering and consultancy organisation in the world, handling numerous prestigious projects both at home and abroad.

1.2 Beginning with ferrous metallurgy, the company has subsequently diversified its activities into various fields, such as coal carbonisation, chemicals, refractories, petrochemicals, power plants, mining, agglomeration, non-ferrous metals, high voltage power transmission, general engineering, cement, defence projects, environmental engineering, ocean engineering, long distance gas pipe lines and computer software development. Besides design and engineering, MECON has developed expertise in the field of equipment and systems design and supply for rolling mills, coke ovens, coke dry cooling plants, chemical plants, blast furnaces, BOF gas cleaning plants and continuous casting plants. Moreover, it has developed skill in the fields of project and construction management, procurement and contract engineering and inspection.

1.3 Power, environmental engineering, ocean engineering, chemicals and petrochemicals, long distance gas pipelines and computer software development are its thrust areas for diversification. Long association with integrated steel plants has enabled MECON to build a strong technological base. The organisation has acquired assimilated and innovated

technologies to meet the growing needs of the clients and environment.

1.4 In the iron and steel sector, besides undertaking services for the integrated steel plants, MECON has been rendering its services for setting up of pig iron plants, midi and mini steel plants, rolling mills and processing lines, etc.

1.5 MECON has laid stress on computer applications for its various project works. It undertakes implementation of industrial process control and automation projects.

1.6 Setting standards second to none, MECON is already an ISO 9001 company and is geared to meet the stringent global standards. Today, against the backdrop of the liberalized national economic framework the organisation is poised to take up greater challenges in Metallurgical and other allied industries.

1.7 MECON has formed two Joint Venture Companies - Elpro Engineering & Systems Ltd. and Silverline MECON Ltd. - and has participated in the equity of Kudremukh Iron & Steel Co. Ltd. (KISCO).

2.0 Overseas Operations

2.1 In the prevailing liberalized economic environment 'globalisation' has continued to be the thrust of MECON's business activities. MECON's Dusseldorf office in Germany, which started functioning in July, 1993, has now been registered with the Statutory Authorities. MECON's Middle East office in Dubai is continuing to yield tangible results.

2.2 For promoting MECON's overseas business prospects, agreements have been signed with a number of reputed International and Indian firms.

2.3 MECON also received an assignment from the United Gulf Group Co., Saudi Arabia for providing project execution assistance including market survey for setting up a 150,000 t/yr

long product rolling mills in Saudi Arabia. An order for design, supply erection and commissioning of chemical cleaning cum-recoiling line in Essar Gujarat's CRM complex in Indonesia has also been received.

3.0 Performance of MECON in the recent past and current year is as follows :

S. No.	Performance Criteria	Financial Year (Actual) 1993-94	(Rupees in million)	
			(Actual) 1994-95	1995-96 (Prov.)
1	Gross Margin	115.48	125.00	112.00
2	Net profit as % of Capital Employed	16.91	17.36	12.5
3	Turn-over (Net Sales)	1386.56	2067.00	2380.00

3.1 Financial Aspects

The authorised capital of the company is Rs.4.00 crore. The issued, subscribed and fully paid-up equity share capital is Rs.2.02 crore.

The company's turnover during the year 1995-96 has been Rs. 238 crore as compared to Rs.206.7 crore during 1994-95. The profit before tax is Rs.9.20 crore. The company has paid 40% dividend on its paid up capital to the Government, amounting to Rs.80.61 lakhs. This is the 16th consecutive year that MECON has paid dividend to the Government of India. The MoU score for the year 1994-95 has been 1.3, rated as "EXCELLENT".

4.0 Technological Development

4.1 During the process of execution of various project assignments, the company has laid greater emphasis on incorporating various state-of-the-art technologies in its engineered/designed plant/equipment/systems. Some of these are listed below :

- Low head caster in continuous casting plant

- Mini blast furnace for Special Grade iron making

- Aluminium automotive Wheel Casting

- Hot Aluminium Billet Casting

- Computer Controlled Hydraulic AGC

- High pressure liquor Ammonia Aspiration in Coke Oven Batteries

- Laser guided positioning device for Coke Oven operating machines

- Development of In-house Design for 6-Hi Cold Rolling Mills

- Under burden probes in Blast Furnace

- Computerised Production Planning & Control.

Computerised Scheduling and Trailing Systems (level-III), have been implemented for SMS-I & II at Bokaro Steel Plant.

5.0 Present Major Assignments

- Detailed Engineering & Consultancy Services for Integrated Iron & Steel Complex, Jindal Vijayanagar Steel Ltd.

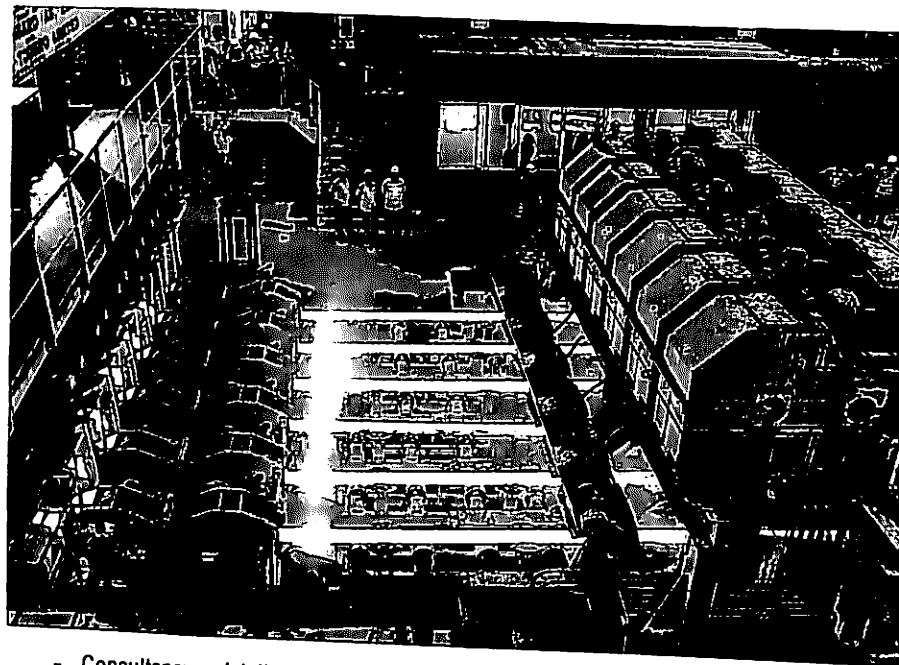
- Consultancy and Detailed Engineering for Oxygen Plant- II, Bhilai Steel Plant.

- Design Engineering, Supply, Erections and Commissioning of Electrolytic Cleaning Line, Vishnupriya Industries.

- Design, Supply, Erection and Commissioning of Chemical Cleaning-cum-recoiling line in CRM Complex in Indonesia. Essar Gujarat.

- Engineering services for Panipat Refinery Project, EIL.

- Detailed Engineering Services for Copper Project, INDOGULF Fertiliser & Chemical Corporation Ltd.



- Consultancy, detailed engineering services for modernisation of Bokaro Steel Plant.

- Consultancy, detailed engineering services for the Pig Iron Project being set up by KIOCL.

- Design, Supply, erection and commissioning of 3 nos. of Cold Rolling Mills for India Government Mint.

- Design, Supply, supervision of erection and commissioning of 2-High Skinpass Mill for Surana Strips Ltd., Hyderabad.

- Design, Supply, erection and commissioning of Continuous Casting Plant-II for Rourkela Steel Plant.

- Design, Supply, dismantling of existing furnace, erection and commissioning of Reheating Furnace No. 2, 3 and 4 of Hot Strip Mill for Bokaro Steel Plant.

5.1 Other important assignments being handled by MECON are:

- 2X210 MW lignite-based power

plant of Neyveli Lignite Corporation.

- 1,50,000 tpy Ferro Chrome Plant of Jindal Ferro Alloys Ltd.

- 2nd Phase of Mideast Integrated Steel Ltd.

- Aluminium Foil Plant of Mardia Steels Ltd., Ahmedabad.

- 50,000 tpy aluminium rolled product plant of Mukand Ltd.

- Aluminium Strip Casting Plant of NALCO

- 1 x 550m3 blast furnace of Century Textiles Ltd.

6.0 Research & Development

6.1 The thrust on research and development activities has been maintained with emphasis on taking the R&D achievements out of the laboratories and drawing boards to the end-users. Successful field installations have enthused the R&D group and led to significant progress. The achievements during the year are as follows :

- Successful installation and commissioning of a MECON - designed oil mist sensor at BALCO reversing cold rolling mill, Korba. The device automatically detects failure of oil mist lubrication system in rolling mills and prevents damage that would otherwise have occurred in such cases.

- A commercial order from VSP for an optical device developed by MECON for accurate setting of roller guides in hot rolling mills. VSP has also sought MECON's R&D assistance for a few other optical devices.

- An expert system developed by MECON for diagnosis of defects in continuous casting of blooms supplied to VSP.

- Integrated design and drafting software developed by MECON for low-tension switch board design supplied to M/s GEC Alsthom, Crompton Greaves and TRF Ltd.

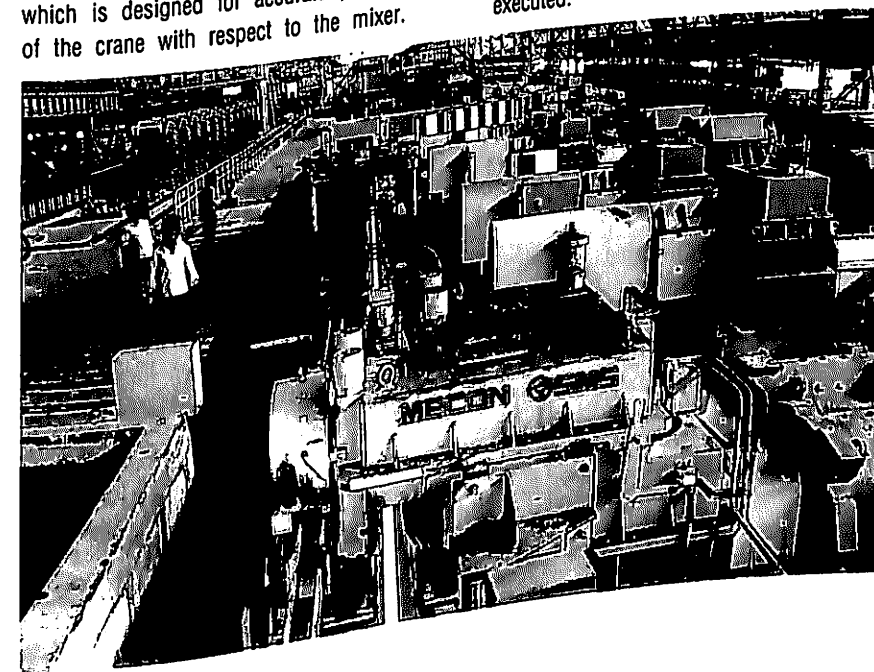
- A laser-based alignment system installed in the converter shop of DSP, which is designed for accurate positioning of the crane with respect to the mixer.

- The Department of Scientific and Industrial Research, Government of India has approved funding of a substantial amount for projects related to development of a 6-Hi cold rolling and development of blast furnace underburden probe.

- MECON has signed a MOU with Research and Development Centre for Iron&Steel, SAIL. This will help in commercialisation of upcoming technologies and efforts in indigenisation so as to become less dependent on foreign technologies.

7.0 Implementation of Total Quality Management

7.1 MECON has been the first engineering consultancy organisation in the country to have achieved the prestigious ISO-9001 certification of Design & Engineering, Consultancy, Contracting and Supply, Inspection and Project Management Services in industrial sectors like Iron & Steel, Non-Ferrous, Power, Chemical, Refractories, Ocean Engineering and Environmental Engineering as also for the engineering projects being executed.



8.0 Industrial Relations and Workers' Participation

8.1 The company is maintaining cordial industrial relations, owing much to the positive consultative approach shown by the MECON Executive Association and MECON Employees Union. Joint consultative fora continue to function.

9.0 Cost Reduction Measures

9.1 The control over expenditure incurred by Head Office, Regional Engineering Offices and Overseas and Site Offices is being exercised through ceiling in budget allocation for each individual account head.

10.0 Social Welfare

10.1 In addition to the welfare amenities provided to its employees, MECON has continued providing appropriate support to the community development work in and around its Headquarters, Ranchi. The company has undertaken a number of programmes for the welfare of the community which include literacy drive, adult education, health & family planning, medical camps, afforestation, construction of roads, digging of wells/Handpumps, construction of check dams, etc. MECON is running 28 adult education centres, 4 sewing & stitching centres, one chalk manufacturing centre and 4 homeopathic dispensaries. The company is also running a vocational training centre. MECON Community Development Committee has adopted two Villages-Jayarappa and Rai, for developing them as model villages in association with and financial assistance from the State Government.

11.0 Manpower Position

11.1 The total number of employees in the company as on 31st March, 1996 is 3600. Out of this 341 and 372 belong to the SC and ST employees respectively.

12.0 Future Plan

12.1 While sustaining its growth in steel and other allied fields, the Company is working towards fulfilling its plan to direct its efforts towards creating additional revenues from market segments belonging to priority sectors, such as Power, Pollution Control Systems, Gas Pipelines, Petrochemicals, Information Technology and Infrastructural Sector like Ports, Highway etc.



12.2 During the year, number of steps have been taken in MECON so as to make it more responsive to customers' needs and to put it on the path of continuous incremental improvement.

13.0 Measures for Improvement

13.1 To ensure its continued qualitative as well as quantitative growth and for maintaining its leading role in Engineering & Consultancy in metallurgical and other allied industries in the country and abroad, following steps have been taken :

- Signing of MOU with the Ministry of Steel for the fourth successive year towards bringing in objectiveness in target setting and continuing with enhanced autonomy of operation.

- Independent study by the third party

to evaluate customers/prospective customers satisfaction on MECON's services.

- Organising Vendor's Meet to get feedback from the clients about the level of their satisfaction relating to the services rendered by MECON.

- Globalisation through presence of MECON in the international markets in Europe, Middle-East and Africa.

- MOUs with R&D institutions, manufacturing organisations, project execution agencies and foreign consultants.

- Reorientation of the company's strategy in view of the significant changes taking place in the economic policies of the Government.

- Management by policy evolution through participation.

SPONGE IRON INDIA LIMITED (SIIL)

1.0 Introduction

1.1 The Demonstration Sponge Iron Plant of the Company with a capacity of 30,000 tpa was initially set up with UNDP/UNIDO assistance to establish the techno-economic feasibility of producing sponge iron (a part substitute for ferrous scrap used by steel-melting electric arc furnaces) from lump iron ore and 100% non-coking coal. The unit, based on non coking coal from Singareni Collieries Company Limited (SCCL) and iron ores from various regions in Andhra Pradesh and neighbouring States of Madhya Pradesh and Karnataka, went into regular operations in November, 1980. Being a Demonstration plant it is 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 in the Sponge Iron Plant based on Rotary Kiln Process to suit the local raw materials and operating conditions as a result of which it has not only established the viability of the technology but has also paved way for the development of Sponge Iron Industry in the Country.

1.2 Taking note of the successful operations of the Demonstration Plant, Government of India approved doubling 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.

1.3 The Company has also successfully designed and built a plant for briquetting of sponge iron fines (below 5 mm size) which were earlier not usable by electric arc furnaces and were being discarded.

The Briquetting Plant was commissioned during October, 1987 and is operating to capacity. The high density sponge iron briquettes have received wide acceptance in the market; several users prefer briquettes to lump sponge iron.

1.4 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 and thus effecting saving in costs.

1.5 A specially designed Submerged Arc Furnace Project based on Open slag bath operation of 45,000 tpa capacity has been set up by SIIL for smelting pre-reduced sponge iron into high quality (low phos) Pig Iron. This would reduce the power consumption in smelting to about 1000 kwh per ton of hot-metal as compared to 2700 kwh in the case of Pig Iron production by conventional electrical smelting directly from iron ore. This technology route would open a new concept of producing high quality pig iron, once the production is stabilised on sustainable basis. The trial runs of the plant were carried out to attain the product quality. However, further operations had to be suspended due to non-availability of adequate power and uneconomical prevailing prices in the market.

2.0 Finance

The authorised share capital of the Company stood at Rs.40.00 crores on 31.3.1996; paid-up capital was Rs.29.55 crores. Shares valuing Rs.28.72 crores are held by Government of India, the balance of Rs.0.83 crore being shares of Government of Andhra Pradesh. An amount of Rs.1.90 crores is in

Share Deposit Account as on 31.3.1996, against which shares are to be issued to Govt. of India in 1996-97.

3.0 Production

3.1 The Production and Financial Performance of the Company during the last two years, together with provisional figures for 1995-96, is furnished in the table below:

	1993-94	1994-95	1995-96 (Provisional)
Production			55,605
- Sponge Iron (t)	48,500	50,375	117
- Power Generation (Lakh Kwh)	42	94	93
- Capacity utilisation (%)	81	84	
Sales (t)			52,573
- Sponge Iron	43,898	50,858	2265
Sales Turnover (Rs. in lakhs)	1924	2086	
Generation of Internal		55	276
Resources (Rs. in lakhs)	(-)6		21
Net Profit (Rs. in lakhs)	(-)245	(-)198	

3.2 As against the target of 52,000 tonnes of Sponge Iron production upto March, 1996, a production of 55,605 tonnes was achieved representing 107% of target. The quality of coal supplied by Singareni Collieries has slightly improved resulting in lower consumption of coal in comparison to the earlier years.

4.0 Sales and Profitability

Against a target of 52,000 tonnes fixed upto 31st March, 1996, actual despatches were 52,573 tonnes representing 101% achievement of the target. Operations upto the end of 31st March, 1996 have resulted in an estimated net profit of Rs.29.36 lakhs. The Profit is mainly attributable to lower cost of

production due to higher capacity utilisation of both the plants and improvement in generation of Power through Captive Power Plant.

5.0 Cost Reduction

i) During the financial year 1995-96, efforts have been made to receive only sized ore from Bailadilla which has reduced the specific consumption of iron ore.

ii) Also, high grade coal procured from private sources and also from M/s. Singareni Collieries Company Limited has reduced the specific consumption of coal.

iii) During this financial year production has also been increased to 55,605 MT the highest ever.

The above improvements have resulted in the reduction of cost of

production.

6.0 Efforts made towards Indigenisation

The first direct reduction plant was commissioned in 1980 with the assistance of Lurgi/Germany. In this plant, almost all the equipments were imported. In the 2nd Plant, which came into operation in 1985, 90 percent of the equipments were indigenised.

During the course of operation, not only mechanical and electrical equipment but also instrumentation equipment were indigenised by providing Data Acquisition System.

Further, the imported weigh feeders were substituted with indigenous components.

Many of the equipment and the spares also were indigenised.

The above process of indigenisation has resulted in considerable savings in the imports.

7.0 Manpower

The total number of employees of the Company as on 31.03.1996 is furnished below :

Sl. Groups No.	Total No. of Employees	SC	ST	Ex-service Men	PHC	Women
1. Group A	108	14	1	-	-	-
2. Group B	92	15	5	-	1	5
3. Group C	237	38	22	1	3	14
4. Group D (Excluding Sweepers)	157	27	27	-	5	11
5. Group D1	9	8	1	-	-	7
TOTAL	603	102	56	1	9	37

8.0 Employees' Participation In Management

Pursuant to the directives of Government of India, a scheme for Employees' Participation in Management has been implemented in the Company. Accordingly, one Plant Level Committee, Works Committee, two Shop Level Committees, Canteen Management Committee, Safety Committee, Communal Harmony Committee and Games & Sports Committee have been constituted with representatives of the Management

and the Employees and regular meetings are held to discuss various problems and finding solutions internally. Members of the other Registered Trade Unions were also included in various Committees. As directed by Government of India and in order to increase induction of women at various levels in the Management, the women employees are also included in some of the statutory and non-statutory committees.

Sports and Games

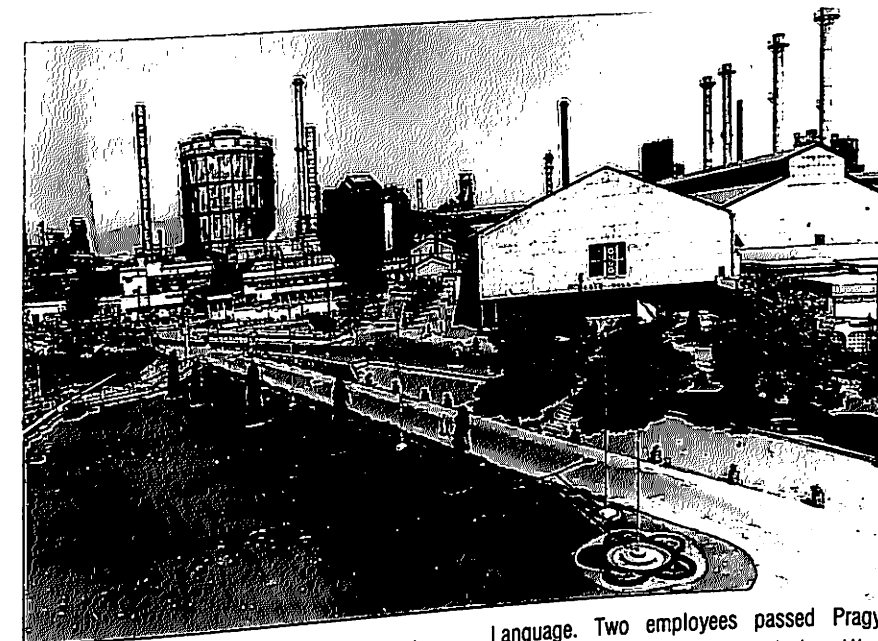
During the year, Annual Sports and

Games were conducted for all employees. On 26.1.1996 prizes were distributed to the winners of various games.

Safety Day

As per the guidelines received from Govt. of Andhra Pradesh, Safety Day was observed on 4.3.1996. In this connection essay writing, elocution competition, Safety slogans and march-past were conducted at the plant.

The various Committees are functioning



systematically and suggestions made by the members are given due consideration.

9.0 Implementation of Hindi

From April, 1995 to March, 1996, 166 documents were released in bilingual form in accordance with Section 3(3) of Official Languages Act, 1963.

Cash prizes to successful employees were declared under Noting and Drafting Scheme. Hindi Day was celebrated and prizes were awarded to winners in various competitions. 15 employees were nominated to attend Hindi Workshop conducted by the Central Hindi Training Subinstitute, Department of Official Language, Ministry of Home Affairs at Hyderabad. During the year compliance of section 3(3) was ensured. Three employees were nominated to attend Pragya Hindi training course for acquiring working knowledge of Hindi. Deputy Director (Implementation), Regional Implementation Office, Bangalore visited the Regd. Office and Site Office for inspecting the progressive use of Hindi and appreciated the efforts being made for promoting the use of the Official

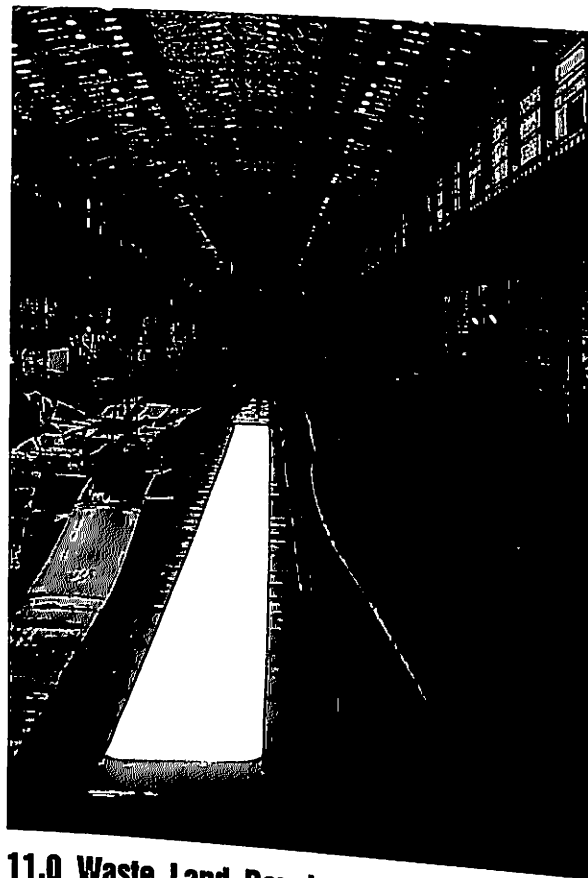
Language. Two employees passed Pragya Hindi examination conducted by Hindi Teaching Scheme, Hyderabad, for acquiring working knowledge of Hindi. Hindi typewriting week, Hindi Stenography week and Hindi working day was observed at Regd. Office as a part of Hindi implementation.

10.0 Anti-Pollution Measures

i) The entire material handling system in the plant has been provided with dedusting system. The waste gases coming out of the kilns are passed through waste heat recovery boilers and the sensible heat is being recovered for electric power generation. The gases are also being scrubbed in wet scrubber for eliminating the dust and other gases.

ii) Regular cleaning of all the equipment and surrounding areas is being carried out which helps in reducing the pollution.

iii) Every month the samples of stack emission and water outlets are checked for close monitoring of the pollution levels. This system helps in maintaining the pollution levels within the specified limits.



11.0 Waste Land Development

Consistent with the national policy of stepping up the rate of afforestation in the country to preserve ecological balance, the company has undertaken, on a continuing basis, planting of trees in its factory premises and township in a phased manner. During the last two years more than 10,000 plants

were planted in ten acres of land per year.

12.0 Engineering and Consultancy

12.1 Engineering

The Company has done the entire engineering work for its Expansion Unit, Briquetting Plant and also the Continuous Charging System for feeding sponge iron into Arc Furnace, with in-house expertise. The Company has also completed the engineering for Waste Heat Recovery System from the off gases from the kiln which otherwise were getting wasted. With this system the Company is currently generating about 2 MW of power from the waste

gases.

12.2 Consultancy Services

The Engineering and Projects Division of the Company after commissioning the sponge iron plants for 5 parties in India is currently completing the assignment of conversion of 2 cement kilns in Peru for production of sponge iron.

HINDUSTAN STEEL WORKS CONSTRUCTION LIMITED (HSCL)

1.0 Background

Hindustan Steel Works Construction Limited (HSCL) was incorporated in June, 1964 under the Ministry of Steel & Heavy Industries (Govt. of India) with the primary objective of creation in public sector of an organisation capable of undertaking complete construction of modern integrated steel plants from the stage of site investigation to the stage of commissioning of the plant. Pooling the available expertise and knowhow in the various disciplines in construction industry, the company today has a wide range of specialised works in steel sector, power plants, dam construction, bridges, coal handling plants, underground communication and transport system, industrial and township complexes etc., involving high degree of planning, co-ordination and sophisticated construction techniques. Since inception the company has turned out over Rs.4100 crores worth of works in Steel and other sectors in India. In the process the company has achieved many important milestones, provided a strong buffer between private contractors and steel plants and proved its worth as a readily available agency to take up any urgent jobs of steel plants. The

Company is also associated with modernisation works of Durgapur Steel Plant in consortia with Foreign bidders for Global Packages. The Company has executed indigenous packages of Bolani Iron Ore Complex and also revamping works of Sinter Plant at Durgapur.

Being in the construction industry, the nature and level of operation of the Company in the construction field depend upon the volume of work awarded by the clients, who are generally Central/State Government departments or Public Sector Undertakings, whose construction plans and programmes are, in turn, dependent on the overall development of the country.

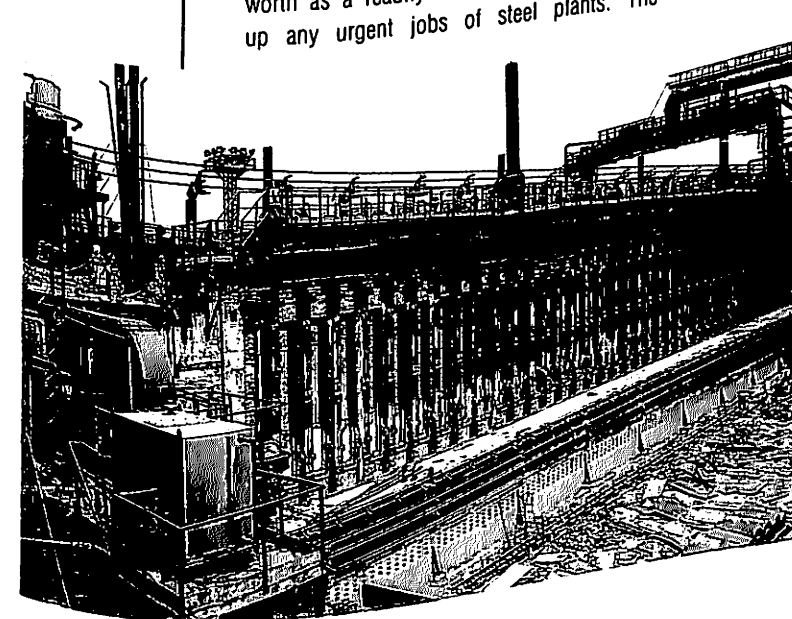
2.0 Projection of Activities and Orders

The Company is in constant touch with various steel plant authorities for securing more jobs.

Some of the important activities/programmes that are covered in the outlay of the various Steel Plants are projects such as modernisation & additional facilities of Merchant Mills augmentation of Captive Power

Plants, upgradation of Blast Furnaces, rebuilding of Coke Oven Batteries, Raw Material Handling, New Sinter Plant, Pipe Plant etc. where HSCL is expected to have a reasonable share. As a part of modernisation scheme of Bokaro Steel Plant, the Company has already obtained jobs of civil and structural works for construction of continuous casting unit. The company has also got diversion channel work from Rourkela Steel Plant.

In addition to the projects



as indicated above and MR/Maintenance jobs in steel sector the company is also planning diversification of the activities in the coal sector on Build own operate basis and in the areas of Pipelines, Petro Chemicals, Highways, Airports, Ports Development, Real Estate etc.

In the above backdrop the expected level of order booking during 1996-97, the terminal year of 8th Five Year Plan is as under:-

(Rs./Crores)	
1996-97	
Expected Order Booking	425

3.0 Proposed Plan Outlay

The Company has a fleet of construction equipment which have been developed in accordance with the requirements and pattern of working in the steel plants. With the need for more and more involvement of company's activities in the steel sector and also in view of prospect of a reasonable share of HSCL in the modernisation/revamping works of various steel plants as indicated above and also with the expectation of works in other sectors like roads, mining works, power plants, oil etc., it has become imperative to procure a few modern, sophisticated and dependable equipments.

4.0 Capital and Loans

The authorised and paid-up Share Capital as on 31st March, 1996 was Rs.20 crores. The total amount of loans from

Government outstanding as at the end of March, 1996 was Rs.268.77 crores (Plan loan Rs.85.10 crores and Non-Plan loan Rs.183.67 crores).

5.0 Working Results

The company achieved a turnover of Rs.390.42 crores during the year 1994-95. The loss suffered for works in India worked out to Rs.48.93 crores and that for Libya Rs.46.92 crores making a total loss of Rs.95.85 crores for the year. The said loss included interest on Government loan for Rs.92.41 crores (for Indian operation Rs.46.12 crores and Libya operation Rs.46.29 crores). Thus, loss for works in India before interest was Rs.2.81 crores. Target of turnover set for the year 1995-96 was Rs.411 crores which has been achieved.

6.0 Manpower Position

The manpower position of the Company as on 31.3.1996 alongwith the statistics of SC/ST, Female, Ex-Servicemen and Physically Handicapped employees is given below :-

Group Strength	Total employees	SC/ST	Female	Ex-Servicemen	Physically Handicapped
A	1578	113	12	7	4
B	572	80	17	7	7
C	11516	3392	907	52	24
D	918	208	24	120	10
TOTAL	14584	3793	960	186	45

As compared to the total strength of 16,230 at the end of March, 1995, there was a reduction of about 1,646 employees during 1995-96 which includes separation due to retirement, resignation, death, termination and voluntary retirement, etc.

The Company has been able to separate 7,352 employees through voluntary retirement scheme as on 31.3.1996.

7.0 Contract Labour Position

The jobs for which outside agencies are employed are mostly in the Civil Engineering area. In other discipline they have been engaged to supplement the work being done by departmental workers of HSCL. The engagement of such workers has been necessary to execute the various jobs on schedule fixed by the clients. The strength of PRWs/ Contractors' workers in the company is around 10,236 as on 31.3.1996.

8.0 Safety Measures

HSCL has formulated its own safety code and for its implementation, the following steps are taken:

a) Safety Organisations are functioning in all the major units with safety engineer reporting to respective head of units.

b) Contractors/PRWs engaged at various HSCL sites are apprised of the safety measures and implementation of safety measures are constantly monitored. Employees are educated, advised and instructed to use safety appliances which are invariably made available by the company for execution of hazardous jobs. Periodic seminars are also conducted to acquaint the personnel with latest safety measures and also to review the safety requirement of various work sites in HSCL.

9.0 Worker Participation in Management

Sl. No.	Name of the Committee/Council	Details
1.	Joint Council/Shop Council	Joint Council 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 comprises 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 in 1981, there have been 31 meetings till 31.10.1995.

10.0 Welfare Plan for SC/ST

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

b) Assistance is given for supply of drinking water.

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

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

11.0 Welfare Scheme

Employees Voluntary Welfare Scheme :

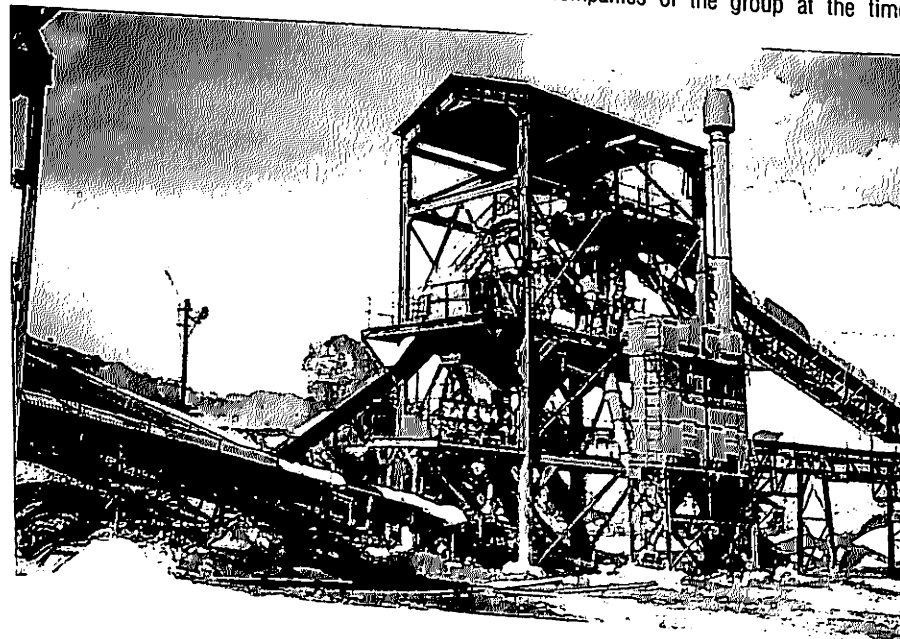
A Central Welfare Scheme for HSCL employees was introduced w.e.f. 1.4.1987. It covers all sections of employees in the Company. The scheme is intended to provide immediate financial assistance to the dependents of employees in the event of death for any reason anywhere, while in service in the company, by a system of voluntary contribution by employees at the rate of Rs. 10/- per month.

1.0 Introduction

1.1 The Undertakings of the erstwhile Bird & Company Limited were taken over by the Govt. under the Bird & Company Limited (Acquisition and transfer of undertakings and other properties) Act, 1980. Consequently shares held by Bird & Company Limited in 21 companies specified in Schedule I to the Act stood transferred to the President of India.

1.2 Based on the shareholding pattern, the following 8 out of 21 companies which were under the control of the Bird & Company Limited came under the Administrative Control of the Ministry of Steel.

- a) Eastern Investments Limited (EIL)
- b) The Orissa Minerals Development Company Limited (OMDCL)
- c) The Bisra Stone Lime Company Limited (BSLCL)
- d) The Karanpura Development Company Limited (KDCL)
- e) Scott & Saxby Limited (SSL)



f) Kumardhubi Fireclay & Silica Works Limited (KFSW)

g) Burrakar Coal Company Limited (Burrakar)

h) Borrea Coal Company Limited (Borrea)

1.3 Of the above, 5 companies viz., OMDCL, BSLCL, KDCL, SSL and KFSW were all sick operational companies sustaining huge cash losses year after year. The Burrakar Coal Company Ltd. and Borrea Coal Company Limited are non-operational.

1.4 The KFSW was engaged in manufacturing and marketing of refractory materials. At present, BIFR has decided to wind up the company.

EIL is an investment company formed by amalgamation of other investment companies of Bird Group.

B. Performance of Operational Companies of Bird Group (Excluding KFSW)

The basic problems of most of the above companies of the group at the time

of take over were:

- i) excessive manpower and heavy burden of fixed expenses,
- ii) huge accumulated losses,
- iii) erosion of working capital,
- iv) heavy burden of outstanding liabilities,
- v) inadequate corporate plan, and
- vi) inadequate market demand.

2.1 During the past few years problems relating to excessive manpower, erosion of working capital etc. have been tackled effectively. Action has also been taken to improve the marketability of products through better product mix and enrichment of quality.

2.2 The overall performance relating to sales turnover of 4 operating companies as a whole during the past few years as well as the current year is indicated in the following table :

	Rs. in lakhs					
	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Sales						
Turnover	2066	2359	3312	3602	3909	4730

It may be seen that the sales turn over has gone up over the years registering an average growth of more than 20% per year.

2.3 The following table indicates the financial performance of the companies as a whole in terms of margin before charging interest

	Rs. in lakhs					
	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Gross						
Margin before	(-)593	(-)597	(-)171	(+)13	(+)276	536
depreciation						
and interest						
on Govt. loans						



on Govt. loans and depreciations.

Over the years Gross margin before depreciation and interest on Govt. loans has steadily improved. The overall cash loss i.e. negative gross margin before charging interest on Govt. loans and depreciation has now been turned into overall cash profit before interest on Govt. loans.

2.4 Due to improved performance, all these companies have stopped taking budgetary support (plan loan) with effect from 1995-96. Excepting BSLC all other companies have also stopped taking non-plan budgetary support with effect from 1994-95.

3.0 Performance of Companies
3.1 The Orissa Minerals Development Company Limited (OMDCL)

3.2 OMDCL is one of the oldest iron ore and manganese ore producing companies. It was incorporated in the year 1918 with a subscribed capital of Rs.60 lakhs. The company has mining leases over 32.57 square km in Barbil, Keonjhar District, Orissa, for iron ore and manganese ore.

3.3 During the year 1995-96 there was an overall improvement in the performance of the company since the company took a number of positive steps to increase its profitability. The company made a net profit of Rs.90.44 lakhs after providing for depreciation and interest on Govt. loan.

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

	Quantity in lakh tonnes		
	Rs. in lakhs		
	1993-94	1994-95	1995-96 (Provisional)
a) Production	4.48	5.32	7.72
b) Turnover	1542.00	2096.00	2744.00
c) Margin before interest on govt. loan and depreciation	71.00	389.00	553.88
d) Net Profit/loss	(-) 153.00	31.00	90.44

In order to take advantage of the growing market the company has taken steps to strengthen its production facilities. Steps have also been taken to improve quality of the products by augmenting the crushing and screening facilities.

3.4 The company entered into a collaboration agreement with a private sector company for setting up of a two million tonnes capacity crushing and screening plant in the joint sector. The entire funds for setting up the project would be raised by the joint venture company outside the plan expenditure of the company. It is expected that the joint venture company will commence production from the beginning of the next year.

With effect from 1994-95 the company

has started repaying the government loans.

4.0 The Bisra Stone Lime Company Limited (BSLCL)

4.1 BSLCL is one of the largest producers of limestone and dolomite in India. The company was incorporated in the year 1910 with a subscribed capital of Rs.50 lakhs. The company has mining leases over 2,771.62 hects., in Birmitrapur, Sundargarh District, Orissa.

4.2 During the year 1995-96, the Company has achieved a near cash breakeven position (before considering interest and depreciation on Govt. loan). The company made all out endeavour to offset the fall in the demand for dolomite by creating new markets for limestone for cement industry and special quality limestone for Durgapur Steel Plant.

4.3 The performance of the company in recent years is as follows :-

	Quantity in lakh tonnes		
	Rs. in lakhs		
	1993-94	1994-95	1995-96 (Provisional)
a) Production	10.23	8.33	8.95
b) Turnover	1644.00	1385.00	1833.00
c) Margin before interest on govt. loans and depreciation.	(-) 47.00	(-)80.00	(-)21.00
d) Net Profit/loss	(-)1147.00	(-)1513.00	(-)1699.00

4.4 The company expects to further improve its performance during the current year. A crushing and screening plant for supply of 6 lakh tonnes of dolomite per annum to Visakhapatnam Steel Plant has been completed and it is running satisfactorily. In addition, a few small crushing and screening units have been installed to augment the production of better quality fluxes.

Based on the recommendation of Metallurgical & Engineering Consultants (India) Ltd. (MECON) who were appointed as Consultant to make a techno-economic study and suggest measures for improving the performance of the company, a number of steps have been taken to improve the production/despatch and consequently the profitability.

5.0 The Karanpura Development Company Limited (KDCL)

5.1 The company was incorporated in July 1920 with a subscribed capital of Rs.20.00 lakhs. The company produces limestone from its mines situated in District Hazaribagh, Bihar. During the first half of the year 1995-96 the company earned a cash profit. However, in pursuance of a notification issued by the Govt. prohibiting of mining limestone through contractors, the activities of the company have been affected, resulting in net loss of Rs.43.00 lakhs.

The company is trying to improve its performance through judicious deployment of departmental employees.

6.0 SCOTT & SAXBY Limited (SSL)

6.1 The company is a wholly owned subsidiary of KDCL, mainly engaged in 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 at its factory and at all the working sites effective from November, 1992. The possibilities of commencement of work is under active consideration of the company.

7.0 Kumardhubi Fireclay and Silica Works Limited (KFSW)

Management of Kumardhubi Fireclay and Silica Works Ltd. (KFSW), an erstwhile Bird Group of Company was taken over by Government of India in 1980. The company is one of the oldest refractory units in India, having been set up in 1915. It is located in Kumardhubi, Dhanbad District of Bihar.

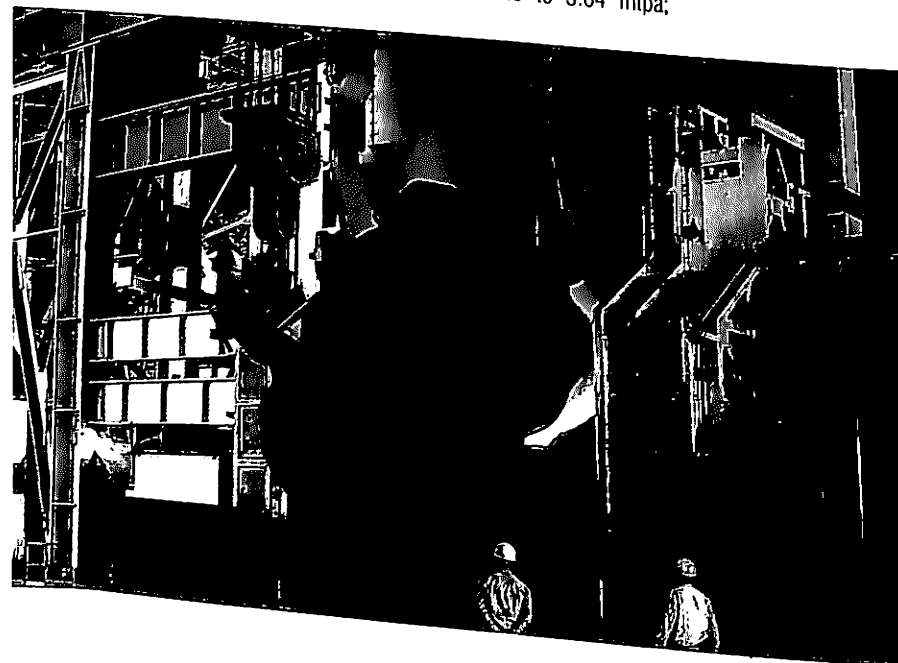
It performed well upto end of 1982 whereafter due to obsolete plant and machinery it started incurring losses. Because of its continued losses a reference was made to Board of Industrial & Financial Reconstruction (BIFR) in 1987 under the provisions of (SICA (S.P.) Act, 1985. BIFR declared it a sick company in 1989 and in 1990 directed Central Government to take steps for revival of this company. Government requested Industrial Reconstruction Bank of India (IRBI) to suggest a revival package for KFSW. While the revival plan of KFSW was under examination, the company's position turned from bad to worse and due to acute shortage of working capital the operations of the company were halted from August, 1992. Meanwhile the Company was referred to BIFR. BIFR in its meeting held on 13th September, 1994 has taken a decision to close down KFSW. BIFR has written to the Registrar, Hon'ble High Court of Calcutta for further necessary action in the matter. Appeal was preferred by workers union against the decision of BIFR in the Appellate Authority for industrial and financial reconstruction. The appeal has since been dismissed.

1.1 Introduction

1.1.1 The Tata Iron & Steel Co. Ltd. (TISCO) was founded over 80 years ago. This steel plant is located at Jamshedpur and has captive collieries at Sijua, Jamadoba and West Bokaro and iron ore mines at Noamundi in Bihar and Joda in Orissa.

1.1.2 The company embarked on a 2 MT expansion programme which was completed in 1958. Subsequently, the first major modernisation programme was undertaken by the company in 1980 when outdated Duplex Process was replaced by a modern LD Shop alongwith Continuous Casting and other allied facilities. Immediately thereafter, the company started work on Modernisation Programme Phase-II. The principal facilities in this phase included the modern high speed Bar & Rod Mill of 300,000 tpa capacity, raw material Bedding & Blending Yard, 1.37 mtpa Sinter Plant, 2 x 30 MW Power Plant, etc.

1.1.3 TISCO has completed its modernisation Phase III in October, 1994, which increased its Saleable Steel capacity to 2.7 mtpa.



The major facilities under this programme included a 1 mtpa capacity Hot Strip Mill, two slab casters, a 1 mtpa capacity New LD Shop, a half Coke Oven Battery, a 500 tpd capacity Oxygen Plant, three Lime Calcining Kilns, a New Captive Power Generation Plant of 30 MW capacity and expansion/modernisation of raw material facilities, transportation system and infrastructure.

In addition, TISCO has commissioned a modern 1 mtpa capacity 'G' Blast Furnace in October, 1992 which is operating at its rated capacity. The Hot Strip Mill was commissioned in March'93. The first Slab Caster was commissioned in October'93 and the second in August'94. The new LD Shop No.2 was commissioned in October'94.

1.2 Modernisation Phase- IV

1.2.1 TISCO is planning to embark on a modernisation programme Phase IV, the major facilities of which are targetted to commence production during 1998. In phase IV it is proposed to -

a) increase capacity of hot metal from 3.28 to 3.64 mtpa;

b) increase crude steel production from 3.05 to 3.40 mtpa;

c) increase saleable steel capacity from 2.76 to 3.23 mtpa;

d) expand LD-2 by providing a 3rd vessel;

e) install a 3rd slab caster;

f) increase capacity of Hot Strip Mill to 2 mtpa;

g) set-up a Bar & Rod Mill in addition to the existing one;

h) modernise the Medium & Light structural Mill to produce 200,000 tpa of forging quality Round Cornered Squares and Rounds and 150,000 tpa of forging quality billets for conversion at Bar & Rod Mill to cater to the growing demand from the Automobile Sector;

i) achieve 100% oxygen steel making and continuous casting;

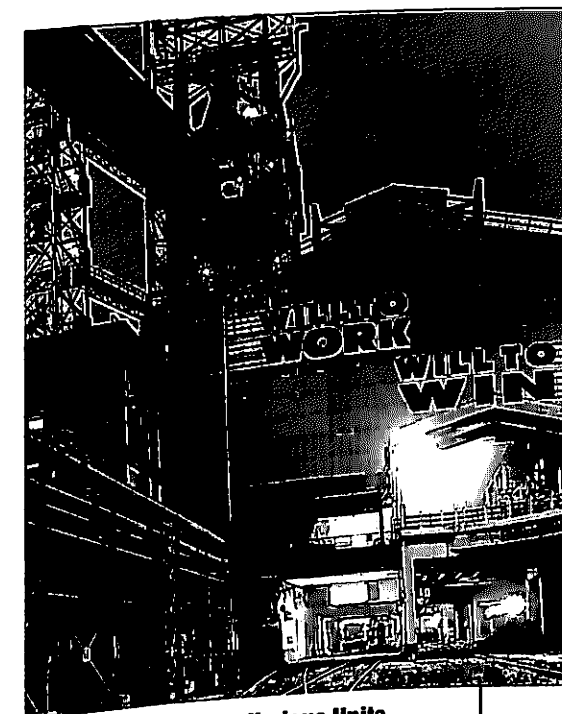
j) improve yield, achieve lower energy consumption and lower operating cost.

With the additional facilities, Steel Melling Shop No.3, Rolling Mills 1 & 2, Sheet Mills, Narrow Strip Mill and Merchant Mill will be phased out.

1.3 Production

1.3.1 Production in the years 1994-95 and 1995-96 was as follows :

	(in tonnes)	
	1995-96	1994-95
Hot Metal	3,240,890	2,924,532
Crude Steel	3,019,060	2,787,536
Saleable Steel	2,701,760	2,446,128
Semis %	32.16	43.91



1.4 Performance of Various Units

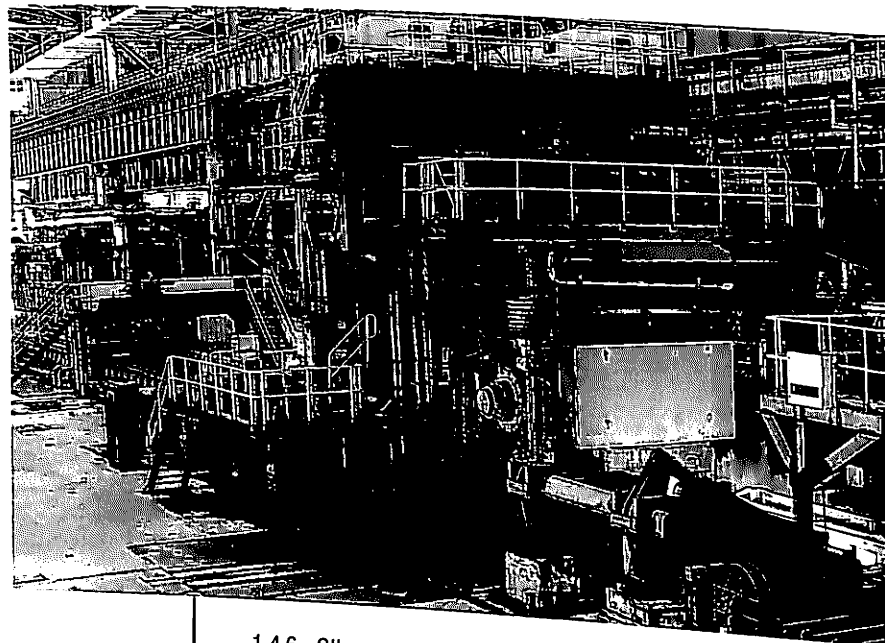
1.4.1 The blast furnaces turned in a record performance with the best ever hot metal output at 3.24 million tons, during 1995-96 an increase of 11% over the previous year.

1.4.2 Productivity levels were also quite good.

1.4.3 Combined LD Shop output of crude steel was 38% better than the previous year and the production of continuous cast billets and slabs was higher by 10% and 16% respectively than the planned targets.

1.4.4 Hot Strip Mill output was better than the planned output by more than 16% and the products were of an excellent quality. Customer feedback has shown that the quality of hot rolled coils has been rated the best in the country.

1.4.5 The Bar & Rod Mill also continued to produce items well received by the domestic and international market.



the Sinter Plant for higher sinter production would result in lower fuel rate at the Blast Furnace. Modernising the Medium & Light Structural Mill by providing an energy efficient Walking Beam Reheat Furnace would reduce the energy consumption at the mill. It is also planned to introduce the state-of-the-art instrumentation and level-II automation in all reheating furnaces for energy efficient operation. Computerised Energy Management Centre for tracking of all the energy network and distribution, is under construction and will be commissioned in this financial year.

1.4.6 Other production departments like Sintering Plant, Coke Ovens, other finishing mills and support services also achieved some record performances and continued to provide necessary support to their main producing departments.

1.5 Energy Conservation

1.5.1 The plant specific energy consumption rate for the year 1995-96 was 8.673 G. Ca./tcs compared to 8.935 in the previous year. During June'95, cold blast oxygen enrichment facility was provided in the 'G' Blast Furnace, which has helped in further reducing the coke rate and improving the blast furnace productivity. The new half coke oven battery, with stamp charge facility has been commissioned in September'95, which has provided more coke of better quality. The production through continuous casting route has increased by 17% over the previous year, thereby reducing energy consumption. Increased by-product gas utilisation at the Boilers has reduced middling consumption.

1.5.2 During the Modernisation Programme Phase IV, augmentation of facilities at

1.6 Environment

1.6.1 Five Open Hearth furnaces of SMS No.3 were closed down. Exhaust gas outlet paths for 2 furnaces were connected to a Gas Cleaning Plant. As a result, pollution problems have been reduced.

1.6.2 A new By-product plant at Coke Ovens is under commissioning. This will not only clean the by-product coke oven gas, but ensure that the effluents discharged from Coke Ovens are within the stipulated norms.

1.7 Safety

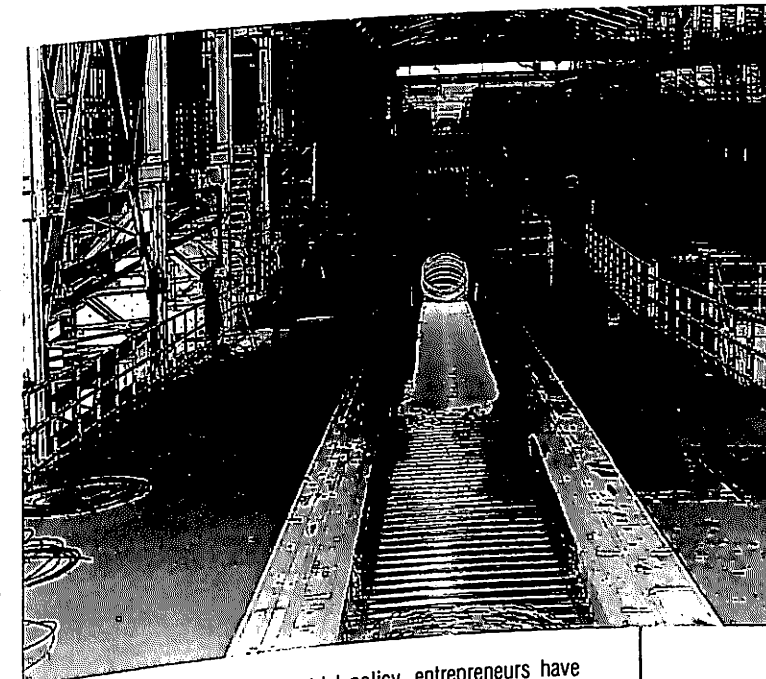
1.7.1 During the year 1995-96, there were 114 accidents in Tata Steel as against 149 during the year 1994-95. Many departments achieved accident free man-hours, the most significant being Material Handling Services recording 3 Million Accident Free Manhours.

2. Secondary Steel Sector

2.1 Electric Arc Furnace Industry

2.1.1 At present 183 Electric Arc Furnace Units with a total capacity of 8.44 million tonnes have been commissioned. In response to New Industrial Policy, entrepreneurs have shown interest to set up additional steel making capacity for the production of steel ingots/billets/slabs.

2.1.2 Production of Ingots/concast billets by EAF units, which are reporting their production to the office of the Development Commissioner for Iron & Steel, during the last four years is given below:-



the new industrial policy, entrepreneurs have shown interest to set up additional re-rolling

Category	1992-93	1993-94	1994-95	(In '000 tonnes)
				1995-96 **(Prov.)
Mild Steel	1498.7	962.5	1130.1	1340.9
Medium/High Carbon Steel	293.1	297.1	434.0	629.3
Alloy Steel	585.0	693.3	818.0	974.9
Stainless Steel	152.1	210.3	291.1	264.9
Total Reported	2528.9	2163.2	2673.2	N.A.
Total Estimated	446.7	336.1	400.0	N.A.
Grand Total	2975.6	2499.3	3073.2	3210.0

** The above figures do not include production of steel by the Casting Units registered with erstwhile DGT.

2.2 Steel Re-rolling Industry

2.2.1 There are about 1,015 commissioned units with a total capacity of 20.96 million tonnes. Out of these, units with a capacity of 4.05 million tonnes are having captive steel making furnaces. In accordance with

capacity in the country. It has been reported that 45 proposals having capacity of 39.32 lakh tonnes are under implementation.

2.2.2 Production of the re-rolling units during the last four years is as follows:-

Category	(In '000 tonnes)			
	1992-93	1993-94	1994-95	1995-96 **(Prov.)
Bars/Rods (Incl. Squares)	1828.9	1206.1	1733.4	2961.5
Wire Rods	557.3	543.8	702.5	1079.8
Structural	849.8	857.9	670.8	1672.3
Hoops	1.7	-	20.1	11.3
Special Sections	125.8	116.4	316.8	455.6
Slabs/Plates	18.0	4.1	455.5	27.5
Total Reported	3381.5	2728.3	3899.1	N.A.
Total Estimated	1996.9	2258.4	2000.0	N.A.
GRAND TOTAL	5378.4	4986.7	5899.1	6208.0

2.3 Steel Wire Drawing Industry

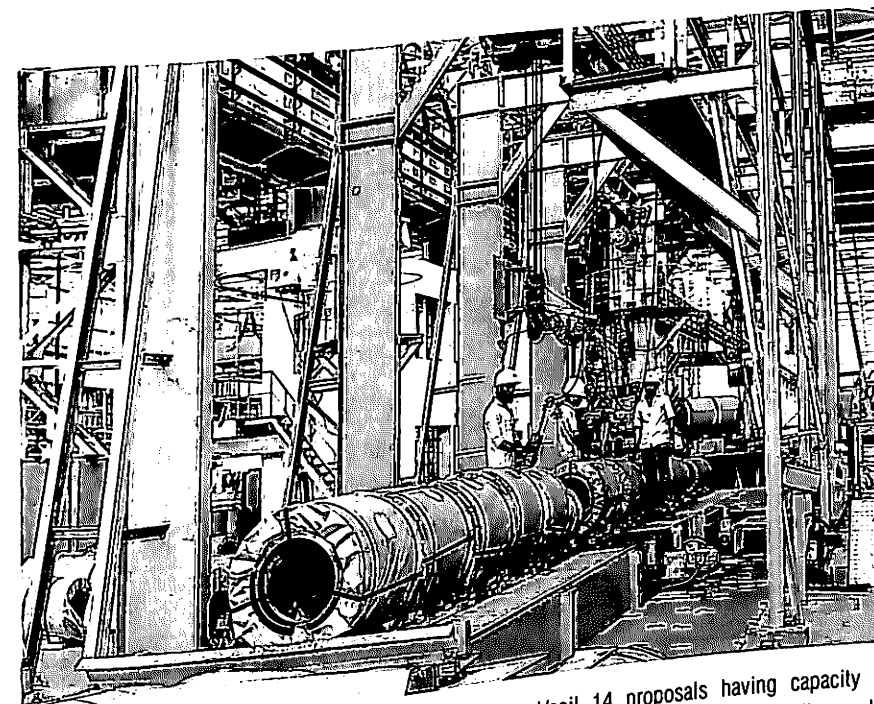
2.3.1 There are 81 commissioned units with a total capacity of 1.02 million tonnes. In accordance with the new Industrial Policy, proposals have been submitted for manufacture of Steel Wires. As per the latest study, 4 proposals having capacity of 1.12 lakh tonnes are under implementation.

2.3.2 Production of steel wire drawing units during the last four years is as under:-

Category	(In '000 tonnes)			
	1992-93	1993-94	1994-95	1995-96 (Prov.)
Mild Steel	136.2	135.9	105.7	183.5
Medium/High Carbon	128.0	160.8	166.3	215.2
Alloy Steels	11.0	10.1	10.8	14.2
Stainless Steel	3.9	2.6	3.9	4.8
Others	-	-	55.7	25.8
Total Reported	279.1	309.4	342.4	N.A.
Total Estimated	122.8	127.7	140.0	N.A.
Grand Total	401.9	437.1	482.4	443.5

2.4 Cold Rolled Steel Sheets/ Strips Manufacturing Industry

2.4.1 There are 65 units with a total capacity of 2.36 million tonnes. After the liberalisation many proposals have been received in the form of IEMs for establishment of Cold Rolling Units also. Out of the proposals 18 units having capacity of 17.30 lakh tonnes are reported to be under implementation.



2.4.2 The production of units during the last four years is as follows:-

Category	(In '000 tonnes)			
	1992-93	1993-94	1994-95	1995-96 (Prov.)
Mild Steel	752.2	828.5	907.2	1250.0
Medium Carbon	12.1	13.6	30.2	29.2
Steel	6.3	8.3	21.4	15.8
High Carbon Steel	4.0	4.3	1.1	2.5
Alloy Steels	7.8	7.2	12.9	37.6
Stainless Steel	-	-	152.7	20.9
Others	-	-	1125.5	N.A.
Total Reported	782.4	861.9	1125.5	N.A.
Total Estimated	20.0	17.3	1125.5	1356.0
GRAND TOTAL	802.4	879.2	1125.5	1356.0

2.5 Hot Rolled Steel Sheets/ Strips Units

2.5.1 In the secondary sector there are 8 commissioned units with a total capacity of 2.7 million tonnes. Out of the proposals received for the manufacture of Hot rolled

sheet/coil 14 proposals having capacity of 43.77 lakh tonnes are reportedly under

implementation. During the year under review 2 major units started production in the private sector viz., a) M/s. Lloyds Metal India Ltd. and b) M/s. Essar Gujarat Ltd. having capacity of 6 lakh and 20 lakh tonnes respectively.

2.5.2 The total production of hot rolled steel sheets/ strips during the last four years is as follows:-

in the private sector with a capacity of 0.15million tonnes of Electrolytic Tinplate have been commissioned. Production

(In '000 tonnes)				
Category	1992-93	1993-94	1994-95	1995-96 **(Prov.)
Hot Rolled Steel Sheets/Strips	71.7	68.9	230.7	893.2
Total Reported	71.7	68.9	230.7	N.A.
Total Estimated	-	-	155.1	N.A.
GRAND TOTAL	71.7	68.9	385.8	893.2@

@ In addition around 138.3 thousand tonnes of HR Plates have been produced by the Units.

2.6 GP/GC Galvalume/Gulfan PVC/Vinyl Coated Sheets/Strips Units

2.6.1 There are 13 commissioned units with a capacity of 0.76 million tonnes producing GP/GC Coated Sheets. Besides, 5 new units are reported to be under implementation, with total capacity of 4.75 lakh tonnes.

2.6.2 Production of GP/GC Sheets during the last 4 years is as follows :-

(In '000 tonnes)				
Category	1992-93	1993-94	1994-95	1995-96 (Prov.)
GP/GC Sheets/Strips	229.5	253.9	376.9	466.7
Total Reported:	229.5	253.9	376.9	N.A.
Total Estimated	-	-	78.9	N.A.
Grand Total	229.5	253.9	455.8	466.7

2.7 Tin Plate Industry

2.7.1 Besides Rourkela Steel Plant, 2 units

of electrolytic tinplate of the two units in the private sector during the last four years is as follows:

(In '000 tonnes)				
Category	1992-93	1993-94	1994-95	1995-96 (Prov.)
Oil Can Size	32.1	27.4	20.0	17.9
Non Oil Can size	13.5	18.1	24.7	12.2
Total Reported	45.6	45.5	44.7	30.1
Total Estimated	-	-	-	-
GRAND TOTAL	45.6	45.5	44.7	30.1

3. Sponge Iron

3.1 There are 18 commissioned coal based and gas based sponge iron units with a capacity of about 5.4 million tonnes. 4 more projects in the Sponge Iron sector with capacity of 13 lakh tonnes are reportedly under implementation.

The production of sponge iron from 1992-93 onwards is given below :-

tonnes, is under consideration of the Financial Institutions.

(In '000 tonnes)				
Category	1992-93	1993-94	1994-95	1995-96 **(Prov.)
Total Reported	1441.3	2420.0	3392.1	N.A.
Total Estimated	-	-	-	N.A.
Grand Total	1441.3	2420.0	3392.1	4400.0

** Figures are partly estimated.

4. Pig Iron Industry

4.1 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. The main source of pig iron has traditionally been the integrated steel plants of Steel Authority of India Limited including IISCO (a fully owned subsidiary of SAIL) and Rashtriya Ispat Nigam Limited. The domestic production of pig iron in the past however, did not keep pace with the demand. As a result, there had been a general shortage which, in turn, adversely affected the growth of the engineering sector. Efforts were, therefore, made to increase pig iron manufacturing facilities in the secondary sector.

4.2 As a result of various policy initiatives taken by the Government, considerable interest has been shown by the private sector in setting up pig iron units. The All India Financial Institutions have already sanctioned assistance to 18 pig iron/hot metal units in the private sector with net pig iron available capacity of 28.12 lakh tonnes per annum. Assistance to another 6 units, with a capacity of 27.35 lakh

4.3 Since the advent of the new industrial policy, 12 new units with a capacity of 13.49 lakh tpa has been commissioned in secondary sector as on March, 1996. The above excludes M/s Kalinga Iron Works, M/s

Sponge Iron India Limited and VISL, Bhadravati.

4.4 In addition, several more units with a total projected capacity of 16.18 lakh tpa are in various stages of implementation.

4.5 Several units have indicated that they may opt for forward integration to manufacture steel. To that extent, net availability of pig iron from these units for merchant sale would obviously be limited.

4.6 A list of units commissioned, as in March, 1996 is given below :-

Sl.No.	NAME OF THE UNIT	LOCATION	CTY(T)
1.	Kalinga Iron Works	Barbil, Karnataka	1.40
2.	Sesa Goa Limited	Bicholim, Goa	0.90
3.	Mid-West Iron & Steel Company Limited	Srikakulam, A.P.	0.90
4.	Usha Ispat Limited	Redi, Maharashtra	2.95
5.	Sathavahana Ispat Ltd.	Anantpur, A.P.	1.20
6.	Tata Metaliks Limited	Kharakpur, W.B.	0.90
7.	Kirtoskar Ferrous Industries Limited	Raichur, Karnataka	1.20
8.	Sesa Industries Ltd.	Bicholim, Goa	0.90
9.	Sponge Iron India Ltd.	Palonha, A.P.	0.45*
10.	Lanco Ferro Limited	Chittor, A.P.	0.90
11.	Uni-Metal Ispat Ltd.	Bellary, Karnataka	0.75
12.	Usha Martin Industries	Jamshedpur, Bihar	1.09
13.	VISL (a subsidiary of SAIL)	Bhadravati, Karnataka	0.75
14.	Kirtoskar Ferrous Ind. Ltd.	Bellary, Karnataka	1.20
15.	Malwka Steel Ltd.	Jagdishpur, U.P.	0.60
TOTAL : 16.09			

* Yet to start commercial production.

4.7 Actual production of pig iron during the last 5 years from the Integrated Steel Plants and the units in the secondary sector are given below :-

Sl.No.	NAME OF THE UNIT	(In million tonnes)				
		1991-92	92-93	93-94	94-95	95-96** (Prov.)
1.	SAIL	0.45	0.34	0.59	0.75	0.548
2.	IISCO	0.39	0.43	0.41	0.40	0.421
3.	VSP	0.64	0.91	0.98	0.85	0.770
4.	TOTAL MAIN PRODUCERS	1.49	1.68	1.98	2.01	1.739
5.	SECONDARY PRODUCERS	0.10	0.16	0.27	0.78	1.060
	GRAND TOTAL	1.59	1.84	2.25	2.78	2.799

** Till March, 1996.

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

5. New Steel Projects

5.1 In the context of long term demand projection of steel, Government have adopted a two pronged strategy for increasing the steel production in the country in future :-

- Through modernisation and expansion of existing steel plants in the country; and

- Through encouraging creation of new steel capacities in the private sector.

5.2 TISCO has completed their Phase III modernisation programme and have taken up Phase IV modernisation. SAIL has undertaken a massive modernisation programme

in its plants at Durgapur, Rourkela and Bokaro. However, even after taking into account the enhanced production through these modernisations/expansions, there will be a substantial gap in the overall demand-supply projection, which is expected to be met through setting up of additional capacity in the private sector.

5.3 As a result of various policy initiatives taken by the Government, a large number of units have indicated interest in setting up new steel plants. Out of these, 19 units with a total capacity of approx. 11 million tonnes (saleable steel) involving an investment of approx. Rs.19,362 crores have already been sanctioned by the All India Financial Institution. So far 5 of these new units have already been commissioned and others are at various stages of implementation.



In addition, 8 more units with a total capacity of approx. 5.7 million tonnes involving an investment of Rs.12,487 crores are presently pending with the All India Financial Institutions for appraisal.

5.4 The list of units already sanctioned by the All India Financial Institutions indicating their location, capacity, product-mix and investment, as per information currently available, is given below :-

Sl. No.	Name of the Unit and location	Process Route	Saleable Steel capacity in Lakh Tonnes	Equivalent Liquid Steel capacity in Lakh Tonnes	Commissioning Date & item of mfg. & status	Phase	Proposed investment in Rs. crores
1.	Nova Udyog Limited (Nainital, U.P.)	EAF	2.40	2.60	93-94, 93 Dec Non-Flats-B&R Already Commissioned	1	101.40
2.	Indian Seamless S&A Ltd. (Pune, Maharashtra)	EAF	1.50	1.60	93-94, 93 Dec Non Flats-B&R/Seamless Bar Already Commissioned	1	175.00
3.	Essar Gujarat Ltd. (Hazaria, Gujarat)	HBI-EAF	20.00	22.00	95-96, 95 Dec Flats-HRC, 2 EAF & 1 caster, HSM commissioned 1 EAF & 1 Caster under impltn.	1	3525.00
4.	Rajender Steel Ltd. (Raipur, M.P.)	EAF	1.75	1.85	95-96, 96 Jan Flats-HRC, EAF, Slab Caster commissioned. HSM under impltn.	1	175.50
5.	Jindal Strips Ltd. (Raigarh, M.P.)	DRI-EAF	5.00	5.50	95-96, 95 Dec Semis-Slab/Billets 4 DRI, 1 EAF, Slab Caster commissioned. 2nd EAF, Billet Caster under impltn.	1	421.00
6.	Kumar Met. Corpn. Ltd. (Nalgonda, AP)	DRI-EAF	1.25	1.40	95-96, 96 Mar Non-Flats-WR Under implementation	1	127.00
7.	Isibars Limited (Khopoli, Mah.)	-	1.30	1.50	96-97, 96 APR Billets/LP Under implementation	1	117.00
8.	Lloyds Steel Ind. Ltd. (Wardha, Maharashtra)	EAF	6.00	6.60	96-97, 96 June Flats-HRC/CRC/GPGC Already Commissioned	1	1211.00
9.	Nova Steels (I) Ltd. (Bilaspur, MP)	EAF	2.00	2.20	96-97, 96 June Nonflats-WR/B&R EAF & CC under impltn.	1	140.00

10. Kalyani Steels Ltd. (Raichur, Karnataka)	EOF	2.15	2.40	96-97, 96 Sept Blooms/LP Under implementation (BF to be set up by sister company)	1	231.00
11. Southern I&S Co. Ltd. (Salem, Tamil Nadu)	BF-BOF	2.20	2.40	96-97, 96 Oct Nonflats-B&R, WR BF to be commissioned by Dec.,95	1	450.00
12. Malvika Steel Ltd. (Jagdishpur, UP)	BF-BOF	5.75	6.00	96-97, 97 Jan 1st BF commissioned 2nd BF & SMS under impltn. Rolling mill yet to start.	1	@1364.00
13. Nippon Denro Ispat Ltd. (Raigad, Maharashtra)	DRI/BF-EAF	12.00	13.20	96-97, 97 Jan Flats-HRC	1	2200.00
14. SJK Steel Corp. Ltd. (Anantpur, AP)	BF-BOF	2.63	2.90	97-98, 97 April Semis-Billets Under imlementation	1	405.00
15. Usha Ispat Limited (Redi, Maharashtra)	BF-BOF	6.00	6.60	97-98, 97 June Non-Flats-LP Yet to start implementation	1	1400.00
16. Jindal Vijayanagar (Bellary, Karnataka)	COREX/ BF-BOF	12.50	13.75	97-98, 97 Sept Flats HRC HSM to be commissioned by Oct.,96 1st Corex & BOF by Mar.,97 BF&BOF by Sept.,97	1	3300.00
17. Bellary S&A Ltd. (Bellary, Karnataka)	BF-BOF	4.14	4.50	98-99, 98 Dec Nonflats-LP Yet to start implementation	1	891.00
18. Trident Steels Ltd. (Dahej, Gujarat)	BF-BOF	1.00	1.10	97-98, 97 APR Nonflats-LP		99.00
19. Grand Foundary Ltd. (Pune, Maharashtra)	EAF	1.20	1.30	98-99, 98 APR Nonflats-B&R		260.00
Total of sanctioned projects		108.77	119.20			19,362.90

1. Science Advisory Committee

1.1 A Science Advisory Committee (SAC) attached to the Ministry of Steel examines all aspects of Science and Technology development in the Iron and Steel manufacturing industry. The committee advises the Minister of Steel on the policies and programmes required for development of domestic capabilities in Scientific and Technological research and development of design engineering to achieve scientific excellence and reviews progress of science and technology programmes of national importance in the Iron and Steel industry.

1.2 The Committee comprises of eminent scientists and technologists in the metallurgical and engineering fields.

1.3 The Committee decided in their meetings held in 1993-94 and 1994-95 to take up development of RESINNESS technology for production of steel directly from Iron Ore fines and non coking coal in small plants and to study energy conservation measures of mini steel plants (electric arc furnaces).

These are under progress. The Committee had also discussed several other projects to be taken up for research in national interest. Funds for these R&D projects may be available from Steel Development Fund.

2. Iron & Steel Mission

2.1 Restructuring of Iron and steel Mission, earlier known as National Mission for Iron and Steel, is in progress.

3. Research & Development Activities by Iron and Steel Producers

3.1 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.

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



3.2.1 Objective/ thrust of R&D

The main thrust of R&D activities of RDCI&S, Ranchi were as follows :

- To satisfy both internal and external customers and establish itself as peer in R&D organisations of international repute.

- Reduction of cost, improvement in quality and development of new value added products through incremental improvement of plant performance indices and other projects oriented towards basic and applied research and development of major technologies.

3.2.2 Highlights of R&D activities.**3.2.2.1 New Technology/Process Developed**

- Developed digital control system for electricity operated trolley (EOT) crane at BSL.

- Produced SG iron at Kulti works, using HBI/Steel Scrap and low phosphorous Coke in cupola furnace.

- Developed rust prevention oil and its application system at BSL for better customer satisfaction.

- Developed mouldable/ no cement castable and transferred know how to M/s Bharat Refractories Limited.

- Developed technologies for production of impregnating pitch at BSP.

3.2.2.2. Productivity improvement

Various projects were taken towards improvement of productivity of SAIL plants. Utilisation of Blast Furnace shop at RSP upto 90% by using modified regime and by top repair of Blast Furnace No. 2&3 and relining of BF No.4 are some such projects.

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

- Improved chromium recovery at ASP by optimisation of practice for production of stainless steel through EAF-VOD route.

- Use of prefabricated refractory inserts resulted in reduction in consumption of Ingot mould bottom plate at RSP.

- Improved yield by optimum chemistry and continuous casting parameters for AISI C 10 at quality steel at ASP.

3.2.2.4. Reduction in Energy Consumption

- Designed and tested a high velocity burner at Combustion Research Unit. It can be used for drying of refractory lining uniformly and efficiently in Stoves, BF proper and Coke Oven Batteries.

- Introduced post heating facilities for ladle in SMS II at BSL. This resulted in reduction of skull formation, reduction in steel trapping temperature and improvement in ladle lining life.

3.2.2.5. Development of New Products

Several new and value added products have been successfully developed as follows:

- Corrosion resistant ribbed bars at BSP.

- Quenched and tempered ASTM 517, Gr. F quality plates at RSP.

- SAIL-KAVACH steel for security personnel at RSP.

- Improved quality of EN-38 grade automotive steel plates at BSL.

- Improved the life of slide gate springs for SMS I at BSL.

3.2.2.6. Quality Improvement Programme

The following activities were pursued towards quality improvement.

- Identified reasons for defects in slabs/ plates at BSP and recommendations made for reduction in rejection.

- Increase in life of flux crushing hammers at ASP.

- Use of super high temperature wear resistant hard facing electrodes for sinter sprocket has improved the life three times.

- Improvements in coke quality with respect to strength indices and size analysis in cokeoven battery no. 9 at BSP.

- Characterisation of coal and coke at RSP.

3.2.2.7 Energy Conservation

Consumption of Energy in four integrated steel plants including electricity consumption per tonne of crude steel was as under :-

Year	Plan/Target (G. cal)	Actual Performance (G. cal)	Improvement over previous year(%)
1993-94	8.86	8.80	(+) 1.1%
1994-95	8.83	8.70	(+) 1.1%
1995-96(Prov.)	8.69	below 8.7	-

3.2.2.8. R&D Expenditure

Year	Turnover (Rs. crore)	Expenditure (Rs. crores)	Expenditure on R&D as percentage of turnover	Certified benefits accrued
1993-94	11671	40	0.34	32
1994-95	13867	45	0.32	44.6
1995-96 (Prov.)	15000	51.6	0.31	64.2

3.2.2.9. Project Status

No. of projects planned in 1994-95 99

No. of projects due for completion in 1994-95; 79

No. of projects completed in 94-95 84

No. of projects planned in 1995-96 140

No. of projects completed in 1995-96 116

3.3. The Tata Iron & Steel Company Limited (TISCO), Jamshedpur**3.3.1. Objective**

Development of new products and processes, improvement of process parameters and product quality were the major thrust areas.

3.3.2. Highlights of R&D Achievements

- Optimisation of operating parameters in Froth Flotation Cell of West Bokaro and Jamadoba Collieries reduced ash from 17 to 14%.

- Liquid Fuel emulsion Atomiser device designed which resulted in reduction in fuel rate to the extent of 8.8% and increased the gross productivity by 8.4%.

- Corrosion resistant steel reinforcement bar for building construction has been developed (first time in India). About 70,000 tonnes of rebars already sold within the country.

- Development of high tensile plates (TISTEN 52/60) without micro alloying through controlled rolling and accelerated cooling.

- Development of LPG (IS:6240), C-30 medium carbon manganese grade steel

- Wear resistant grade of steel (TISCRAI-220) developed and commercialised.

- Development of software programme for radial ball bearing which can estimate dynamic load rating, fatigue life and EHD lubricant film thickness of bearings.

3.3.5. Project Status

Year	Turnover (Rs. crore)	Expenditure R&D (Rs. crores)	Expenditure on R&D as percentage of turnover
1993-94	3822.64	10.45	0.27
1994-95	4627.40	11.55	0.25
1995-96 (Prov.)	5800.00	7.94	0.14

- a) No. of projects planned in 1994-95 : 100
- b) No. of projects completed in 1994-95 : 82
- c) No. of projects planned in 1995-96 : 55
- d) No. of projects completed in 1995-96 : 39

being monitored and standardised for process stabilisation.

- During the year 1994-95, VSP stabilised the production of 5.5 mm wire rods and 1008 grade of wire rods. During 1995-96, VSP has developed high carbon wire rods with special quantities like high reduction in area and controlled tensile strength, Fe 500 grade reinforcement bars, temcore reinforcement bars in wire rod mill and En 8D quantity of rounds in LMMM and MMSM.

- Development of S45C and 20C forging quality billets which were supplied to overseas customers.

- Development of Electrode Quality and Cable Armour grade Wire rods.

- Obtained ISO-9002 certificate for its wire rod mills products.

3.4.3. R&D Expenditure

Year	Turnover (Rs. crore)	Expenditure (Rs. crores)	R&D Expenditure on R&D as percentage of turnover	Certified benefits accrued
1993-94	1891	2.5	0.13	5
1994-95	2266	2.5	0.11	4.5
1995-96	3050	2.5	0.08	4.5

3.4. Rashtriya Ispat Nigam Ltd., Visakhapatnam Steel Plant (VSP) Visakhapatnam

3.4.1. Objective

The Research and Development efforts of the company are mainly directed towards Process Improvement, Product quality improvement and Product development.

3.4.2. Highlights of R&D Activities

- Injection Refining and Up Temperature (IRUT) Unit in SMS has been installed and the operating parameters of the same are

3.4.4. R&D Projects Status

- a) Number of projects planned in 1994-95 : 5
- b) Number of projects completed in 94-95 : 5
- c) Number of projects planned in 1995-96 : 4
- trouble shooting.

3.5. Kudremukh Iron Ore Company Ltd. (KIOCL), Bangalore

3.5.1. Objective.

- The major thrust was on the improvement of the quality and development of new products.

3.5.2 - The major projects taken up during 1995-96 in the R&D areas are as under:-

- Reclamation of iron ore units from tailings deposited in the Lakhya Tailings; and

- Experimenting Synthetic Binder for pellet making to reduce the level of silica.

3.5.3. Highlights of R&D Achievements

3.5.3.1 The company achieved reduction in specific energy consumption from 78.02 kwh to 76.24 kwh per tonne of concentrates and 32.50 kwh to 29.9 kwh per tonne of pellets during 1995-96 (upto November 1995).

3.5.4. R&D Expenditure.

Year	Turnover (Rs. crores)	Expenditure (Rs. crores)	Expenditure on R&D as percentage of turnover
1993-94	416.69	2.40	0.58
1994-95	369.34	3.43	0.93
1995-96	478.48	3.48	0.73

3.5.5. Project Status

- No. of projects planned in 1994-95 : 3
- No. of projects due for completion in 1994-95 : 1
- No. of projects completed in 1994-95 : 1
- No. of projects planned in 1995-96 : 3

- No. of projects completed in 1995-96 : 3

3.6. Manganese Ore India Limited (MOIL), Nagpur

3.6.1. Objective/Thrust of R&D

- To improve productivity, safety, conserve mineral wastes into useful minerals.

- To locate new ore reserves and convert mineral wastes into useful minerals.

- Develop process for manufacture of manganese based compound.

- Improve overall environment in mining areas.

- Improve quality of products by using better technique.

3.6.2. R&D Expenditure

Year	Turnover (Rs. crores)	Expenditure R&D (Rs. crores)	R&D Expenditure as percentage of turnover
1993-94	58.38	0.32	0.55
1994-95	80.02	0.42	0.52
1995-96 (Prov.)	103.66	0.53	0.51

3.6.3. Project Status

- No. of projects planned in 1994-95 : 10
- No. of projects due for completion in 1994-95 : 7
- No. of projects completed in 1994-95 : 5
- No. of projects planned in 1995-96 : 6

3.7. Bharat Refractories Limited (BRL), Bokaro Steel City

3.7.1. Objective/Thrust of R&D.

The major thrust of various R&D efforts was on development of new products and

reduction of energy consumption in various processes.

3.7.2. Highlights of major R&D Achievements.

The following products have been developed:

- resin bonded Mag-Carbon masses.
- Bottom jointing mass.
- Mag-Carbon refractories for metal line of ladle furnace and slag zone.

Low cost through mass for mini-steel plants.

3.8. National Mineral Development Corporation (NMDC), Hyderabad

3.8.1. Objective/Thrust of R&D

To achieve optimum utilisation of mineral resources including management and utilisation of mine wastes and production of value added products.

3.8.2. Highlights of R&D Activities

- Development of metallic process for production of premium grade iron powder from blue dust concentrates for powder metallurgical industries.

- Development of hydro metallurgical process for production of pigment grade ferric oxide from blue dust and iron ore slimes.

- New products like high grade ferric oxide for use in the manufacture of hard and medium soft ferrite components, Ultra pure ferric oxide for use in manufacture of soft ferric components, ferrite powder mix - a value added ready to use material for manufacture of ferrite components and pigment grade ferric oxide for use in paint industry have been developed.

3.8.3 R&D Expenditure

Year	Turnover (Rs. crores)	Expenditure R&D (Rs. crores)	Expenditure on R&D as percentage of turnover
1993-94	273.48	4.08	1.49
1994-95	299.05	3.94	1.31
1995-96 (Prov.)	581.23*	3.20	0.55

* Including Freight Charges.

3.8.4. Project Status

- No. of projects taken up : 3
in 1994-95
- No. of projects due for : 1
completion in 1994-95
- No. of projects : 1
completed in 1994-95
- No. of projects taken up : 2
in 1995-96.
- No. of projects completed : NIL
in 1995-96.

3.9. Jindal Vijaynagar Steel Limited, Bangalore

3.9.1. The major objective was to assimilate and adapt effectively the imported technologies with indigenous raw material and make continuous improvements in techno-economic performance parameters.

3.9.2. Highlights of R&D Activities

Presently, modelling of COREX process is underway and preliminary results indicate that every 1% decrease in volatile matter of coal reduces the coal consumption rate by nearly 50 Kg. per tonne of hot metal. For effective understanding and further improvement of technology, a joint research and development project has been launched with Indian Institute of Science, Bangalore. One project on COREX process modelling has been undertaken since October 1995 at a cost of Rs.10 lakhs.

3.10 Essar Gujarat Limited, Hazira, Distt. Surat

3.10.1 Objective/thrust on R&D (for Hot Rolled Coil Plant)

- To stabilise operation and to achieve various performance parameters guaranteed by the suppliers.

- Development of sophisticated high value steel grades

3.10.2 Highlights of R&D Activities

A wide range of steel grades like HR coils for cold rolling, galvanising for ERW steel tubes and pipes, pressure vessels, LPG, marine containers (corrosion resistance steel), HSLA etc. have been developed.

3.11 Electric Arc Furnace (EAF) Steel Producers (Mini Steel Plants)

3.11.1 Bihar Alloy Steels Ltd., Calcutta

3.11.1.1 Objective/thrust of R&D

- To produce new products.
- To develop new processes.
- To modify process for quality improvement of the products.

3.11.1.2. Highlights of R&D Activities

New Technology/Process:
Some of the major highlights of R&D activities are as under:

- Modification in Walking Beam Furnace.
- Reduction in consumption of materials and improvement in yield and quality.
- Process Innovations in heat treatment.

Reduction in Energy Consumption

Energy Conservation has been carried out by avoiding waste and better utilisation of energy. Investment has been negligible.

3.11.1.3 R&D Expenditure

Year	Expenditure R&D (Rs. crores)	Expenditure on R&D as percentage of turnover
1993-94	0.52	0.08
1994-95	0.57	0.06
1995-96	0.57	0.06

3.11.1.4 Project Status :

- No. of projects planned in 1994-95 : 06
- No. of projects due for completion in 1994-95 : NIL
- No. of projects completed in 1994-95 : 06
- No. of projects planned in 1995-96 : 09

3.11.2. Mukand Ltd., Bombay

3.11.2.1. Objectives of R&D

The concentration has been on research and development and energy conservation.

3.11.2.2. Highlights of Achievements

Specific areas in which R&D was carried out by the company are:

i) Thermomechanical modelling of the continuous casting process.

ii) Substitution of expensive zircon sand and imported chromite sand at various units in the company's foundries.

iii) Trial development of micro-alloyed steels.

3.11.2.3. R&D Expenditure

3.11.2.4. Project Status

- i) No. of projects planned in 1994-95 : 52

- ii) No. of projects due for completion in 1994-95 : 45
- iii) No. of projects completed in 1994-95 : 40
- iv) No. of projects planned in 1995-96 : 48

3.11.3. Usha Martin Industries Ltd., Calcutta

The company developed Aluminium killed fine grain steel and lead bearing free cutting steel for the first time in India and among the few in the world through Billet Caster Route.

3.11.3.1. R&D Expenditure

Year	Turnover (Rs. crores)	Expenditure R&D (Rs. crores)	Expenditure on R&D as percentage of turnover
1993-94	269.60	0.20	0.07
1994-95	281.14	0.19	0.06

3.11.3.2. Project Status:

- a) No. of projects planned in 1994-95 : 2
- b) No. of projects due for completion in 1994-95 : 2
- c) No. of projects completed in 1994-95 : 2
- d) No. of projects planned in 1995-96: 3

3.11.4. Kalyani Steels Ltd., Pune.

3.11.4.1. Objective/Thrust on R&D

Improvement in productivity and cost reduction.

3.11.4.2. Highlight of R&D activities

Improved layout and equipment for vacuum degassing. Replaced mill stands for better tolerance on rolled sections and quicker roll change. Reduced power consumption in ladle furnace.

3.11.4.3. R&D Expenditure

Year	Turnover (Rs. crores)	Expenditure R&D (Rs. crores)	Expenditure on R&D as percentage of turnover
1993-94	134.36	0.103	0.07
1994-95	181.48	0.08	0.04
1995-96	114.66	8.4	

3.11.4.4 Project Status

- a) No. of projects planned in 1994-95 : 1
- b) No. of projects due for completion in 1994-95 : 1
- c) No. of projects completed in 1994-95 : 1
- d) No. of projects planned in 1995-96 : 3

1. A Computer Based Management Information System (MIS) developed for the Ministry of Steel with the assistance of National Informatics Centre is functional in the areas of Accounting & Budgeting, Section Activity Monitoring System and Industrial Entrepreneurs Memoranda System (IEMs). An integrated MIS is being developed with the assistance of National Informatics Centre for Steel Wing in the areas of Category-wise Production & Export of Main & Secondary Producers, Import, Steel Duties & Prices and Performance Monitoring of Public Sector Undertakings.

2. The Computer Centre in the Ministry of Steel, which has been established as a central facility, is equipped with One Super-AT(386-based) having 8 MB main memory, 300 MB hard disk alongwith 6 Dumb Terminals, 4 nos. of 486-SX Window-based Platforms with Colour Monitor, 10 Nos. of PCS/PC-XTx/PC-ATs and modem based NICNET connectivity to use Electronic Mail facility.

3. Efforts are being made to upgrade Central Server (386-based machine) with Pentium based Server and PCs/PC-XTs with 486-SX Window based machines.

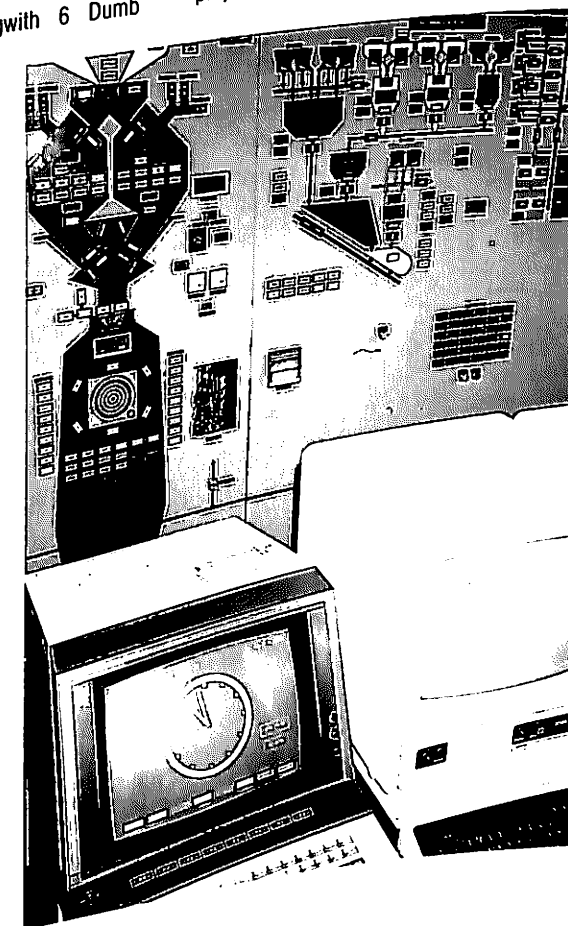
4. The E-MAIL facility of NICNET is being used for transferring of ACC Decisions, incumbency position details and appointment of Central Observers in connection with Elections from Ministry of Steel to Deptt. Of Personnel & Training (DOPT).

5. Word-Processing facility for generation of reports and letters is being extensively

used on day-to-day basis and during Parliament Sessions throughout the year by almost each and every Section/Division in the Ministry.

6. NIC-Computer Cell is actively involved in the compilation and processing of Annual Budget and Annual Report of the Ministry on computer.

7. In-house Training Programmes for the staff in the Ministry for computer usage are also being organised by NIC-Computer Cell from time to time and atleast one person is trained in the usage of computers from various Sections/Divisions where computer facility is provided by NIC. Apart from NIC facility, PCs have been provided to other project sections/desks from other sources.



1. The Ministry of Steel is under the charge of a Cabinet Minister who is also holding charge of Ministry of Mines.

2. The Ministry of Steel is responsible for the planning and development of Iron and Steel Industry; development of essential inputs such as iron ore, lime stone, dolomite, manganese ore, chromite, ferro alloys, sponge iron etc. and other related functions. There are 17 Public Sector Undertakings under the administrative control of the Ministry of Steel. The details are at Annexure-I.

3. The Ministry of Steel has a Secretary, 3 Joint Secretaries, 3 Directors, 3 Deputy Secretaries, 6 Under Secretaries and other lower level officers and staff. The Ministry has a common Financial Adviser of the status of Additional Secretary and a common Chief Controller of Accounts with the Ministry

of Mines. A Technical Wing consisting of an Industrial Adviser, 4 Development Officers and 3 Assistant Development Officers assist and advise the Ministry on technical matters. The organisational chart of the Ministry is at Annexure-II. The details of classification/category of personnel in position are at Annexure-III.

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

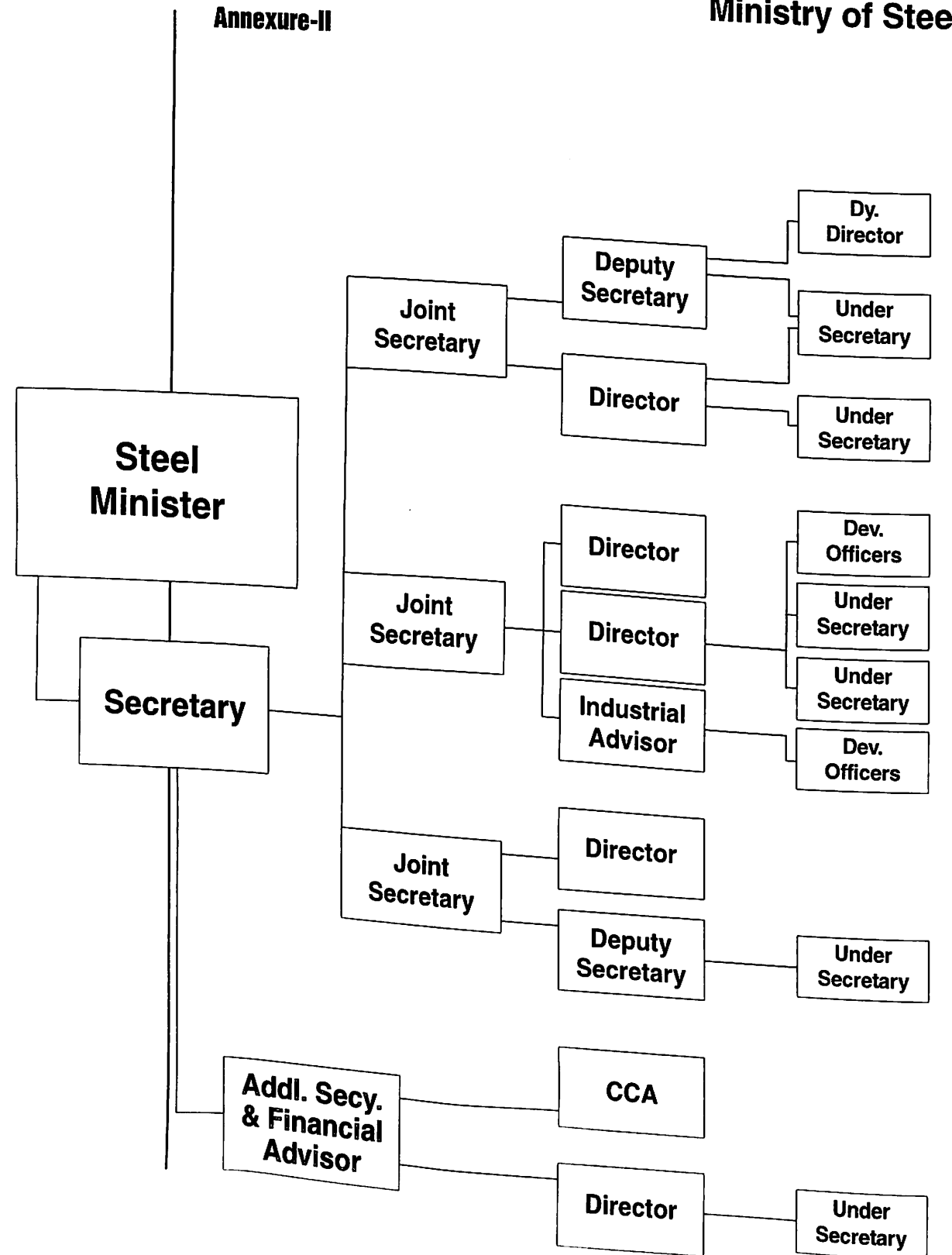
Annexure-I**LIST OF PUBLIC SECTOR UNDERTAKINGS UNDER THE MINISTRY OF STEEL**

1. Steel Authority of India Ltd., Ispat Bhawan, Lodhi Road, New Delhi-110003.
2. Rashtriya Ispat Nigam Ltd., Project Office, 'A' Block, Visakhapatnam-530031.
3. Metallurgical and Engineering Consultants (India) Limited, MECON Building, Ranchi-834002.
4. National Mineral Development Corporation Limited, Castle Hills, Masab Tank, Hyderabad-500028.
5. Bharat Refractories Limited, Sector-IV-3, Quarter No.56, Bokaro Steel City-827001.
6. Kudremukh Iron Ore Co. Ltd., 1 Block Koramangla, Bangalore-560034.
7. Manganese Ore (India) Ltd., 3 Mount Road Extension, Nagpur-440001.
8. Hindustan Steel Works Construction Ltd., No.1 Shakespeare Sarani, (8th floor), Calcutta-700001.
9. Sponge Iron India Ltd., NMDC Complex, Khanij Bhawan, 10-3-3-11/A Castle Hills, Hyderabad-500028.
10. MSTC Ltd., 225 F, Acharya Jagdish Bose Road, Calcutta-700020.
11. Ferro Scrap Nigam Limited, Building No. 54, Old Admn. Office Complex, Bhilai-490001.
12. India Fire Bricks and Insulation Company Ltd., Railway Station, Ranchi Road, Post Office, Marar-820177, District Hazaribagh, Bihar.
13. Indian Iron and Steel Co. Ltd., Burnpur-713325.
14. IISCO Ujjain Pipe and Foundry Limited, Calcutta.
15. J & K Mineral Development Corporation, Srinagar.
16. Visvesvaraya Iron and Steel Ltd., Bhadravati, Karnataka.
17. Maharashtra Elektrosmet Ltd., Chandrapur, Maharashtra.

ORGANISATIONAL Chart

Ministry of Steel

Annexure-II



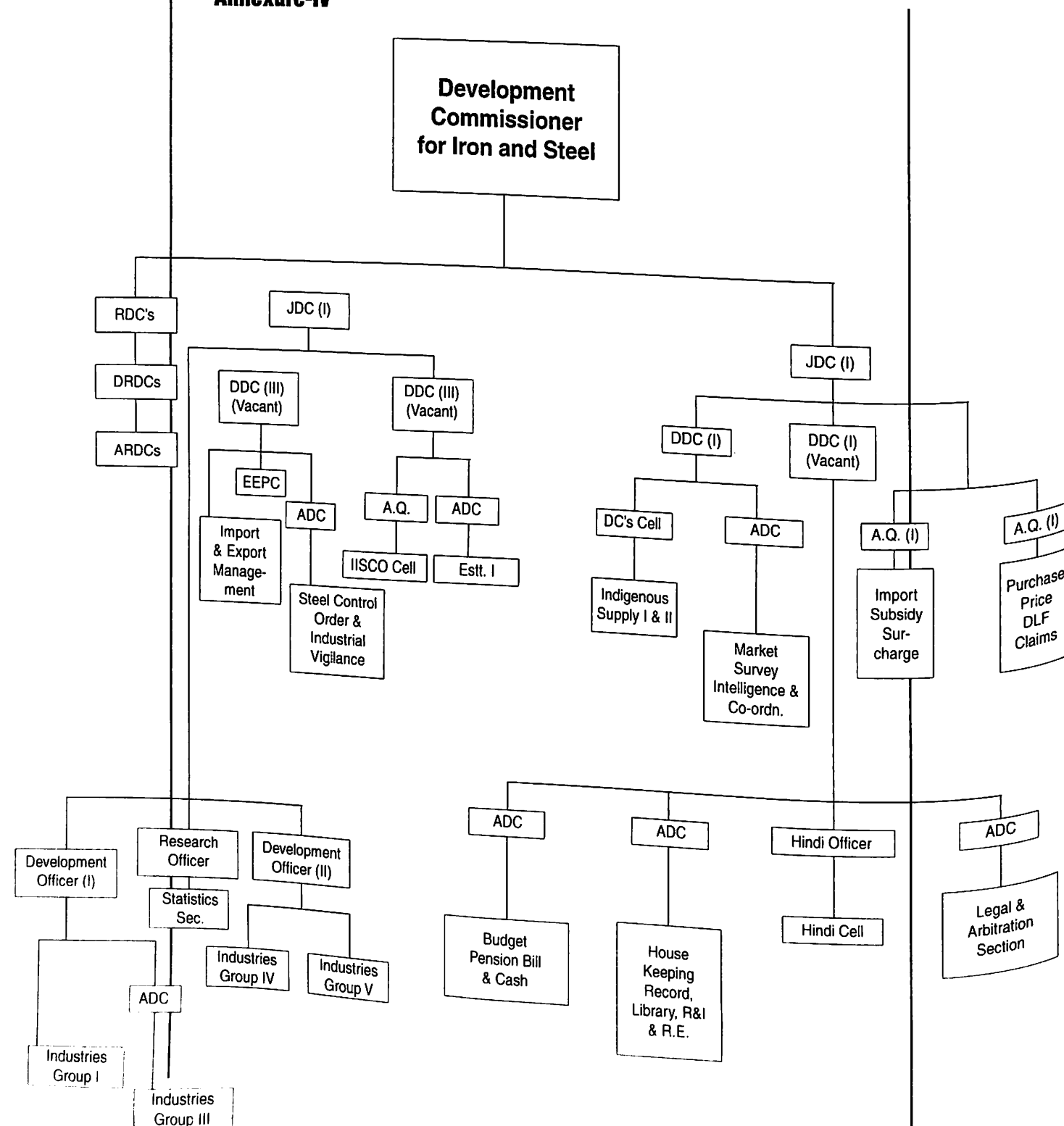
Annexure-III

STATEMENT SHOWING THE NUMBER OF EMPLOYEES, NUMBER OF SC/ST/PH/EX- SERVICEMEN/MEN AND WOMEN AS ON 31.3.96 IN RESPECT OF MINISTRY OF STEEL (SECRETARIAT)

CLASSIFICATION OF POST	NO. OF EMPLOYEES IN POSITION	MEN	WOMEN	SC	ST	OBC	PH	EX-SERVICEMEN
GROUP 'A'	28	25	3	4	1	2	-	-
GROUP 'B'	79	55	24	13	3	3	-	-
GROUP 'C'	85	64	21	17	8	7	1	1
GROUP 'D'	72	69	3	22	9	6	1	1
TOTAL	264	213	51	56	21	18	2	2

CHAPTER - IX DEVELOPMENT COMMISSIONER FOR Iron and Steel

Annexure-IV



CHAPTER - X

WELFARE OF THE Weaker sections

A Cell under the charge of a Liaison Officer functions for monitoring implementation of Government policy relating to reservations for and representation of Scheduled Castes, Scheduled Tribes and other backward classes in the Ministry 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, as and when necessary.

The actual record of PSUs in respect of representation of SCs/STs/OBCs during 1995-96 is indicated below :-

1. Steel Authority of India Limited (SAIL)

Manpower

As on 31.3.1996, out of total manpower of 2,21,594 in the Steel Authority of India Limited (including subsidiaries), 30,794 employees belong to SC Category (13.90%), 21,138 employees belong to ST Category (9.54%) and 10,371 employees belong to OBCs (4.68%). Moreover, there are 11,464 women (5.17%), 638 Physically handicapped (0.29%) and 2499 Ex-servicemen (1.13%).

Other activities undertaken by the plants/units of SAIL having a direct relevance to the advancement of SCs/STs/OBCs

The Government Guidelines on reservations for SCs/STs/OBCs in services are strictly followed in SAIL Plants/Units as indicated below :

i. Relaxations/concessions in age, qualification, application fee, experience, standard of suitability, TA payment for appearing in written examination, etc., are being given to SC/ST candidates.

ii. Continuing efforts to clear backlog of vacancies reserved for SC/ST through Special Recruitment Drive was done in different plants/units during 1994, which has given very good results. The number of SC/ST persons recruited through Special Recruitment Drive during the year 1995 are as under :

Group	Number of persons recruited through special drive - 1994		
	SC	ST	Total
A	3	2	5
B*	383	429	812
C**	10	-	10
Total	396	431	827

* Excluding Safai Karamchari.
** Safai Karamchari only

iii. SAIL at regular intervals has been organising meetings and workshops of Liaison Officers dealing with the subject to sort out difficulties encountered in the implementation of reservation policy and to make the concerned officers familiar with latest instructions and current issues on the subject.

iv. In order to meet the shortfall in the reserved quota, SAIL has a pre-employment training scheme under which SC/ST candidates who appear in the written test for Management Trainee (Tech) but do not finally qualify are offered six months training in steel plants on a monthly stipend at the rate of Rs.1500/- per month for preparing them for the post of Management Trainee (Tech). On successful completion of training they are taken as MT(T) along with subsequent batch of MT(T). In 1994, under this scheme offers were issued to 14 SC candidates and 38 ST candidates.

v. Training programmes are being organised for SC/ST candidates to enable them to develop and enhance their knowledge and skill. While selecting employees for in-house training, the endeavour of the plants is to include as many of SC/ST candidates as possible. Number of SCs/STs trained (including pre-employment training) during 1993, 1994 & 1995 are given below :

Year	SC	ST	Total
1993	4011	2304	6315
1994	4970	2597	7567
1995	4071	2879	6950

2. In addition to the above, the following steps are also being taken for the welfare of the persons belonging to SCs/STs :

A. Educational Facilities

The ward of SC/ST employees are entitled to free education in Company's schools. They are also entitled to school uniforms, shoes etc.

B. Scholarship

Under Merit and Merit-cum-Means Scholarship Scheme 20% scholarships are reserved for the wards of SCs/STs employees



for pursuing higher education including professional courses. The qualifying standard of first class or 60% is relaxable to 50% in their case. As per the scheme, the scholarship amount of Rs.250/- per month is awarded to the wards of employees who join recognised degree courses in Engineering, Medical, Architecture, Agriculture and Veterinary Sciences and a scholarship amount of Rs.150/- per month is awarded to the wards of the employees who join diploma courses in Engineering, Degree/Diploma Courses in Pure Science, Social Sciences etc., recognised by the Government of India.

C. Machinery for Handling Grievances of SC/ST Employees

A Liaison Cell for the welfare of SC/ST community has been constituted in the Plants to act as the Co-ordinating Agency as well as the enforcement machinery in respect of Government Directives issued from time to time regarding welfare of SC/ST community. The Cell regularly conducts inspections in the Shop Floor, Personnel Section and the Recruitment Section to verify and pursue the implementation of Government Directives on Reservations for SC/ST candidates. It also keeps liaison with various external bodies/associations of the SC/ST community. Meetings are conducted with the SC/ST employees and their organisations on quarterly basis with a view to sort out their problems/grievances.

D. Peripheral Development

Keeping in view the objectives of "Prosperity with Social Development", SAIL has been undertaking various developmental

activities for the benefit of the surrounding villages as mentioned below:

i. **Drinking Water** : This includes installation of hand pumps, sinking of wells, deepening of tanks, construction of Pachari Ghats, etc.

ii. **Education** : This includes opening of Adult Education, construction of school building/additional class rooms, repair and maintenance works in village schools, etc.

iii. **Roads and allied amenities** : This category includes construction of approach roads, culverts, electrification of roads, construction of passengers' waiting halls etc.

iv. **Health Facilities** : Under this category comes construction of building for health services, organisation of eye camps, providing vaccines such as Triple Antigen and Polio Vaccines, distribution of Vitamin tablets etc.

3. Most of the villages in the peripheral area of Plants of SAIL have a significant SC/ST population. Thus, the peripheral development works of SAIL directly contribute to the welfare of the weaker sections of the society.

2. Rashtriya Ispat Nigam Ltd. (RINL)

Manpower

As on 31.3.1996, out of total manpower of 17,642,2876 employees belong to SC Category (16.30%), 1,024 employees belong to ST Category (5.80%) and 3,016 employees belong to OBC (17.10%). Moreover, there are 408 women (2.31%), 77 physically handicapped (0.44%) and 266 ex-servicemen (1.51%).

House allotment

In the company's Townships at

Visakhapatnam and Mines, SC and ST employees are provided reservation to the extent of 10% of houses in A and B Types, LIG houses and Executive Flats and 5% in respect of C and D types and MIG houses.



Scholarships

In order to promote talents among SCs/STs, a scholarship scheme exclusively for the children of SC/ST employees has been introduced. Under the scheme, one scholarship of Rs.250/- per month and two scholarships of Rs.150/- per month are awarded each year. RINL has also launched a cash award scheme for the students of SC/ST communities under which First Merit Award of Rs.500/- and Second Merit Award of Rs.250/- are given every year to students passing Xth standard from each of the schools run in the company's township.

Training Programmes

In the training programmes conducted during 1995, SCs/STs were covered. The details are given in the following Table:

	Total No. of Employees covered	No. of Emp. covered in the categories of	
		SC	ST
Freshers Training	192	55	72
Foreign Training	98	8	1
Development Training	2294	478	119
Management Training	2533	275	39

3. National Mineral Development Corporation Limited (NMDC)

Manpower

The total number of employees in NMDC as on 31.3.96 was 6,802, out of which 1,099 persons belong to Scheduled Castes (16.15%), 1,152 to Scheduled Tribes (16.93%), and 382 OBCs (5.61%). More-over, there are 478 women (7.02%), 56 physically handicapped (0.82%) and 96 ex-servicemen (1.41%).

Other Welfare Measures

The Corporation gives facilities for promotion of education among the children of SCs/STs by offering scholarships in local Kendriya Vidyalayas and by providing free education facilities to children of tribals



who seek admission in project schools. A school exclusively for children of tribals is being run by the Corporation at the Bailadila-5 Project. All tribals residing in the project area are offered free medical facilities at the NMDC project hospitals.

Members of Scheduled Tribes avail of the service of the Project Cooperative Societies, even if they are not employees of the Corporation.

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

Training Programmes

In the training programmes conducted during the year 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-Servicemen)
1995(upto Oct.1995)	87	81	713

4. Manganese Ore (India) Limited (MOIL)

Social Commitment

For the upliftment of the weaker section, MOIL has provided Adult Education Classes. MOIL has also adopted a village called 'GONDI' near Ukwa Mine in Madhya Pradesh in which 90% of the population consists of

backward classes and tribals. In this adopted village MOIL has provided medical facilities, drinking water, roads and electricity.

Manpower

As on 31.3.1996, out of total manpower of 8,448, 1,517 employees belong to SC Category (17.95%), 2,187 employees belong to ST Category (25.88%) and 2,738 employees belong to OBC (32.41%). Moreover, there are 1,377 women (16.29%), 17 physically handicapped (0.20%) and 127 ex-servicemen (1.50%).

Training Programme

An Appreciation Programme on Reservation Policy on SC/ST/OBC had been organised on 17th & 18th April 1995 in which 24 employees participated.

5. Kudremukh Iron Ore Company Limited (KIOCL)

Manpower

The total number of employees in KIOCL as on 31.3.96, was 2,429, out of which 312 persons belong to Scheduled Castes (12.84%), 86 persons belong to Scheduled Tribes (3.54%), and 10 persons belong to OBC (0.41%). Moreover, there are 139 women (5.72%), 23 physically handicapped (0.95%) and 151 ex-servicemen (6.22%).

Welfare Measures

a) The Company has set up full fledged facilities at Kudremukh and Mangalore establishments by establishing modern township, hospital, recreation facilities etc. 10% type A & B quarters and 5% C & D type quarters are reserved for SC/ST employees.

b) 20% of the Merit cum Means Scholarship, 6 in number are reserved for children of the SC/ST employees for whom the qualifying standard of First class or 60%, whichever is higher, is relaxable to

50% in the aggregate.

Periodical meetings with SC/ST Representatives:

SC/ST cell meets the SC/ST Welfare Association periodically at Kudremukh, Mangalore and Bangalore. The Management representatives also meet the Welfare Association once in a quarter besides the CMD meeting them once in six months. The grievances of SC/ST employees are discussed and appropriate action is taken to redress their grievances.

Training Programme:

In the training programmes organised at periodic intervals, SC/ST/OBCs are also nominated alongwith others.

6. Bharat Refractories Limited (BRL)

Manpower

The total number of employees in BRL as on 31.3.1996 was 3,824, out of which 406 persons belong to Scheduled Castes (10.6%), 510 persons belong to Scheduled Tribes (13.3%) and 1,973 persons belong to OBCs (51.6%). Moreover, there are 170 women (4.4%), 26 physically handicapped (0.7%) and 80 ex-servicemen (2.1%).

Other Welfare Measures

1. Free Vaccination facilities are provided to the children of local inhabitants who mostly belong to the SC/ST/OBC as the units are located in the tribal belt of Chhotanagpur, Bihar.

2. A Health Centre has been constructed by Bhandaridah Refractories Plant and handed over to Government of Bihar. SC/ST/OBC people are largely benefitted as they constitute 70-80% of local population.

Training Programme

Regular training programmes are being

conducted with the cooperation of Central Board for Workers Education, in which adequate representation for SC/ST/OBC is given.

7. Sponge Iron India Limited (SIIL)

Manpower

The total number of employees in SIIL as on 31.3.1996 was 610, out of which 104 persons belong to Scheduled Castes (17.04%) and 56 persons belong to Scheduled Tribes (9.18%) and 134 persons belong to OBC (21.96%). Moreover, there are 37 women (6.06%), 9 physically handicapped (1.47%) and 1 ex-serviceman (0.16%).

Training Programme

During 1995-96 upto Nov., 1995, three in-house training programmes were conducted for employees wherein 16 Scheduled Castes and 8 Scheduled Tribes employees participated.

8. MSTC Limited

Manpower

As on 31.3.1996, out of total manpower of 285, 54 employees belong to SC Category (18.9%), 10 employees belong to ST Category (3.5%) and 6 employees belong to OBC (2.1%). Moreover, there are 39 women (13.68%), 4 physically handicapped (1.4%) and 4 ex-servicemen (1.4%).

Training Programmes

Fifteen SC/ST/OBC employees were sponsored for training programmes, both in-house and institutional, during the year.

9. Ferro Scrap Nigam Limited (FSNL)

Manpower

The total number of employees as on

31.3.1996 was 1,385, out of which 213 persons belong to Scheduled Castes (15.38%), 152 persons belong to Scheduled Tribes (10.97%) and 101 persons belong to OBC (17.29%). Moreover, there are 13 women (0.9%), 3 physically handicapped (0.22%) and 61 ex-servicemen (4.40%).

Training Programme

During the year, 28 Scheduled Castes, 26 Scheduled Tribes and 5 OBC employees received training.

10. Metallurgical & Engineering Consultants (India) Limited (MECON)

Manpower

As on 31.3.1996, out of total manpower of 3,600, 370 employees belong to SC Category (10.28%), 380 employees belong to ST Category (10.56%) and 156 employees belong to OBC (4.33%). Moreover, there are 237 women (6.58%), 18 physically handicapped (0.5%) and 147 ex-servicemen (4.08%).

11. Hindustan Steelworks Construction Limited (HSCL)

Manpower

As on 01.3.1996, out of total manpower of 14,584, 2,137 employees belong to SC Category (14.65%), 1,655 employees belong to ST Category (11.35%) and 1,347 belong to OBC Category (9.24%). Moreover, there are 960 women (6.58%), 45 physically handicapped (0.31%) and 186 ex-servicemen (1.27%).

Category-wise Employment

The category-wise employment of weaker sections in the PSUs under the Ministry is given in the following tables :-

NMDC - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	820	795	96.95	25	3.04	73	8.90	19	2.31	29	3.53	-	-	1	0.12
GROUP 'B'	1185	1122	94.68	63	5.31	99	8.35	54	4.55	39	3.29	8	0.7	17	1.43
GROUP 'C'	2970	2830	95.28	140	4.71	503	16.93	645	21.71	165	5.55	28	0.9	64	2.15
GROUP 'D'	1827	1577	86.31	250	13.68	424	23.20	434	23.75	149	8.15	20	1.09	14	0.76
TOTAL	6802	6324	92.97	478	7.02	1099	16.15	1152	16.93	382	5.61	56	0.82	96	1.41

MSTC - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	118	105	89.7	13	11.11	12	10.3	3	2.6	5	4.3	-	-	1	0.85
GROUP 'B'	53	43	81.13	10	18.87	10	18.87	3	5.66	-	-	2	3.77	3	5.66
GROUP 'C'	88	73	82.9	15	17.04	21	23.8	3	3.4	1	1.13	2	2.27	-	-
GROUP 'D'	26	25	96.2	1	3.85	11	42.3	1	3.85	-	-	-	-	-	-
TOTAL	285	246	86.3	39	13.68	54	18.9	10	3.5	6	2.1	4	1.4	4	1.4

MECON - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	2706	2598	96.01	108	3.99	243	8.98	103	3.81	118	4.36	04	0.15	10	0.37
GROUP 'B'	197	168	85.28	29	14.72	13	6.60	33	16.75	10	5.08	03	1.52	02	1.02
GROUP 'C'	648	570	87.96	78	12.04	106	16.36	223	34.41	27	4.17	10	1.54	133	20.52
GROUP 'D'	49	27	55.10	22	44.90	08	16.33	21	42.86	01	2.04	01	2.04	02	4.08
TOTAL	3600	3363	93.42	237	6.58	370	10.28	380	10.56	156	4.33	18	0.5	147	4.08

FSNL - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	137	137	100	-	-	10	7.30	4	2.92	3	2.19	-	-	3	2.19
GROUP 'B'	249	243	98	6	2	6	2.41	-	-	19	7.63	-	-	-	-
GROUP 'C'	995	988	99	7	1	193	19.40	148	14.87	79	7.94	3	0.30	58	5.83
GROUP 'D'	4	4	100	-	-	4	100	-	-	-	-	-	-	-	-
TOTAL	1385	1372	99.1	13	0.9	213	15.38	152	10.97	101	17.29	3	0.22	61	4.40

HSCL - As on 01.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	1578	1566	99.24	12	0.76	94	5.96	19	1.20	83	5.26	4	0.25	7	0.44
GROUP 'B'	572	555	97.03	17	2.97	70	12.24	10	1.75	70	12.24	7	1.22	7	1.22
GROUP 'C'	11516	10609	92.12	907	7.88	1793	15.57	1599	13.89	1051	9.13	24	0.21	52	0.45
GROUP 'D'	918	894	97.39	24	2.61	180	19.61	27	2.94	143	15.58	10	1.09	120	13.07
TOTAL	14584	13624	93.42	960	6.58	2137	14.65	1655	11.35	1347	9.24	45	0.31	186	1.27

KIOCL - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	497	477	95.97	20	4.02	48	9.65	14	2.81	5	1.00	0	-	6	1.20
GROUP 'B'	200	183	91.5	17	8.5	11	5.5	1	0.5	0	-	2	1.00	-	-
GROUP 'C'	1527	1442	94.43	85	5.59	208	13.62	42	2.75	3	0.19	21	1.38	141	9.25
GROUP 'D'	205	188	91.70	17	8.29	45	21.95	29	14.14	2	0.97	0	-	4	1.95
TOTAL	2429	2290	94.3	139	5.7	312	12.84	86	3.54	10	0.41	23	0.95	151	6.22

MOIL - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	217	211	97.23	6	2.76	16	7.37	4	1.84	14	6.45	1	0.46	1	0.46
GROUP 'B'	185	166	89.72	19	10.27	16	8.64	6	3.24	25	13.51	-	-	2	1.08
GROUP 'C'	1905	1808	94.90	97	5.09	348	18.26	404	21.20	488	25.61	3	0.15	5	0.26
GROUP 'D'	6141	4886	79.56	1255	20.43	1137	18.51	1773	28.87	2211	36.00	13	0.21	119	1.93
TOTAL	8448	7071	83.70	1377	16.29	1517	17.95	2187	25.88	2738	32.41	17	0.20	127	1.50

BRL - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	332	328	98.8	4	1.2	8	2.4	8	2.4	43	13.0	1	0.3	4	1.2
GROUP 'B'	266	261	98.1	5	1.9	17	6.4	7	2.6	108	40.6	-	-	3	1.1
GROUP 'C'	2192	2104	96.0	88	4.0	204	9.3	227	10.3	1214	55.4	12	0.5	21	1.0
GROUP 'D'	1034	961	92.9	73	7.1	177	17.1	268	25.9	608	58.8	13	1.3	52	5.0
TOTAL	3824	3654	95.6	170	4.4	406	10.6	510	13.3	1973	51.6	26	0.7	80	2.1

SIIL - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	109	109	100	NIL	NIL	15	13.76	1	0.91	3	2.75	NIL	NIL	NIL	NIL
GROUP 'B'	92	87	94.56	5	5.43	15	16.3	5	5.43	11	11.95	1	1.08	-	-
GROUP 'C'	242	228	94.21	14	5.78	39	16.11	22	9.28	69	28.51	3	1.26	1	0.42
GROUP 'D'	167	149	89.22	18	10.77	35	20.95	28	16.86	51	30.53	5	3.01	-	-
TOTAL	610	573	93.93	37	6.06	104	17.04	56	9.18	134	21.96	9	1.47	1	0.16

RINL - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	2679	2568	96.36	111	4.14	385	14.37	133	4.96	142	5.30	-	-	-	-
GROUP 'B'	2167	2119	97.78	48	2.22	336	15.51	50	2.31	453	20.90	08	0.37	32	1.48
GROUP 'C'	9574	9389	98.07	185	1.93	1607	16.79	601	6.728	1704	17.80	33	0.34	113	1.18
GROUP 'D'	3222	3158	98.01	64	1.99	548	17.01	240	7.45	717	22.25	36	1.12	121	3.76
TOTAL	17642	17234	97.69	408	2.31	2876	16.30	1024	5.80	3016	17.10	77	0.44	266	1.51

SAIL - As on 31.3.96

Classification of Posts	Total No. of Employees	Men		Women		SC		ST		OBC		Physically Handicapped		Ex-Servicemen	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
GROUP 'A'	21677	20976	96.77	701	3.23	1563	7.21	581	2.68	280	1.29	25	0.11	40	0.18
GROUP 'B'	40332	37672	93.40	2660	6.60	2511	6.21	1715	4.25	3214	7.97	80	0.20	43	0.11
GROUP 'C'	155670	148756	95.55	6914	4.45	23452	15.06	18372	12.04	6849	-	-	-	-	-
GROUP 'D'	3915	2726	69.63	1189	30.37	3268	83.47	270	6.90	28	0.71	5	0.13	19	0.48
TOTAL	221594	210130	94.83	11464	5.17	30794	13.90	21138	9.54	10371	4.68	638	0.29	2499	1.13

1. The Ministry continued its efforts for greater use of Hindi in official work during the year 1995-96 keeping in view the Annual Programme prepared by the Department of Official Languages (Ministry of Home Affairs) for implementation of the Official Language Policy of the Union.

2. The work relating to the progressive use of Hindi in the Ministry of Steel is under the administrative control of a Joint Secretary and is looked after by a Deputy Secretary. The Hindi Section consists of a Deputy Director, a Senior Translator, three Junior Translators and two LDCs. There are 57 Devnagari Typewriters including 29 bilingual electronic Typewriters. Adequate reading material in Hindi is available in the Departmental Library of the Ministry. A number of measures have been taken for the promotion of progressive use of Hindi in the Ministry and in the Office of the Development Commissioner for Iron and Steel.

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

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

(b) An inspection team of the Ministry oversees the status of implementation of the provision of the Official Language Act/Rules in its attached office and Public Sector Undertakings under the administrative control of the Ministry. In the year under review this inspection team had made 30 such inspections.

4. Official Language Implementation Committee

There is an Official Language Implementation Committee under the Chairmanship of

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

5. Hindi Salahkar Samiti

In accordance with Government instructions, the Ministry of Steel has constituted a Hindi Salahkar Samiti. Besides Members of Parliament, senior officers of the Ministry of Steel, Chairman-cum-Managing Directors of Undertakings, and eminent persons working for the propagation of Hindi are also its members. A meeting of this Samiti was held on 9.6.95 under the chairmanship of Minister of State for Steel.

6. Rajbhasha Shield Trophies

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

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

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

8. Incentive Scheme for Original Work in Hindi

The cash incentive scheme for Original work in Hindi introduced by the Department of Official Languages is being implemented in the Ministry. Nine Persons have been given cash prizes under the incentive scheme during the year.

9. Cash Prizes Scheme for Dictation in Hindi

An incentive scheme for Officers for giving dictations in Hindi is in operation in this Ministry. Two cash prizes of Rs.1000/- each, separate for Hindi speaking and Non-Hindi speaking officers are given.

10. Award for writing of Hindi Books

A Scheme for awarding cash prizes for writing technical books in Hindi on the various disciplines related to the Steel Industry and allied subjects is also in operation in the Ministry. The amount of awards has been raised to Rs.15,000/-, Rs.10,000/- and Rs.7,500/- for First, Second and Third prizes respectively from the award year 1993-94.

11. "Hindi Fortnight"

In order to encourage the use of Hindi in Official Work amongst Officers/Employees of the Ministry, a "Hindi Fortnight" was observed from 7th Sept., to 21st Sept., 1995. An appeal was issued by the Hon'ble State Minister for Steel exhorting staff of the Ministry and the Public Sector Undertakings to increase the use of Hindi in Official Work. During this period, Hindi Essay writing, Hindi typing, and Hindi Stenography competitions were conducted and prizes awarded.

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

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

Training Course	No. of Trained Persons
(a) Hindi Typing	6
(b) Hindi Stenography	16
(c) Hindi Training	-
(i) Total No. of Employees/ Officers (Group A,B & C)	180
(ii) Total No. of Employees/ Officers possessing working knowledge of Hindi	166

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

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

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

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