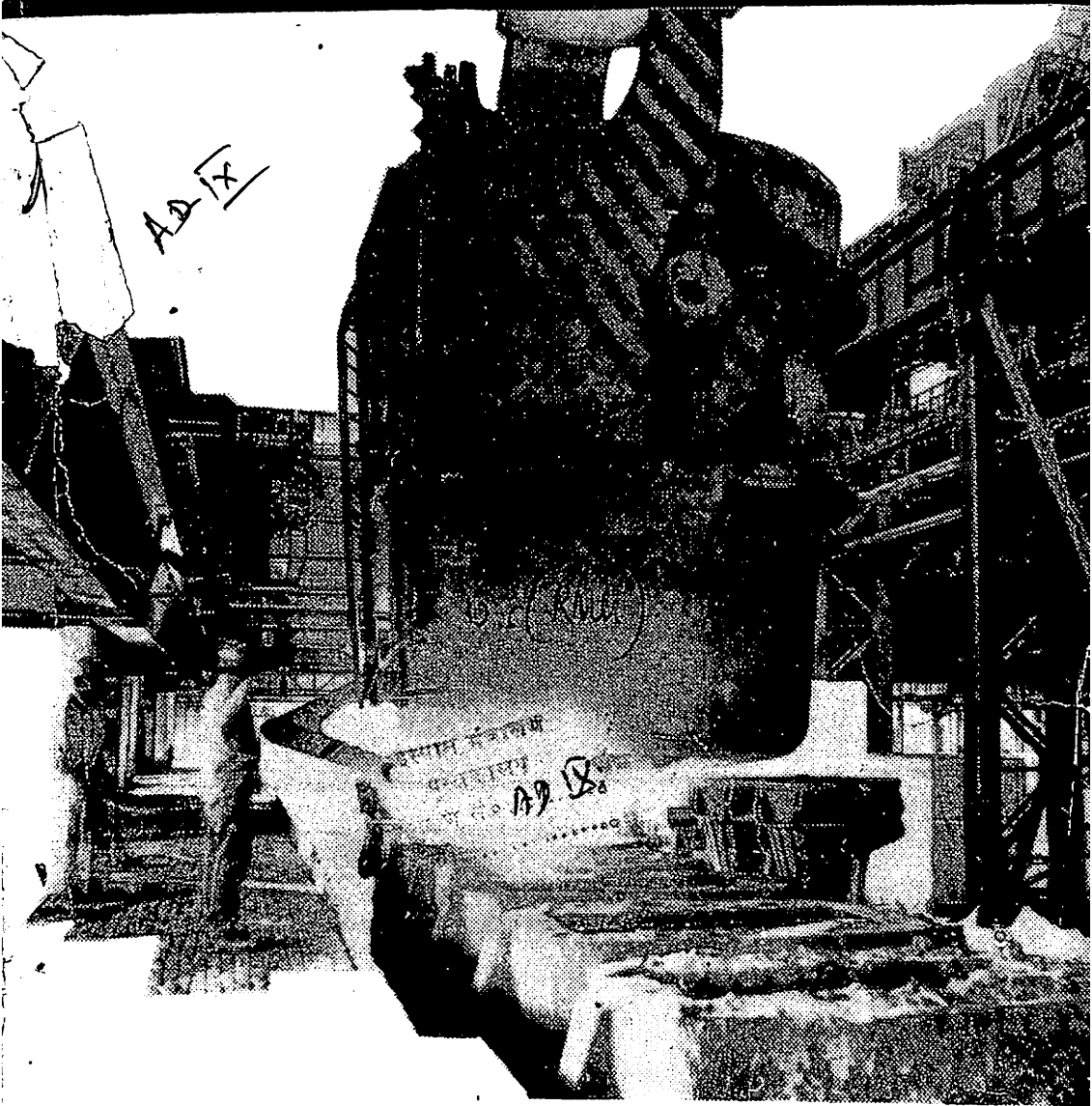




REPORT 1984-85



GOVERNMENT OF INDIA
MINISTRY OF STEEL, MINES & COAL
DEPARTMENT OF STEEL
NEW DELHI

REPORT

1984-85

इस्पात मंत्रालय
पुस्तकालय
पंजीकरण सं० AD.१४
दिनांक.....



GOVERNMENT OF INDIA
MINISTRY OF STEEL, MINES AND COAL
DEPARTMENT OF STEEL
NEW DELHI

PREFACE

This Report is divided into two parts.

Part I presents an overall picture of the Department of Steel highlighting, *inter alia*, planning and development in the steel Sector

Part II covers the activities and the performance of the organisations/undertakings under the Department of Steel during the year.

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PART I

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CHAPTER I

Department of Steel—Main functions and Organisational structure.

1. MAIN FUNCTIONS

1.1 The Ministry of Steel, Mines and Coal has three wings—Departments of Steel, Mines and Coal. The Department of Steel is responsible for the planning and implementation of policies for production, distribution and import and export of iron and steel. This encompasses planning and development for the iron and steel industry both in the public and private sectors, the development of essential inputs such as iron ore, limestone, dolomite, manganese ore, chromite etc., the formulation of import and export policies in respect of pig iron, steel and ferro-alloys and other related functions. The iron and steel industry includes the integrated steel plants, the electric arc furnace units, re-rolling mills, wire drawing units, producers of cold rolled strips and skelp, tin plane manufacturers, ferro-alloy producers and units making special and alloy steels. A list of subjects allocated to the Department of Steel is given in Annexure 1A.

2. ORGANISATIONAL STRUCTURE

2.1 The Department of Steel has a Secretary, four Joint Secretaries, four Directors, four Deputy Secretaries, seven Under Secretaries, one Senior Analyst and one Deputy Controller of Accounts. The two Departments of Steel and Mines have a common Financial Adviser of the status of Additional Secretary and a common Controller of Accounts. A Technical Wing consisting of an Industrial Adviser, four Development Officers and three Assistant Development Officers assists and advises the Department on technical matters. The size of the Secretariat of the Department continues to be small with a total strength of only 315. A statement showing the representation of women, Scheduled Castes and Scheduled Tribes, Ex-servicemen and the physically

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CHAPTER I

Department of Steel—Main functions and Organisational structure.

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2.2 One of the Deputy Secretaries in the Department acts as the Liason Officer for watching the interests of Scheduled Caste and Scheduled Tribe employees in service matters. One of the Under Secretaries functions as the Welfare Officer of the Department. There is a Complaint Cell in the Department to receive public complaints and grievances and to ensure that these are dealt with promptly.

2.3 The Department of Steel has only one attached office, viz., the Office of the Iron and Steel Controller at Calcutta. The Iron and Steel Controller, who is of the status of a Joint Secretary, is assisted by two Joint Controllers, 4 Deputy Controllers, 7 Assistant Controllers, one Industrial Adviser, two Development Officers and one Assistant Development Officer in the Head office. Besides this there is a Hindi Officer to implement the provisions of Official Language Act. There are six regional offices with Regional Iron and Steel Controllers at Bombay, Calcutta, Hyderabad, Kanpur, Madras and New Delhi. The details of the employees of the Iron and Steel Control Organisation are given in Annexure 1C.

2.4 The Department of Steel has sixteen Public Sector Enterprises under its administrative control. A list of these Enterprises is given in Annexure 1D. There is also a Mineral Development Board which is the centralised agency for ensuring systematic, coordinated and integrated development of ferrous and other designated strategic minerals.

USE OF HINDI IN OFFICIAL WORK

Provision of Hindi Devanagari Typewriters

1. The position regarding provision of Hindi typewriters in respect of Main Office of the Iron & Steel Control and five Regional Offices is as follows :—

	Hindi Type- writers	Remarks
Main Office	3*	*Out of 3 typewriters, 1 has been borrowed from Regional Iron & Steel Controller, Calcutta.
Regional Office, Calcutta		
Regional Office, Kanpur	1	
Regional Office, New Delhi	1	
Regional Office, Bombay	1	
Regional Office, Hyderabad	1	

Check points for effective implementation of Official Language have been devised and are being followed strictly.

2. 4 days' Hindi Workshop was organised in the last year, i.e. March, 1984, for imparting practical training in noting and drafting to the employees having working knowledge of Hindi to enable them to overcome their hesitation to work in Hindi. Similarly Hindi Day on 14th September, 1984 was also celebrated for creating awareness regarding progressive use of Hindi among the staff.

3. The position regarding progressive use of Hindi in the work of this office was found to be very satisfactory by the Parliamentary Committee as well as inspection team of Department of Steel during their inspection.

ANNEXURE—IA

LIST OF ITEMS OF WORK ALLOCATED TO THE DEPARTMENT OF STEEL

1. Steel plants in the public and private sectors, the re-rolling industry and ferro-alloys including all future development.
2. Development of iron ore mines in the public sector.
3. Development of other ore mines and coal washeries and Mineral processing for the steel plants.
4. Production, distribution, prices, imports and exports of iron and steel and ferro-alloys.
5. Planning development and control of, and assistance to, all iron and steel industries.
6. Production, supply, pricing and distribution of iron ore, manganese ore limestone, sillimanite, kyanite and other minerals and alloys used in the steel industry, excluding grant of mining leases or matters connected therewith.
7. The Steel Authority of India Limited and its subsidiaries.
8. Matters relating to the following undertakings namely :—
 - (1) The Visvesvarayya Iron and Steel Company Limited.
 - (2) The Bolani Ores (India) Limited.
 - (3) The Manganese Ore (India) Limited.
 - (4) The Metal Scrap Trade Corporation Limited.
9. Other Public Sector Enterprises or Undertakings falling under the subjects included in this list except such as are specifically allotted to any other Department.
10. All attached or subordinate offices or other organisations concerned with any of the subjects specified in this list.

ANNEXURE—IB

Statement showing the number of employees, number of SC/ST, physically handicapped, Ex-servicemen, men & women as on 31-12-1984 in respect of the Secretariat of the Department of Steel.

Group of posts	Number of employees	Men	Women	SC	ST	Physically handicapped	Ex-servicemen
Group A .	34	32	2	2	..	..	..
Group B .	87	82	5	10	1	..	..
Group C .	126	93	33	15	3	1	2
Group D .	68	66	2	24	9	1	2
Total . .	315	273	42	51	13	2	4

ANNEXURE—IC

Statement showing the number of employees, number of SC/ST, physically handicapped, Ex-servicemen, men & Women as on 31-12-1984 in respect of Iron & Steel Control Organisation.

Group of Posts	Number of employees	Men	Women	SC	ST	Physi- cally handi- capped	Ex-ser- vicemen
Group A	24	24	..	2	..	..	..
Group B	30	30	..	16	..	..	..
Group C	178	148	30	25	7	3	6
Group D	87	85	2	22	3	1	2
Total	319	287	32	65	10	4	8

ANNEXURE—ID

List of Public Sector Enterprises under the Department of Steel.

1. Steel Authority of India Limited.
2. Indian Iron & Steel Company Limited (Subsidiary of Steel Authority of India Limited).
3. Metallurgical & Engineering Consultants (India) Limited.
4. Hindustan Steelworks Construction Limited.
5. Kudremukh Iron Ore Company Limited.
6. National Mineral Development Corporation Limited.
7. Manganese Ore (India) Limited.
8. Bharat Refractories Limited.
9. Indian Firebricks & Insulation Company Limited (a Subsidiary of Bharat Refractories Limited).
10. Metal Scrap Trade Corporation.
11. Ferro Scrap Nigam Limited (A Subsidiary of MSTC).
12. Sponge Iron India Limited.
13. IISCO Stanton Pipe & Foundry Company Limited (a Subsidiary of Indian Iron & Steel Company Limited).
14. Rashtriya Ispat Nigam Limited.
15. Neelachal Ispat Nigam Limited.
16. Vijayanagar Steel Limited.

CHAPTER 2

Planning and Development in the Steel Sector

(1) Steel industry occupies a very crucial place in the industrial development of a country, since it caters to the needs of the basic input materials for many diverse industries and various sectors of economy. The Indian steel industry, therefore, also occupies a place of prime importance in the strategy for overall industrial development of the country. Today, there is hardly any sector of the national economy like engineering, ship building, automobile and construction industry etc. which does not owe its dependence to an assured availability of the steel and on whose availability the growth prospects of these sector depend.

(2) Indian Steel Industry has witnessed a phenomenal growth consistent with the need of the country since the country became independent in 1947. In 1947, India had only two integrated steel plants the manufacturer of steel in bulk M/s. Tata Iron and Steel Company, Jamshedpur with a capacity of 1 MT and M/s. Indian Iron and Steel Company, Burnpur with a capacity of 0.3 MT per annum. These plants were based on foreign technology but were financed from indigenous sources.

(3) With the planned development of the country based upon the Five Year Plans consistent with overall national priority, the Government decided during the Second Five Year Plan period (1956—61) to shift the emphasis from agriculture to industrialisation. As a consequence, it was decided to set up three integrated steel plants of 1 MT ingot steel capacity each in the public sector to be located at Rourkela, Bhilai and Durgapur. These steel plants were built with the assistance of technologically advanced countries viz. West Germany, U.S.S.R. and U.K. respectively. At the same time, the existing steel plants of Tata Iron and Steel Co. and Indian Iron and Steel Co. were expanded to 2.0 and 1.0 MT capacity respectively.

(4) Steel capacity in the public sector was conceived for further expansion during the 3rd Five Year Plan. The existing capacities expanded were Durgapur to 1.6 MT, Rourkela to 1.8 MT and Bhilai to 2.5 MT. Yet another Steel Plant at Bokaro with an initial capacity of 1.7 million ingot tonne was planned with USSR collaboration.

(5) The present installed capacity of the six integrated steel plants in the country is 11.4 million ingot tonnes. The capacities of Bhilai and Bokaro steel plants are being increased to 4 million ingot tonnes each. In addition, Tata Iron and Steel Co. is being modernised in two stages. The first stage of 2.16 million ingot tonne has already been commissioned. Considering the existing capacity and expansion programmes under implementation, the capacity with the integrated steel plants would increase to about 14.5 MT.

(6) Realising the key place which the Iron and Steel Industry occupies in the country overall economic development, due priority is given to the research and development activities pertaining to the steel industry. The Research and Development Organisation of the Steel Authority of India Limited has been entrusted with the task of coordinated implementation of the R&D plans and various projects have been identified with the ultimate aim of achieving self reliance through increased productivity, import substitution, cost reduction and development of new processes and technologies in the manufacture of iron and steel. A high level Scientific Advisory Committee has also been set up to examine all aspects of science and technology in the iron and steel manufacturing industry, not only with a view to developing the domestic capabilities but also to achieve scientific excellence.

(7) Emphasis has also been given on the development of electric arc furnace units who are supplementing the availability of steel produced by the integrated steel plants. This sector of steel making enjoys the advantages of lower capital investment shorter gestation period, flexibility with regard to the quality mix, possibility of meeting regional demands etc. The present licensed and installed capacities for the mini steel plants in terms of ingots/billets is 4.78 and 4.15 million tones respectively. Presently, there are 176 mini steel plants holding licences/Letter of Intents out of which 149 numbers of units have already been installed. This sector produces mild steel as well as alloy, special and stainless steels. The estimated production during the current year is about 2.2 M.T.

(8) In the 6th Five Year Plan 1980—85 main emphasis has been placed on expeditious completion of the expansion programme mainly at Bhilai and Bokaro Steel Plants. Several steps have been taken to improve the performance of steel plants. The steps include improving and maximising infrastructural support

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to the plants, production of special, critical items to satisfy the market demand, import of low ash coking coal, improving quality of washed coking coal etc. Emphasis has been laid on planning and implementing capital repairs and maintenance schedule in order to maintain equipment in good health. Steps have also been taken for modernisation and refurbishing of existing obsolete equipment, adopting latest technologies, improving and adhering to norms of techno-economic parameters in operations and technological regimes. The plan also envisages the setting up of a new steel plant at Visakhapatnam.

(9) The draft Working Group Report on Iron and Steel industry for the 7th Five Year Plan (1985—90) has placed the demand of saleable steel in the country at a level of 10.808 million tonnes during 1984-85 and 13.856 MT by 1989-90. The total availability of saleable steel has been planned to increase from 9.187 MT per year in 1984-85 to 13.020 MT per year in the year 1989-90. The initial estimates of demand of saleable steel have also been indicated as 17.6 MT and 22.5 MT in the terminal years 1994-95 and 1999-2000 A.D. respectively.

(10) Important schemes under implementation/consideration are as follows :—

- (i) Expansion of Bhilai and Bokaro Steel Plants to a capacity of 4.0 million ingot tonnes each.
- (ii) Salem Steel Plant with an annual capacity of 32,000 tonnes of cold rolled stainless steel sheets based on imported hot rolled bands. The project has since been commissioned.
- (iii) Visakhapatnam Steel Project of 3.25 million ingot tonnes capacity, in two over lapping stages.
- (iv) Modernisation of Tata Iron and Steel Company to increase the existing capacity of 2.0 million ingot tonnes to 2.16 million ingot tonnes. This modernisation scheme has since been completed. The capacity is further proposed to be expanded to 2.30 million tonnes of ingot through second phase of modernisation.
- (v) Increase in the capacity of Alloy Steels Plant, Durgapur from 1,00,000 tonnes to 1,60,000 tonnes of alloy steel ingots and ultimately to 2,60,000 tonnes of

liquid steel under its expansion/modernisation programme. The first stage of 1,60,000 tonnes of alloy steel ingots has since been commissioned.

- (vi) A project to produce 37,500 tonnes per annum of cold rolled grain oriented electrical steel sheets and 36,000 tonnes per annum of cold rolled non-grain oriented steel sheets at Rourkela Steel Plant. The trial commissioning of the project has been done.
- (vii) Modernisation of Rourkela and Durgapur Steel plants to have increased productivity with minimum investment.
- (viii) A task Force has been constituted on Bhilai and Bokaro Steel Plants to enable these plants to produce according to the installed capacity on sustained basis.
- (ix) Pelletisation Plant of 3.0 million tonnes/annum Mangalore, based on iron ore concentrate from Kudremukh Iron Ore Project.
- (x) A Direct Reduction Pilot Plant with a capacity of 10 tonnes per day, using solid reductant, i.e. non-coking coal, as an R&D Project to SAIL.
- (xi) Additional Power generation capacity at Bokaro (3 x 60 MW), Durgapur (2 x 60 MW), Rourkela (2 x 60 MW) and Bhilai (3 x 60 MW).

(11) Details of Undertakings/Plant-wise progress of Capital Expenditure for Central Sector are shown at Annexure I.

(12) To prepare a long term profile for the development of Iron and Steel Industry upto the turn of century, 2000 A.D., a Working Group has also been constituted. The broad terms of references of this Working Group are as follows :—

- (a) To formulate a perspective plan for the development of steel industry in the country upto the turn of the century, taking into account among other factors, particularly the following :—
 - (i) the demand and its likely pattern;
 - (ii) the need to provide infrastructural support to other sectors of economy;

(iii) the infrastructural support, viz., raw materials, power, transportation facilities that could be required and the financial resources necessary for implementation of the steel development plan;

(iv) the technological options that may be available and the strategy most suited to Indian conditions.

(b) To suggest measures that may be adopted for development of such manufacturing, technological and managerial capabilities as may be required for implementing the development plan.

The outcome of this Working Group is under various stages of scrutiny/assessments.

ANNEXURE-1

UNDERTAKING/PLANT-WISE PROGRESS OF CAPITAL EXPENDITURE FOR CENTRAL SECTOR

(Rs. in crores)

Sl. No.	Name of the Undertaking	Approved outlay 1984-85	Revised outlay 1984-85	Approved outlay 1985-86
1	2	3	4	
A. IRON AND STEEL				
1. Steel Authority of India Ltd.				
(i)	Bhilai Steel Plant	176.00	240.12	245.00
(ii)	Rourkela Steel Plant	90.00	92.25	105.00
(iii)	Alloy Steels Plant	20.00	24.00	25.00
(iv)	Durgapur Steel Plant	49.00	44.00	62.00
(v)	Bokaro Steel Plant	137.00	177.43	155.00
(vi)	Salem Steel Plant	5.00	3.79	4.00
(vii)	R & D Centre	16.00	6.65	10.00
(viii)	Central Marketing Organisation	7.50	7.50	8.00
(ix)	Corporate Office & MTI	2.00	1.75	1.74
(x)	Indian Iron & Steel Co.	28.50	16.21	35.20
(xi)	IISCO — Ujjain	1.50	0.45	0.80
(xii)	Visvesvaraya Iron & Steel Ltd..	3.00	2.50	1.26
Total : SAIL		535.50	616.65	653.00
2.	Rashtriya Ispat Nigam Ltd.	480.00	652.35	215.00
3.	Vijayanagar Steel Ltd.	2.00	1.50	1.00
4.	Neelachal Ispat Nigam Ltd.	2.00	1.90	1.00
5.	Sponge Iron India Ltd.	4.00	4.30	3.20
6.	Hindustan Steelworks Construction Limited	4.00	6.00	3.00
7.	Metallurgical & Engg. Consultants Limited	3.50	3.50	3.80
8.	Bharat Refractories Ltd.	7.00	7.00	6.00
9.	Metal Scrap Trade Corporaton	1.00	..	1.00
10.	Tenughat Dam Project	1.00	1.00	1.00
11.	Mahandi Reservoir Project	1.00	1.00	1.00
Total : Iron and Steel		1041.00	1295.20	889.00

1	2	3	4	5
B. FERROUS MINERALS				
1. National Mineral Dev. Corpn.		23.25	22.72	17.37
2. Kudremukh Iron Ore Co. Ltd..		18.08	15.04	11.50
3. Manganese Ore India Ltd.		2.50	1.65	1.48
4. Mineral Development Board		0.70	0.65	0.65
5. Loans to Govt. of Karnataka		1.00	5.00	5.00
TOTAL : FERROUS MINERALS		45.78	45.06	36.00
TOTAL : DEPARTMENT OF STEEL		1086.78	1340.26	925.00

PART II

CHAPTER I

PRODUCTION

IRON AND STEEL

The 6 integrated steel plants produced 7.48 million tonnes of ingot steel during April '84 to Feb. '85 representing a 70 per cent of capacity utilisation. Steel Authority of India Ltd. plants produced 5.62 million tonnes of ingot steel representing 65 per cent of capacity utilisation.

2. The six integrated steel plants produced 6.18 million tonnes of saleable steel during April 84 to Feb. 85 representing a capacity utilisation of 75 per cent. Steel Authority of India Ltd. plants produced 4.64 million tonnes of saleable steel representing a capacity utilisation of 70 per cent.

3. The production could have been better but, for the basic input constraints i.e. power and coking coal, and to a limited extent rail transport which continued to affect performance this year as well. The worst affected were Rourkela Steel Plant, Durgapur Steel Plant & Bokaro steel Plant which were subjected to severe restrictions from OSEB, and DVC. These restrictions were particularly severe in the first quarter of the year.

4. *Measures taken to step up production*

To secure better supplies of coking coal and power, close liaison continues to be maintained with major input supplying agencies like Coal India Limited, DVC, State Electricity Boards and the Railways. Infrastructure Coordination Committee have been set up at the Plant level which include representative of Plants, Railways, Coal India Limited and concerned power supplying agencies as members to sort out problems of input supplies. Captive power generation is being augmented at the Steel Authority of India Ltd. steel plants by 600 MW, which, when commissioned in phases between 1985-86 would take care of the power requirement of these plants upto the mother mill stage.

Equipment maintenance has also received close attention during the year. Import substitution measures pursued during the year helped to indigenise another five hundred items leading to saving of about Rs. 2 crores in foreign exchange.

5. Production of saleable steel from Alloy Steels Plant during 1983-84 was 43,690 tonnes. Salem Steel Plant produced 6,920 tonnes of saleable steel during that year. Salem Steel Plant produced 11,520 tonnes of saleable steel during the period April 84 to Dec. 84.

6. Mini steel plants alongwith the re-rolling mills are playing an important role in the Indian Economy. Integrated steel plants produce mainly mild steel in bulk quantities. Electric Arc furnaces produce alloy, special and stainless steel in addition to mild steel.

At present 153 units have been given Industrial/Carry on Business licences with a total capacity of 3.89 million tonnes of steel ingots/cast billets per year. Out of these 150 units with a capacity of 3.94 million tonnes have been commissioned and started commercial production. In addition to this, 18 existing units and 15 new units have been issued letter of intent for a further capacity of 0.85 million tonnes per year. Besides these, there are about 50 electric arc furnaces units under DGTD having Industrial/COB licences for manufacture of steel castings. These units also produce some quantity of steel ingots by way of diversification.

7. There are 71 steel wire drawing industrial units in medium and large scale sector with a licensed capacity of about 0.84 million tonnes per year. In addition to this about 600 units are reported to be in existence in the small scale sector having an estimated installed capacity of about 0.8 million tonnes.

The production performance of these units as a whole showed a marked decline during 84-85 due to lack of demand. High Carbon steel wire rods for stringent application, low medium and alloy steel wire rods which are not available indigenously are being allowed to be imported as required.

8. Tinplate Industry

Besides Rourkela Steel plant, there are two more units in the private sector for production of tinplates. Total capacity of these three units is 0.3 million tonnes of electrolytic tinplate per year. All these 3 units use imported tin mill black plates

as their raw material. The production of tinplates during 1983-84 was 71,000 tonnes and from April 1984 to December 1984 it was 66,000 tonnes.

9. Ferro Alloys

At present there are 24 licensed units having a total capacity of 0.59 million tonnes per year for production of ferro manganese, ferro silicon ferro chrome including charge chrome, ferro vanadium, ferro molybdenum.

10. Pig Iron

In addition to Integrated Steel Plants 2 units are having industrial licence for a total licensed capacity of 0.136 million tonnes per year. One more unit has also been issued letter of intent with a capacity of 0.15 million tonnes per year. At present only one unit is on production. The other unit have stopped production due to power scarcity as well as low indigenous demand. Production of pig iron by the units in the private sector in 1983-84 was 75,000 tonnes and from April 1984 to September 84 it was 24,000 tonnes.

11. Ferro Alloys

The production of Ferro Alloys in 1983-84 was 2.65 lakh tonnes as against the production of 2.55 lakh tonnes in 1982-83.

12. Raw Material

National Mineral Development Corporation

The total targetted production of lump plus fines from Bailadila—14 during April to December 1984 has been achieved with actual production at 18.71 lakh tonnes against the target of 18.74 lakh tonnes. The target of production from Bailadila—5 during April to December, 1984 has also been fulfilled i.e. 30.89 lakh tonnes. Production at Donimalia during April to December 1984 was higher than the target i.e. the production of 14.55 lakh tonnes was achieved against the target of 13.76 lakh tonnes. The recession in the international steel industry particularly in Japan (the principal buyer of Indian iron ore) continues. However, there are signs of slow recovery in the coming years.

13. Kudremukh Iron Ore Company Limited

The company planned a production of 1.65 million tonnes of iron ore concentrate during 1984-85. Against this, in the period April—December 1984 it has already achieved a production of 1.245 million tonnes. For 1985-86 the company has planned a production of 2.50 million tonnes of Concentrate and 0.50 million tonnes of pellets. During 1984-85 the despatches of concentrate to Romania, Czechoslovakia and Bahrain are planned at 1.65 million tonnes against which the company has already despatched 1.302 million tonnes.

14. Bharat Refractories Limited

Bharat Refractories limited and its subsidiary IFICO produced 66,899 tonnes of refractories bricks in 1983-84 and have produced 47,290 tonnes of the material from April 1984 to Jan. 1985.

15. Manganese Ore (India) Limited

In 1983-84 Manganese Ore (India) Limited produced from its various mines 4,43,811 tonnes of ore of various grades against the target of 4,25,000 tonnes, as compared to 4,71,299 tonnes during 1982-83. From April to December 1984 the company produced 3,08,880 tonnes of manganese ore against the target of 3,09,271 tonnes.

16. Sponge Iron India Limited

The production of sponge iron during 1983-84 was 28,196 Metric Tonnes against a target of 28,500 Metric Tonnes representing capacity utilisation of 94 per cent. For the year 1984-85 the production target was revised from 28,500 metric tonnes to 25,000 metric tonnes representing capacity utilisation of 83 per cent. The actual production for the period April to November 1984 was 13,002 metric tonnes.

CHAPTER II

2.1 Availability, Distribution and Supply

2.1.1 Table below gives the availability of iron and steel to the home market during 1983-84 and April—December, 1984 as compared to April—December, 1983.

	('000 tonnes)			
	Pig iron		Steel	
	1983-84	April—December 1983	1983-84	April—December 1984
1. Production :				
(a) Main Producers .	1407.5	979.0	837.8	6385.2
(b) Secondary Producers* .	74.9	52.2	54.3	2041.7
2. Import arrivals (canalised) .	217.0	164.6	0.4	594.6
3. Total (1+2) .	1699.4	1195.8	892.5	9021.5
4. Exports .	..	..	..	24.4
5. Net availability (3-4) .	1699.4	1195.8	892.5	8997.1
				6337.6
				6458.8

*Estimated—

It is estimated that during the entire year production of saleable steel would be about 7.24 million tonnes and that of pig iron 1.28 million tonnes.

Though there was an overall increase in availability of steel mainly due to the increased production by integrated steel plants, shortages were felt in certain types of flat products like HR Coils/Skelp, CR Coils/Sheets as a result of pick up in their demand. Availability of pig iron posed no problems. The available quantity is expected to be more than sufficient in view of the present offtake pattern.

2.1.2 Strategy to meet the home requirements and to ensure fair distribution of available material

In order to meet the increased demand of some flat products and rationalising the distribution of others, the following changes were introduced in the distribution guidelines of the Joint Plant Committee (JPC) during the year under report.

1. Relaxations of end use restrictions under the relevant clauses of the Iron & Steel (Control) Order, 1956 which had been granted in earlier years were withdrawn with effect from 19/21 Nov., 1984.

इसका मंत्रालय
परामर्श
को अध्यक्ष
ADP...

2. An entitlement formula based on the best offtake in any of the last three years was introduced for distribution of H. Coils/Skelp. CR Coils/Sheets and billets. For units with no past offtake, the entitlement of the material is to be fixed by the Iron & Steel Controller.
3. JPC allocations to priority sectors which were earlier restricted only to a few sections, and sized of plates and structurals, in view of the easy availability of other categories, have been restored in respect of all categories of steel commencing from January, 1985.
4. The Iron and Steel Controller continues to be responsible for monitoring production, despatches, supplies and imports. Prompt corrective action, if any, is to be taken by SAIL on the basis of his recommendations.

In addition to these changes, the following measures introduced in the previous years were continued in the current year also.

1. Associating rerollers for production of light sections of structurals. Under this scheme, tested billets are supplied to priority sectors who get these converted from rerollers into lighter sections of structurals on payment of remuneration fixed by SAIL.
2. Associating rerollers of bars and rods to supplement SAIL's production of these items. Under this scheme, rerollables are supplied by SAIL to identified rerollers and bars and rods produced by them are marketed by SAIL.
3. Inter-stockyard transportation of certain categories of steel at producer's cost subject to prior sale in order to ensure better consumer satisfaction and to remove imbalances in regional availability.
4. Throwing open sale of steel to all those interested in trading in steel. Under this scheme, the details of material available for sale are exhibited on the notice boards of branch sales offices of SAIL. Any trader can apply for material provided the quantity is not less than one truck load.

5. Strengthening of marketing organisation in the plants and regions to facilitate the marketing of products and to meet consumers demand.

The system for settlement of complaints from consumers has been streamlined to provide for full customer satisfaction. It has been made a standing item for inclusion in the agenda for SAIL Board meetings so that the shortcomings of the system could be discussed and corrective action taken to improve it further.

2.1.3 Distribution procedure for steel

Priority sectors under Status Group 'A' like Defence, Irrigation, Power, P&T, Railways and EEPC units are allocated steel annually by the Joint Plant Committee. Allocations to the Small Scale Industries Corporations are now done by the Iron and Steel Controller. Consumers other than these have to register their requirements with main producers/their branch sales offices for supplies of all items. Small Scale Units are normally to register their demand with their respective SSICs. However, small scale units having an offtake of more than 100 tonnes or more during any quarter during the past 5 years have been given option of receiving supplies either from main producers directly or through their respective SSICs. Apart from this, small scale units in the State of Jammu & Kashmir and the Union Territory of Delhi have an option to receive their supplies either through their SSICs or directly from the main producers.

2.1.4 Distribution of Pig Iron

The Iron and Steel Controller/Joint Plant Committee makes allocation of pig iron to consumers under Status Group 'A', Railway Sleeper Manufacturers and Spun Pipe Manufacturers taking into account their past offtake, projected demands and availability. DGTD units having foundries obtain their requirements directly from the plants/stockyards. The entitlement formula of individual units is "best year's offtake during the five years from 1976-77 to 1980-81 or 20 per cent of licensed capacity whichever is higher". Essentiality Certificates issued in favour of foundries by Government Departments/Undertakings are also entertained by the stockyards.

Supplies of pig iron to the SSI Units continue to be routed through the SSI Corporations except in the State of Tamil Nadu where the State SSI Corporation is not handling the

material. Registered Associations/Cooperative Societies can also get direct supplies of pig iron, both indigenous and imported from the producers for distribution to their member small scale units on being sponsored by the State Director of Industries and out of their State Corporation's allocation.

2.1.5 Small Scale Industries Corporations—Allocations and Supplies of iron and steel

Allocations of iron and steel to Small Scale Industries Corporations are made by the Iron & Steel Controller annually. The table below indicates the allocations to and offtake by supplies of iron and steel to the Small Scale Industries Corporations in 1983-84 and during 1984-85 upto December, 1984 :—

Year	(Tonnes)			
	Allocations		Offtake/Supplies	
	Pig Iron	Steel	Pig Iron	Steel
1983-84	7,12,300	5,66,000	5,07,576	1,09,780
1984-85 (Upto December, 1984)	7,38,750	5,29,200	3,52,975	1,32,12

Supplies this year are comparatively higher. The supplies would have been still higher but for non lifting against the offers made by the producers.

2.1.6 Rebates for supplies of iron and steel

Small Scale Industries Corporations have been entrusted with the distribution of iron and steel materials to the small scale industrial units since 1972. They are supplied steel at rebate by the main producers so that it could be made available to the small scale industrial units at prices comparable to main producers' stockyard prices. The Corporations had been representing for some time that the handling margins given to them for distribution of iron and steel materials were inadequate and should be revised. An ad hoc increase of 50 per cent was therefore, made in the rebates allowed to them with effect from 1st April, 1984. The rebates now range from Rs. 210 to Rs. 300 per tonne as against Rs. 140 to Rs. 200 per tonne

earlier. No rebate is given for pig iron. Mostly indigenous pig iron is supplied to the Corporations directly from the plants on JPC railhead price which is less by Rs. 125/- per tonne (Rs. 175/- per tonne w.e.f. 21-2-1985) than the stockyard price and the Corporations are required to sell it to the SSI Units at the corresponding prices of the main producers' stockyard. They are expected to cover their handling charges for pig iron from this difference of Rs. 175/- per tonne. Imported pig iron to them continues to be supplied at stockyard prices.

2.1.7 Review of the System by Ghosh Committee

A Committee was set up under the Chairmanship of Shri D. N. Ghosh, formerly Additional Secretary and F.A., in this Ministry to

(a) review generally the working of the existing schemes of supplies through the SSICs and suggest measures for streamlining the same;

(b) examine the cost of handling of iron and steel materials by the SSICs and to suggest a mechanism by which iron and steel are made available to SSIs at prices comparable to the prices at which these are delivered from the stockyards of the main producers; and

(c) make recommendation on (a) & (b) and on any other matter incidental to it.

A representative of DCSSI, COSICI, SAIL, JPC and Iron & Steel Controller and the Joint Secretary incharge of Steel Control and Distribution Wing were made Members of this Committee. The Committee has submitted its report which is under consideration.

2.1.8 Distribution Network

SAIL including IISCO have a network of 44 departmental yards, 11 consignment agents and 58 other conversion/twisting yards throughout the country. TISCO has 12 stockyards and 99 other distribution outlets. SAIL plans to open new stockyards at Dharamnagar in Tripura and a consignment agency yard at Jabalpur besides re-activating their yard at Lucknow. IISCO also hopes to open a stockyard at Burnpur (West Bengal) during 1985-86.

Considering the special problems in meeting the requirements of consumers in the North-Eastern Region mainly arising out of transport bottlenecks and logistics, special efforts are being made to ensure that adequate quantities are moved to that region by regular coordination between the producers and the Railways. The producers are also reimbursed the actual cost of transportation by alternate routes by road/river by the Joint Plant Committee.

2.1.9 Distribution by other steel producers

Distribution of the products of ministeel plants, rerollers and secondary producers is done by the producers themselves. Similarly alloy steel products are distributed by the producers through their sales network.

2.1.10 Pricing

As a result of deregulation of the iron and steel prices by Government in April, 1982 the regime of administered prices vanished and the prices are now fixed and announced by the Joint Plant Committee. During the year under report Joint Plant Committee has revised iron and steel prices on 22nd June, 1984 on an average by 15 per cent of the then prevailing prices. This increase had become unavoidable on account of increase in costs of raw materials (including coal), consumables, salaries and wages, stores and spares and average rail freight that were beyond the control of the producers, as well as the need to have a fund for assisting the export of engineering products. This increase, therefore, included an element of Rs. 75 per tonne on pig iron and Rs. 100 per tonne on all steel items on account of Engineering Goods Export Assistance Fund apart from an increase of Rs. 27 per tonne in the freight element for steel and an increase of Rs. 4/- per tonne on production of saleable steel in the producers' contribution towards the establishment expenditure of Joint Plant Committee.

Effective from 21-2-1985 iron and steel prices have again been revised by JPC on an average by 15 per cent. Section size and quality extras have also been revised/rationalised simultaneously.

Iron and steel materials are supplied by the main producers at a uniform price throughout the country. Similarly sales through stockyards are also at uniform prices throughout the

country. For this purpose : a freight equalisation fund is operated and maintained by the Joint Plant Committee. Presently the standard freight element for steel is Rs. 470/- per tonne and Rs. 320/- per tonne for pig iron.

On the recommendations made by the National Transport Policy Committee headed by Shri B. D. Pande, Government has taken a decision, in principle, to phase out freight equalisation in respect of industrial commodities including iron and steel. The modalities are being worked out in consultation with the Ministries/Departments concerned.

2.1.11 Imports/Exports

The thrust in overall policy formulation was to ensure that indigenous steel production does not get a set back due to excessive imports and at the same time the genuine needs are met fully supplementing domestic availability by imports. Some of the items which were not normally allowed for import and placed under the limited permissible list in 1983-84 were shifted to canalisation.

Import of most of the carbon steel items continued to be canalised through the Authority of Steel of India Ltd., (SAIL). The canalising agency for import of stainless steel sheets, strips, plates and coils was shifted from the Minerals and Metals Trading Corporation of India Ltd. (MMTC) to SAIL. Metal Scrap Trade Corporation Ltd. (MSTC) continued to be the canalising agency for import of steel melting scrap, rerollable scrap, sponge iron and old ships for breaking. The canalising agencies continued to enjoy the facility for import of canalised items of steel under OGL. The flexibility arrangements inbuilt within policy for import of items in the limited permissible lists and canalised lists were continued. Canalised imports continued to be mainly the flat products. Shipments from abroad against ordering by SAIL during April—October, 1984 was 3,27,517 tonnes valued at Rs. 159.68 crores.

According to DGCI&S publication during 1981-82, steel import was about 2.8 million tonnes valued at Rs. 1009.9 crores. During 1983-84, SAIL imported 6.57 million tonnes of steel valued at Rs. 249.56 crores.

2.1.12 Exports

The requirements of exporters of engineering goods get highest priority alongwith other nationally important sectors like Power, Defence, Irrigation, etc., Demand of EEPC is mainly met from indigenous production. During 1983-84, the export target of engineering goods was fixed at Rs. 1950 crores. Supplies effected during the year 1983-84 were 20,482 MT of pig iron and 44,214 MT of steel as against an allocation of 53,458 MT of pig iron and 86,137 MT of steel. The export target for the current year is Rs. 1750 crores. To help meet this target a quantity of 21,437 tonnes of pig iron and 55,754 tonnes of steel has been allocated to this sector from domestic sources during April—November, 1984. Supplies during April—November, 1984 are 30,660 tonnes of steel and 8,749 tonnes of pig iron. Substantial quantities are expected to be supplied by the producers to this sector during the remaining period.

Export of iron and steel has been limited to the minimum level as there is demand within the country. Export of steel is canalised through SAIL. During 1984-85 (April—October, 1984) 1 lakh tonnes of steel valued at Rs. 22.69 crores was exported by SAIL. The items of export were billets, bars and rods, structurals and plates. According to DGCIS, export of steel during 1981-82 was 10,570 tonnes valued at Rs. 7.27 crores. During 1983-84, export was 24,400 tonnes valued at Rs. 5.25 crores.

Itemwise details of imports during 1981-82, 1982-83, 1983-84 and April—November, 1984 are given in Annexure-I and II respectively.

ANNEXURE I

Import of Steel

(Qty. in tonnes and Value in Rs.)

Code	Description	1981-82	
		Quantity	Value
6724	Puddled Bars, pilings, Ingots blocks etc. Iron or Steel	3,354	22,209,044
6725	Blooms, Billets etc. Iron or Steel	234,532	658,145,487
6727	Iron Steels Coils for Re-rolling	18,284	155,204,402
6731	Wire Rod Iron or Steel	238,441	882,486,270
6732	Bars Rods Iron or Steel	178,112	825,980,136
6733	Angles, Shapes, Sections, Sheet Piling Iron or Steel	261,680	940,630,296
6741	Universal Plates Iron or Steel	93,785	310,694,162
6744	Sheets, Plates, rolled not further worked more than 4.75 mm thick	362,761	1,222,661,316
6745	Sheets, Plates rolled not further worked 5 mm to 4.75 mm thick	401,856	1,285,819,147
6746	Sheets, Plates rolled not further worked less than 3 mm thick	649,520	2,475,585,319
6747	Tinned Sheets, Plates Steel	100,439	510,402,889
6749	Other Sheets Plates worked Iron or Steel	77,454	315,306,174
6750	Hoops and Strips Iron or Steel Hot or Cold Rolled	22,656	251,141,435
6760	Rails & Rly. Track construction materials Iron or Steel	38,173	142,345,849
6770	Iron & Steel Wire not insulated	8,882	99,873,165
		2,789,929	10,099,585,091

Functions of the Iron and Steel Control Organisation

The Iron and Steel Control Organisation was initially set up to perform the regulatory functions envisaged in the Iron & Steel (Control) Order, 1956. Its responsibilities have expanded over the years. It now plays a very important advisory role, in addition to its regulatory functions, in practically all matters relating to the Iron and Steel Industry. The Iron and Steel Controller monitors the working of electric arc furnace industry, the secondary producers, the tinplate manufacturers, the ferro-alloy industry, etc. He also monitors supplies of iron and steel to priority sectors and the North-Eastern region including the State of Sikkim which are beset with the problems of inadequate transport and communications. He is also the Chairman of a "Task Force" constituted to monitor timely and adequate supplies of steel to different states/KVICs for the promotion of Central Sector Scheme of family based Biogas Plants in the country. He also heads the Joint Plant Committee which was formed to perform specific functions under the Iron and Steel (Control) Order and to administer various funds such as the Freight Equalisation Fund, the Steel Development Fund, etc.

In performing the regulatory and control functions assigned to him, the Iron and Steel Controller and his Regional Controllers continue to carry out inspections to check misutilisation of iron and steel. A statement showing the number of inspections carried out and punitive action taken by the Iron and Steel Control Organisation during 1983-84 and 1984-85 (April, 1984 to February, 1985) is given in Annexure III.

ANNEXURE II

Import of Iron & steel materials from 1982-83 to 1984-85

(April-November, 1984) By SAIL

(Quantity : '000 tonnes)

(Value : Rs. Million C&F)

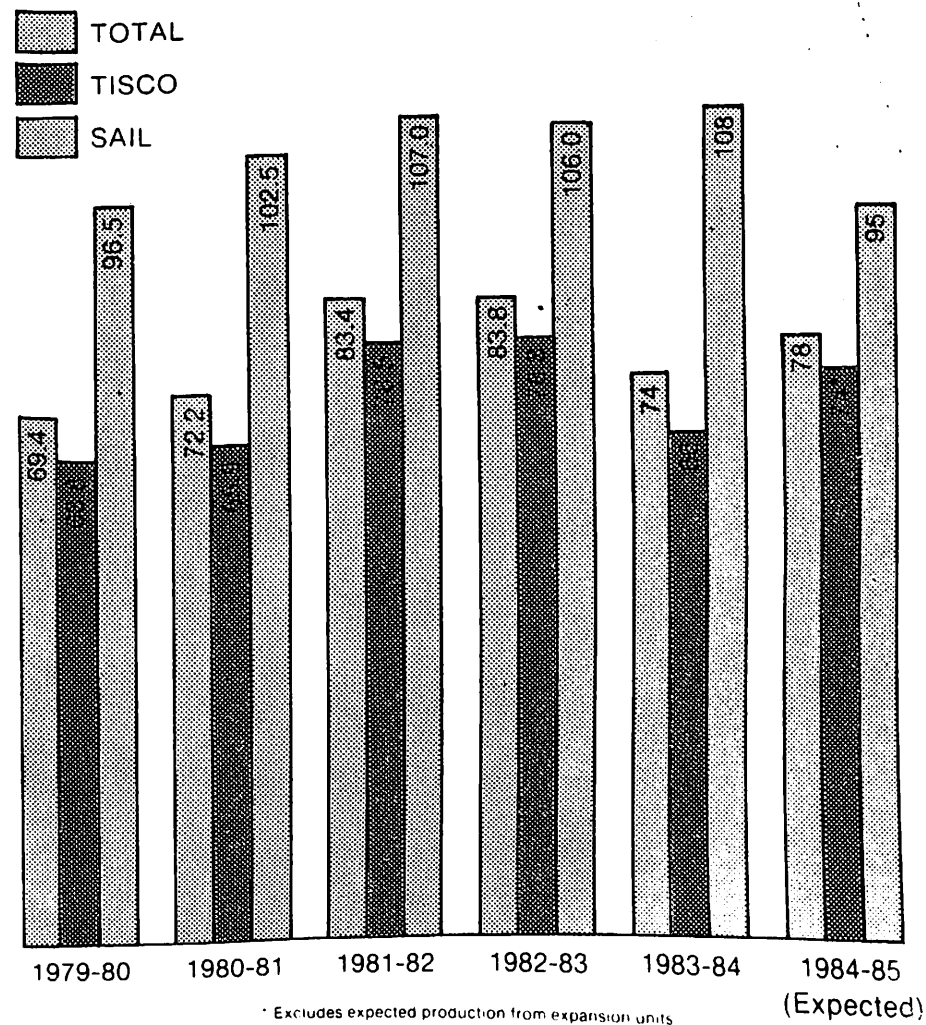
Sl. Category No.	1982-83		1983-84		1984-85 (April-Nov. '84)	
	Quantity	Value	Quantity	Value	Quantity	Value
A. Pig Iron	426.8	636.1	203.5	300.2	..	..
B. Steel :						
1. Ingots	2.0	5.2	..	..	..	..
2. Slabs/Blooms/ Billets	43.7	100.7	13.9	27.4	..	..
3. Bars & Rods	44.3	175.8	2.1	9.3	29.55	110.630
4. Structural	682.3	2232.2	97.6	306.1	—1.60	6.341
5. Rails	2.0	8.5	..	..	..	..
6. Plates	239.0	804.9	87.3	271.0	63.52	215.329
7. HR Coils/Sheets/ Strips	27.8	126.2	36.9	140.9	49.05	129.017
8. CR Coils/Sheets	77.8	338.1	113.2	445.9	113.35	478.351
9. Tin plates	16.6	110.4	..	..	2.31	14.809
10. TMBP	65.3	334.8	151.6	751.4	62.19	363.976
11. Tin plate waste/ waste	0.3	0.9	..	..	..	..
12. Electrical Steel Sheets	40.7	387.0	48.0	463.7	35.86	352.66
13. GP/GC Sheets	74.2	374.4	..	..	7.64	43.628
14. Stainless/Spl. Steel	0.8	11.7	0.7	6.4	0.68	9.357
15. Others	..	..	..	..	0.05	0.443
Total—Steel	1317.1	5011.6	568.2	2495.5	365.80	1787.541
Total—Iron & Steel	1744.0	5647.0	771.8	2795.8	365.80	1787.541

ANNEXURE III

Statement showing the number of cases of Inspections of units/suspension of supplies/debarments in 1983-84 (April, 1983—March, 1984) and 1984-85 (April-February, 1985)

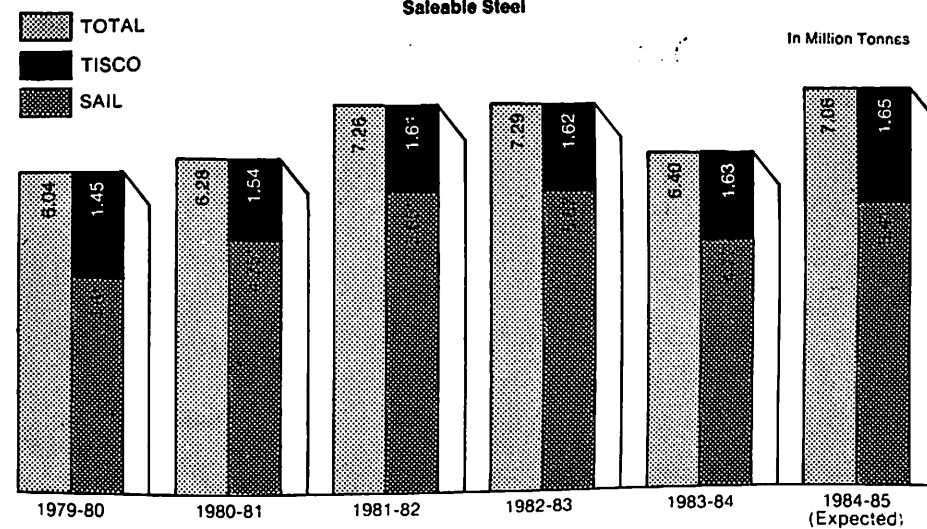
Region	Inspection		Suspensions		Debarments	
	1983-84 (April- Feb. '85)	1984-85 (April- Feb. '85)	1983-84 (April- Feb. '85)	1984-85 (April- Feb. '85)	1983-84 (April- Feb. '85)	1984-85 (April- Feb. '85)
1. Bombay	373	292	31	17	10	3
2. Calcutta	157	220	1	Nil	1	3
3. Delhi	252	265	2	2	18	1
4. Hyderabad	244	418	2	14	8	3
5. Kanpur	114	66	25	11	6	8
6. Madras	393	491	14	13	14	8
Total	1533	1762	75	57	57	26

Percentage capacity utilisation of Main Steel Producers
Saleable Steel



Production Performance of Main Steel Producers
Saleable Steel

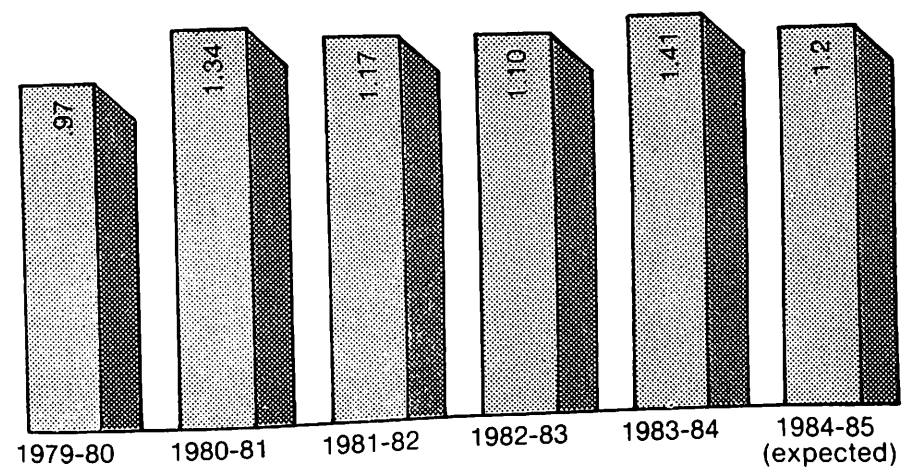
In Million Tonnes



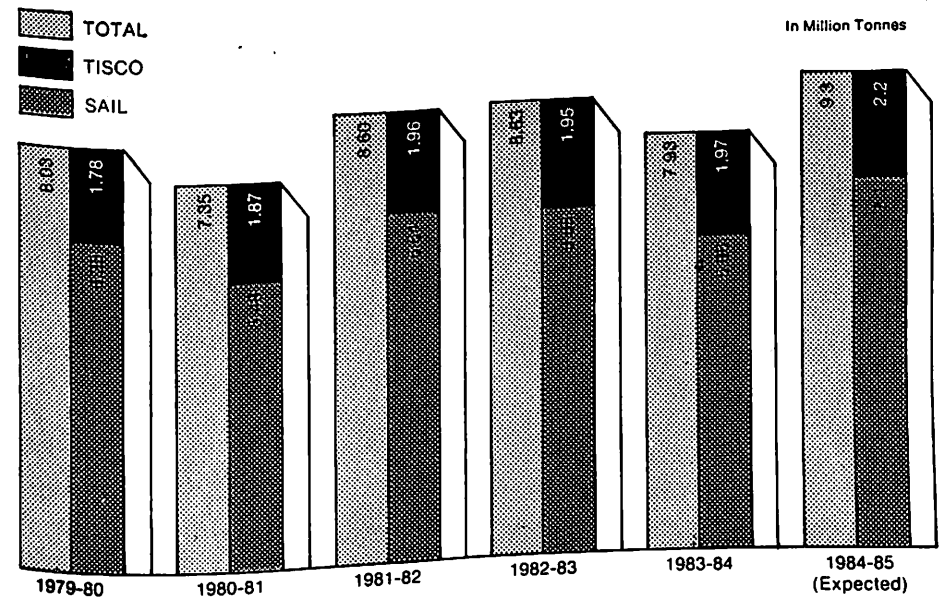
*Excludes Inter plant transfer

Production performance of SAIL
PIG IRON

In Million Tonnes



Production Performance of Main Steel Plants
Ingot Steel



Chapter -III

The Public Sector

3.1.1 *Steel Authority of India Limited*

The Steel Authority of India Limited (SAIL) is the Flagship of the Indian Steel Industry. It is wholly owned by Government of India and is responsible for the management of five integrated steel Plants at Bhilai, Rourkela; Durgapur, Bokaro and Burnpur and two alloy steels plant at Durgapur and Salem.

3.1.2 The authorised capital of the Company remained unchanged at Rs. 4000—crores. The Government provided during the year equity funds in cash amounting to Rs. 201.25 crores, including Rs. 1.93 crores for the Indian Iron & Steel Company Limited to finance capital Schemes and Rs. 1 crore for purchase of minority interest in the IISCO Station Pipe & Foundry Company Limited. The paid up capital of the Company, thus increased from Rs. 3221.09 crores excluding share money pending allotment Rs. 17.22 crores as on 31st March, 1983 to Rs. 3422.73 crores excluding share money pending allotment Rs. 16.83 crores as on 31st March, 1984.

3.1.3 The Company borrowed during the year 1983-84 and Rs. 243.94 crores from the Steel Development Fund (Rs. 27.32 crores from the Government of India for capital schemes. Besides, the Government advanced non-plan loan of Rs. 7.50 crores for meeting the working capital requirements of IISCO. The total borrowing as on 31st March, 1984 from the Steel Development Fund amount to Rs. 952.90 crores and from the Government of India to Rs. 973.59 crores.

3.1.4 The amount of fixed and cumulative deposit with the Company under the Public Deposit Scheme at the close of the year was Rs. 49.14 crores as against Rs. 51.21 crores in the previous year. This amount has increased to Rs. 69.60 crores as on 30th November, 1984.

3.1.5 The Company's investment as on 31-3-1984 were as under :—

Subsidiaries	Rs. in crores
(i) HISCO	76.98
Other Companies	
(i) VISL	18.56
(ii) North Bengal Dolomite Limited	0.12
(iii) Belpaher Refractories Limited	1.12
(iv) Almora Magnesite Limited	0.28
(v) Indian Potash Limited	0.02

3.1.6 Turnover and Profit/loss

The gross turn-over of the Company during the year 1983-84 was Rs. 3108.22 crores as against Rs. 3032.66 crores in the year 1982-83. This includes sales of imported iron and steel amounting to Rs. 297.42 crores. The gross loss before providing for depreciation was Rs. 81.01 crores as against gross profit of Rs. 19.55 crores in the previous year. The Company incurred a net loss of Rs. 214.53 crores as against the net loss of Rs. 105.76 crores in the previous year.

The working results of the various units of the Company are indicated below :—

Plants/Units	(Rs. in crores)
	Profit +
Bhilai Steel Plant	Loss —
Durgapur Steel Plant	(—)2.83
Rourkela Steel Plant (including Fertilizer Plant)	(—)63.72
Bokaro Steel Plant	(—)100.32
Alloy Steels Plant	(+)0.55
Salem Steel Plant	(—)33.75
Others	(—)18.08
	(+)3.62
	Net Loss : (—)214.53

Production Performance

3.1.7 The production performance and capacity utilisation of SAIL Plants during the last five years are at Annexure-3A & 3B respectively.

3.1.8 The production of ingot steel in the Company's integrated steel plants at Bhilai, Bokaro, Durgapur and Rourkela at 5.412 million tonnes as against 6.055 million tonnes in the previous year, though 101% of the target for the year, was lower by 11% compared to previous year. In the case of saleable steel, production at 4.326 million tonnes (5.165 million tonnes in the year 1982-83) was lower by 16% in relation to the previous year. The production of Saleable pig iron at 1.278 million tonnes (0.984 million tonnes in the previous year) was higher by 30% as compared to the previous year.

3.1.9 Alloy Steels plant produced 43.7 thousand tonnes and Salem Steel Plant 6.9 thousand tonnes of saleable steel respectively during 1983-84.

3.1.10 Production performance of the four integrated steel plants during the first nine months of the current year is as follows :—

	'000 tonnes		
	Ingot Steel	Saleable Steel	Pig Iron
1. Annual Target	6600	5000	1100
2. Plan for April 84—Dec. 84	4710	3462	807
3. Actual April—December	4179	3357	779

3.1.11 The production could have been better but for the basic input constraints—viz., power, coking coal (quality and quantity) and to a limited extent rail transport which continued to effect performance this year as well. The worst affected were Rourkela Steel Plant, Durgapur Steel Plant and Bokaro Steel Plant which were subjected to severe restrictions from OSEB and DVC throughout the year, this being particularly severe in the first quarter of the year.

3.1.12 Measures taken to step up production

To secure better supplies of coking coal and power, close liaison continues to be maintained with major input supplying agencies like Coal India Limited, DVC, State Electricity Boards and the Railways. Infrastructure Co-ordination Committees have been set up at the plant level which include representatives of Plants, Railways, Coal India Ltd. and concerned power supplying agencies as member to sort out problems of input

supplies. Captive power generation is being augmented at the Steel Plants by 600 MW, which, when commissioned in phases between 1985-86, would take care of the power requirements of these plants upto the mother mill stage. Equipment maintenance has also received close attention during the year. Import substitution measures pursued during the year helped to indigenise another 500 items leading to savings of about 2 crores in foreign exchange. Stores & Spares items indigenised till March 1984 was 9500 resulting in a saving in foreign exchange of Rs. 36 crores. Inter-plant steel standardisation was also pursued with vigour and 35 standards were brought out this year, the cumulative number being 133.

3.1.13 Personnel

The total number of employees of the Company and its subsidiaries (including IISCO) as on 30th September, 1984 is given below :—

Group	Total Scheduled number of employees is on 30-9-84	Scheduled Castes	Scheduled tribes	Women employees
A. SAIL				
Group A	15887	320	133	257
Group B	17824	478	250	779
Group C (Excluding Sweepers)	165030	19887	18371	9409
Group C (Sweepers only)	4565	3590	266	1050
Total (A)	203306	24282	19020	11495
B. SUBSIDIARIES				
Group A				
Group B	1753	37	8	28
Group C (Excluding sweepers)	2992	145	19	63
Group C (Sweepers only)	38530	5722	2182	1341
Total (B)	817	183	NIL	178
Total (A + B)	44170	6717	2209	1611
	247476	30999	21229	13106

NOTES : 1. This excludes Temporary, Casual/NMR workmen.
2. This includes manpower in respect of Maghahatuburu and Kiriburu Mines of Bokaro.

3.1.14 National Joint Committee for Steel Industry

The pioneering work of the National Joint Committee for the Steel Industry in successfully concluding the fourth wage agreement for the industry in May 1983 has been followed up by further mutual cooperation in other areas as well. The SAIL Committee on Production and Productivity has identified and agreed upon measures for joint action to improve production and productivity. The detailed action plan on these is being evolved plantwise.

3.1.15 Manpower & Productivity

The total manpower of 2,05,236 on the rolls of the Company as on 31st March, 1984 comprised of 16,150 executives and 189,086 non-executives. The productivity per man measured in terms of ingot tonnes per year in integrated steel plants remained more or less at the same level as in the previous year due to restricted production on account of market and input constraints.

3.1.16 Enriching Human Resources

The Company assiduously continues to follow the policy of enriching its human resources by inducting graduate trainees in technical as also administrative disciplines, which was supplemented by induction of senior and junior operative trainees as well. Efforts to upgrade managerial skills and performance were also sustained. The Company's Management Training Institute at Ranchi will shortly have its own campus equipped with better training facilities. Alongwith appropriate strengthening of the faculty, the Institute will play a bigger role in development of manpower resources of the Company. The training programme at this Institute, as well as in management development centres in the plants and policy of sponsoring selected managers to management programmes conducted by external institutes and specialised training abroad have helped the Company to man senior managerial posts from within. The Company also trained 32 foreign nationals from other developing countries in its steel plants during the year.

3.1.17 Scheduled Castes & Scheduled Tribes

As a result of incentives and concession being extended to employees belonging to scheduled castes and scheduled tribes,

percentages of their employment in the Company further rose to 11.87 per cent and 9.3 per cent respectively as on 31st March, 1984. The intake of scheduled castes this year in new recruitments was also higher at 19.75 per cent and that of scheduled tribes at 11.43 per cent. In promotion, the share of scheduled castes was 10.73 per cent while in the case of scheduled tribes it was 5.03 per cent.

3.1.18 Industrial Relations

The industrial relations during the year were generally satisfactory. There were some problems, however, due to politically motivated bandhs which affected normal functioning of the plants situated in the state of West Bengal. The loss of mandays this year due to industrial relations problems was almost the same as in the previous year but a further 18,674 mandays were lost due to political bandhs.

3.1.19 Safety Measures

Safety Engineering Departments are functioning in all the steel plants. There is a continuous monitoring of safety performance both at the Corporate Office as well as at the Unit level to identify critical areas and to take corrective action. On the industry level, the Standing Committee on Safety has been functioning since 1973 and has provided valuable consultancy as well as coordination towards the effort for the creation of safe and healthy working environment. During the year (upto November, 1984) a total of 1481 reportable accidents and 23 fatal accidents have been reported. Joint Safety Committees are functioning in all the steel plants both at the apex level as well as at the shop floor level.

3.1.20 Workers' Participation

The present system of workers participation involves consultation and joint decision making on matters concerning wages, working conditions, production and productivity, incentives, safety, welfare, etc. at shop floor and zonal, plant, industry and national levels. In each plant, a large number of such joint committees are functioning. Efforts are being made, in line with the Government's scheme for workers' participation, to further strengthen these committees and to enlarge their scope to areas like, factors relating to productivity on the shop floor, identification of restrictive practices and their elimination,

inventory management and developing and implementing norms of consumption of raw material and other consumables.

3.1.21 Major Development Schemes

Some of the notable achievements in implementation of capital projects during the period are (i) trial rolling of slabs into plates in the prestigious 3600 mm heavy plate mill at Bhilai; (ii) Hot trial runs of the second 300-tonne converter at Bokaro; (iii) Starting of the commercial production of cold rolled non-oriented electrical sheets in the silicon steel plant at Rourkela, and; (iv) Commissioning of coke oven battery No. V B at Rourkela.

3.1.22 BSP's Expansion

The expansion of Bhilai Steel Plant to 4 million tonne progressed well during the period. Besides successful trial rolling earlier in the heavy plate section of 3600 mm plate mill, the first oxygen converter and a slab caster have also since been put on hot trials. A bloom caster is due to be commissioned shortly. The remaining facilities in converter shop, concast shop and plate mill are likely to be completed progressively during 1985-86. With this, Bhilai will have oxygen blown converters for the first time and will also be the first integrated steel plant in the country to have concast facilities. The remaining facilities of the expansion programme comprising 7th blast furnace along-with coke oven Battery No. 9 and allied facilities are likely to be commissioned during 1987.

3.1.23 Technological Improvement Schemes in Bhilai Steel Plant

Among technical improvement schemes being put through at Bhilai, the experimental coal dust injection in blast furnace No. 2 is getting ready for commissioning. The conversion of No. 10 open hearth furnace into twin hearth furnace is expected to be completed by June 1985 and the scheme for partial briquetting coal charge by March 1987.

3.1.24 Expansion of Bokaro Steel Plant

The expansion of Bokaro Steel Plant also to 4 million tonne capacity is now well advanced. The seventh coke oven battery and fifth blast furnace are due to be commissioned shortly. These are the last units under the expansion programme in these shops. The second steel melting shop is also expected to be

completed by March 1985. The second cold rolling mills being installed under the expansion programme is expected to be commissioned by March 1987. Meghahatuburu Iron Ore Project designed to meet requirements of iron ore for 4 million tonne stage of Bokaro Steel Plant is now getting ready for commissioning.

3.1.25 Renovation & Modernisation of Durgapur Steel Plant

A scheme for renovation and technological upgradation of Durgapur Steel Plant is in an advanced stage of consideration. When implemented, this will improve the quality of raw materials, intermediate and finished products, reduce unit consumption of raw materials and energy, help in conservation of scarce raw materials like metallurgical coal, improve productivity and help produce value added.

3.1.26 Silicon Steel Plant—Rourkela

The cold rolled non-grain oriented stream in the silicon steel plant designed to produce 36,000 tonnes of electrical sheets per year has gone into commercial production. The facilities for production of 37,500 tonnes of cold rolled grain-oriented electrical sheets are expected to be commissioned by March 1985. When the plant is fully commissioned, the country will save considerable amount of foreign exchange presently being spent on import of about 50,000 tonnes of silicon steel sheets to meet the needs of the growing power sector. A proposal for the modernisation of Rourkela Steel Plant is under consideration.

3.1.27 Stage II Expansion of ASP

The Stage-II expansion of Alloy Steels Plant with the object of updating its technology and thereby improving economic viability is scheduled to be completed during 1986-87. The major equipment have been ordered, some of which have also begun to arrive at the site. The civil and structural jobs have also started.

3.1.28 Additional Facilities at Salem Steel Plant

Additional facilities being planned at Salem Steel Plant to handle and process hot rolled stainless steel coils to be indigenously available from Alloy Steels Plant|Bokaro Steel Plant

route are likely to be completed by June 1986. Salem Steel Plant will not thereafter need to import hot bands from abroad.

3.1.29 Augmenting Captive Power Plants

The schemes for augmenting captive power generation by 600 MW in the integrated steel plants are in different stages of implementation. The first unit of 3×60 MW power plant at Bokaro is likely to be commissioned by March 1985 and other two units progressively during 1985. The first unit of 2X60 MW power plant at Durgapur is expected to be commissioned by June and the second by December 1985. The first unit of 2X60 MW power plant at Rourkela, on which also work has begun, is expected to be commissioned by June and the second unit by December 1986. The Government also sanctioned a 3X60 MW captive power plant for Bilal in June 1983 on which the work will commence shortly.

ANNEXURE 3-A

PRODUCTION PERFORMANCE OF STEEL PLANTS

1979-80 — 1984-85

(000' ton)

Plant Products	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 upto December 1985
INGOT STEEL						
BSP	2108	2041	2115	2130	1837	1433@
DSP	882	741	930	952	806	579
RSP	1268	1165	1203	1144	1088	784
BSL	1426	923	1792	1829	1681	1383@
IISCO	565	609	600	624	543	295
Sub Total	6249	5479	6640	6679	5955	4474
TISCO	1779	1874	1956	1946	1973	1511
TOTAL	8028	7353	8596	8625	7928	5985
SALEABLE STEEL						
BSP	1706	1818	1819	1838	1574	1266
DSP	605	598	782	813	602	411

1	2	3	4	5	6	7
RSP	1045	985	1091	992	862	686
BSL	849	844	1472	1529	1288	994
IISCO	430	523	488	500	444	245
Sub Total	4593*	4746*	5651**	5671**	4771**	3602
TISCO	1447	1537	1606	1621	1626	1232
TOTAL	6040	6283	7257	7292	6397	4834
SALEABLE PIG IRON						
BSP	519	430	504	457	544	388
DSP	121	102	88	105	159	52
RSP . . . . .	..	13	66	29	47	15
BSL	280	730	452	393	528	324
IISCO	52	64	59	119	130	58
TOTAL	972	1339**	1169	1104**	1408	837
AS ^o —ingot steel	76.65	70.39	86.01	81.12	67.43	59.87
Saleable Steel	45.68	41.71	52.04	46.80	43.69	40.95
SSP . . . . .	..	..	3.21	6.75	6.92	11.52

*Excludes inter-plant transfer.

**Rounded off.

@Inc^odes production of SMS-2 in hot trials period.

ANNEXURE 3-B

CAPACITY UTILISATION PERCENTAGE

Plant	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 upto December 1984
INGOT STEEL						
BSP	84.3	81.6	84.6	85.2	73	76*
DSP	55.1	46.3	58.1	59.5	50	48
RSP	70.4	64.7	66.8	63.6	60	58
BSL	57.4	36.9	71.7	73.2	67	74*
IISCO	56.5	60.9	60.0	62.4	54	39
Sub Total SAIL	66.5	58.3	70.6	71.1	63	63
TISCO	89.0	93.7	97.8	97.3	99	92
TOTAL	70.4	64.5	75.1	75.7	70	* 68
SALEABLE STEELS						
BSP	86.8	92.5	92.6	93.5	80	86
DSP	48.8	48.3	63.1	65.6	49	44
RSP	85.3	80.4	89.1	81.0	70	75
BSL	43.1	42.8	74.7	77.6	65	67
IISCO	53.8	65.4	61.0	62.5	55	41
Sub Total SAIL	63.8	65.9	78.5	7.88	66	67
TISCO	96.5	102.5	107.0	106.0	108	94
TOTAL	69.4	72.2	83.4	83.8	74	72
ALLOY STEEL PLANT						
INGOT STEEL	76.7	70.4	86.0	50.7	42	80
SALEABLE STEEL	76.1	69.6	86.7	78.0	42	91

*Includes production of SMS-2 in hot trials period.

3.2 Visvesvaraya Iron and Steel Limited, Bhadravali

3.2.1 The Visvesvaraya Iron and Steel Limited (VISL) is a major producer of special and alloy steels with a capacity of 77,000 tonnes per annum. In addition to special steels, it produces Mild Steel, Cement, Ferro-alloys, Castings, Pig Iron etc.

3.2.2 As on 1-4-1984 the authorised capital of the Company was Rs. 75 crores of which Rs. 46.40 crores were subscribed and paid up. 60 per cent of the paid-up capital i.e. Rs. 27.84 crores was held by the Government of Karnataka and 40 per cent i.e. Rs. 18.56 crores by the Steel Authority of India Limited. In addition loans of Rs. 15.39 crores from Government of India SAIL were outstanding against the Company as on 26-2-85.

Production

3.2.3 The installed capacity of the plant, production during 1983-84 and April—December, 1984 and likely production during the period Jan—March, 1985 are as follows :—

(In tonnes)

Sl. No.	Products	Installed capacity Tonnes/Annum	Production during		
			1983-84	April-Dec., 1984	Jan-March 1985 (Projected)
1.	Mild Steel	48,000	10,086	16,000	3,000
2.	Alloy and Special Steel	77,000	40,006	36,500	11,500
3.	Steel Ingots	1,80,000	57,980	70,500	22,500
4.	Ferro-Silicon	20,000	4,477	1,842	..
5.	Cement	96,000	55,590	34,800	18,200
6.	Ferro Alloys	3,000	7,248	4,00	2,100
7.	Pig Iron	1,80,000	44,947	46,300	11,500
8.	Steel Castings	2,500	585	250	100
9.	Gray Iron Castings	15,600	6,004	6,000	2,000
10.	Cast Iron Spun Pipes	17,000	4,355	1,400	..
11.	Refractories	9,600	7,176	4,400	1,600

Working Results

3.2.4 During the year 1983-84, the Company incurred a loss of Rs. 25.41 crores. According to preliminary estimates a loss of Rs. 33.33 crores is projected for 1984-85. Reasons for adverse working results during 1983-84 and 1984-85 in brief

are : recession in Steel Industry, increase in inputs costs, power cuts, increase in wages, interest burden without corresponding increase in sales income due to reduced volume of turnover owing to fall in demand and increased availability of imported steel at comparatively lower prices, etc.

Capital Scheme under implementation

3.2.5 The Optimisation Scheme Phase-I is under implementation at VISL. Estimated cost Rs. 13.92 crores, the major equipments to be installed under the Scheme are :—

- (i) One continuous Casting Machine with connected auxiliaries in melting shop;
- (ii) One Oxygen Plant; and
- (iii) Other related facilities in Rolling Mills and HTS.

Continuous Casting Machine was erected in May, 1983. The auxiliary facilities for continuous casting machine have been completed during this year. The Oxygen Plant under erection is expected to be completed by end of March, 1985.

Research and Development Activities Undertaken

3.2.6 The Project has undertaken research and development activities *inter alia* for energy conservation in electrical pig iron furnace, standardisation and diversification of products and production processes.

Man-Power

3.2.7 As on 1st January, 1985, the project employed 11,325 persons of which 1,370 were Scheduled Castes and 100 Scheduled Tribes. 163 ex-servicemen and 145 handicapped persons were also employed. Total number of women employed was 437.

3.3 Sponge Iron India Limited

3.3.1 The Demonstration Sponge Iron Plant of Sponge Iron India Limited (SIIL) which has been in operation for about 4 years has established that Sponge Iron suitable for conversion into steel in Electric Arc Furnaces can be produced using 100 per cent lump ore and non-coking coal. The Sponge from produced is very stable, free from fire hazard and can be transported and stored with minimal precautions and is being successfully melted

in Electric Arc Furnaces in different parts of the Country. Experiments conducted in Cupolas in Iron Foundries have established that Sponge Iron can economically substitute Pig Iron upto 30 per cent of the charge.

3.3.2 Finance

The authorised share capital of the Company as on 31-3-1984 was Rs. 12 crores and the paid up share capital as on that date was Rs. 9.84 crores. The paid up capital as on 31-3-1983 was Rs. 5.74 crores. The above includes Rs. 0.83 crores subscribed by the Government of Andhra Pradesh and the balance by the Government of India.

3.3.3 Production

The production of Sponge Iron during 1983-84 was 28,196 MT against a target of 28,500 MT representing capacity utilisation of 94%. For the year 1984-85 the production target was revised from 28,500 MT to 25,000 MT representing a capacity utilisation of 83% on account of capital repair works like replacement of kiln refractories and modifications to the kiln inlet which had to be carried out for the first time after four years of operation. The production was also affected during the earlier part of the year due to fluctuations in the quality of coal supplied by M/s. Singareni Collieries Company Limited (SCC Ltd.) with ash percentage going as high as 40 per cent as against the stipulation of 25 per cent (maximum). Further, research and development test campaigns were also conducted during the earlier part of the financial year, which resulted in non-availability of capacity to that extent for production purpose. The actual production for the period April to November, 1984 was 13,002 MT. On the basis of production so far, it is anticipated that the revised target of 25,000 MT will be achieved during the year.

3.3.4 Sales and Profitability

During the year 1983-84, 24,237 MT of Sponge Iron was sold fetching a revenue of Rs. 342.03 lakhs. During the year 1984-85, the sales are anticipated at 27,418 MT with a realisation of Rs. 421.95 lakhs.

The year 1984-85 is expected to end with a net profit of Rs. 4.68 lakhs as compared to Rs. 2.18 lakhs during 1983-84.

3.3.5 Cost Reduction

(a) *Iron Ore* : With constant efforts being made to reduce the consumption of iron ore by utilising iron ore pebbles ranging upto 20 mm in combination with lump iron ore, the consumption per tonne of sponge iron is expected to be 2.25 MT as against the consumption of 2.59 MT during 1981-82 and 2.42 MT during 1982-83.

(b) *Coal* : The coal received from M/s. Singareni Collieries Ltd. has shale and dull coal to the extent of 30 per cent. Unless the shale and dull coal is segregated it is not possible to bring down the ash content in coal. As high ash content in coal reduces the production capacity of the kiln, shale and dull coal are being segregated at the mines and clean coal only transported to the site. On account of these measures and modification to the process, coal consumption is expected to come down to 1.15 MT in 1984-85 as against the consumption of 1.92 MT during 1981-82, 1.81 MT during 1982-83 and 1.21 MT during 1983-84.

However, there is a likelihood of SCC Ltd. selling graded coal (after removal of shale and dull coal) with a higher cost w.e.f. January, 1985.

3.3.6 Expansion of Plant Capacity

Taking note of the successful operation of the plant, Government of India had approved Expansion of the capacity from 30,000 tonnes per annum to 60,000 tonnes at an estimated cost of Rs. 8.55 crores with a Foreign Exchange Component of Rs. 2.20 crores.

The progress of implementation of the Expansion Project has been satisfactory, despite certain problems faced due to non-availability of cement during the first and second quarters of 1984. Some difficulty was also experienced in obtaining kiln tyres by the main equipment supplier M/s. Tungabhadra Steel Products Ltd. (a Public Sector Enterprise). By rescheduling some of the activities and locating an alternative indigenous source for supply of tyres, it has become possible to complete the physical installation by January, 1985 followed by cold trials and heating cycle. The unit is expected to go into regular operation by July 1985 as per schedule.

The expenditure incurred on Expansion Plant upto November '84 is Rs. 5.26 crores and the anticipated expenditure upto 31-3-1985 is Rs. 6.9 crores.

3.3.7 Efforts made towards indigenisation

The Engineering & Projects Division of the Company has successfully carried out basic and detailed engineering work of the Expansion Unit resulting in timely procurement of various items of equipment needed for the Expansion Unit. By effecting modifications and revising the specifications of some of the critical equipment, the Division has been able to reduce the import content from the originally estimated figure of Rs. 2.20 crores to a mere Rs. 0.80 crores (inclusive of Import duty). Besides effecting a reduction in the foreign exchange requirement for the Expansion Unit by substitution with indigenous equipment the efforts in this direction have also resulted in identification of indigenous sources for spares and consumables, which in the long run, would benefit the Company.

3.3.8 Test Work

In the field of consultancy services, the Company has successfully carried out a number of assignments for UNIDO. Raw Materials of Pakistan and Hungary have been tested for establishing their suitability for production of sponge iron. On the basis of the test results, the possibility of converting an old cement kiln in Hungary for production of sponge iron has been recommended to UNIDO. During the year 1983-84 an amount of Rs. 6.36 lakhs was earned in foreign exchange by way of income from consultancy services. During the year 1984-85, the Company has taken up test work on the raw materials of Vietnam. Besides this, under a UNDP sponsored Regional Project which has since been approved by Government, the Company is expected to render technical and consultancy services to some of the ESCAP Countries in the field of sponge iron production.

Besides the above, the Company, has taken up test work on the iron ores from Donimalai Region for establishing their suitability for production of sponge iron in the proposed Vijayanagar Steel Plant. Testing of raw materials for the proposed Direct Reduction Plant of Neelachal Ispat Nigam Limited at Daitari is also programmed for the current year.

3.3.9 Research & Development

In the field of Research and Development, the Company has carried out extensive studies on the use of high ash coals and

the effect on production and productivity. Studies have also been conducted on the extent of waste gas generated when using such type of coals with a view to establish the feasibility of utilising the sensible heat in the waste gases for generation of electric power.

3.3.10 Energy Conservation Measures

The plant is based on use of 100 percent coal as reductant. When the unit commenced operation in the year 1980-81 the coal consumption was around 1.9 tonnes per tonne of sponge iron. By suitable adjustments to process parameters and careful monitoring of the process it has been possible to reduce coal consumption to about 1.5 tonnes in 1982-83 and further reduce to 1.2 tonnes in 1983-84. Presently the plant is operating with coal consumption at this level.

In the Direct Reduction Process for production of sponge iron in a Rotary Kiln nearly 45 per cent of the energy input is carried away in the waste gases leaving the kiln at about 900 to 1000°C. The Company has carried out detailed studies for utilising the sensible heat in the waste gases and has prepared a scheme for utilising the sensible heat for steam generation by means of waste heat boilers followed by power generation through steam turbine units. After the Expansion Unit is commissioned when both the kilns are in operation the waste heat from the two kilns could be utilised for generation of electric power upto 4 MW. This scheme is proposed to be taken up during the Seventh Five year Plan.

3.3.11 Manpower

The total number of employees of the Company as on 30-11-1984 together with break-up indicating separately persons belonging to Scheduled Castes, Scheduled Tribes, Ex-servicemen, Physically Handicapped and Women is furnished in the Annexure.

3.3.12 Communal Harmony Celebrations

Keeping with Government policy, 4 festivals by major communities have been celebrated as community functions under the auspices of committee for Communal Harmony.

3.3.13 Best Industrial Relations and Productivity Award

The Company has been selected for 'Best Industrial Relations' and 'Productivity' awards in the year 1982-83 by the

Government of Andhra Pradesh. The awards were presented on May 1, 1984 by the Chief Minister of Andhra Pradesh.

3.3.14 Employees' Participation in Management

Pursuant to the directives of Government of India, the Scheme for Employees' participation in Management has been implemented in the Company. Under the scheme one Plant Level Committee to discuss Plant Level problems and 3 Shop Floor Level Committees to deal with the problems of particular Departments have been constituted with representatives of the Management and Employees.

SPONGE IRON INDIA LIMITED

Total No. of employees of the Company as on 30-11-1984 indicating separately persons belonging to Scheduled Caste, Scheduled Tribes and Woman

Group	Total No. of employees	SC	ST	Ex-Servicemen	Physically Handicapped	Women	Remarks
Group 'A'	58	3	..	..	..	1	
Group 'B'	20	1	..	..	..	..
Group 'C'	211	17	9	3	1	15	
Group 'D'	114	29	18	1	3	2	
(Excluding Sweepers)	(5)	(2)				(2)	
TOTAL	408	52	27	4	4	20	

3.4 BHARAT REFRACTORIES LIMITED:

The Refractory Plant at Bhandaridah was acquired by the Government of India under the provisions of the Asian Refractories (Acquisition of Undertaking) Act, 1971, and was managed on behalf of the Government of India by the Bokaro Steel Limited upto 21-7-1974. On 22-7-1974 a separate Company was in the name and style of "Bharat Refractories Limited" was incorporated as subsidiary to the Bokaro Steel Limited. Subsequently under the provisions of the Public Sector Iron and Steel Companies (Restructuring and Miscellaneous Provisions) Act, 1978, Bharat Refractories Limited ceased to be a subsidiary of Bokaro Steel Limited. Steel Authority of India Limited and the Company was placed under the direct administrative control of Department of Steel with effect from 1st May, 1978. The following undertaking were also transferred to and vested in Bharat Refractories Limited from the above date.

Refractories Plant at Ranchi Road which had earlier been taken over by M/s. Hindustan Steel Limited (Now known as Ranchi Road Refractories Plant) along with its captive sillimanite mines in Meghalaya, known as Nongstoin Sillimanite Mines.

The Refractories Plant of Bhilai Steel Plant of SAIL located at Bhilai (now known as Bhilai Refractories Plant).

India Firebricks & Insulation Co. Ltd., formerly a subsidiary of Steel Authority of India Limited, was made a subsidiary of BRL.

All the units of the Company including the subsidiary company excepting Bhilai Refractories Plant were taken over as sick units from private sector.

The authorised share capital of the company is Rs. 40 crores, against which the paid up capital as on 31-12-1984 was Rs. 35.61 crores. The total outstanding loan as on 31st December, 1984 was Rs. 36.91 crores.

3.4.2. Production Performance :

The production performance of the various units of the company as well its subsidiary company IFICO during 1983-84 and 1984-85 (till Jan. 85) is given below :

Name of Unit	Qty. in MT.			
	Production in 1983-84		1984-85	
	Bricks	Mortar	Bricks	Mortar
Bhandaridah Refractories Plant	14,878	4,386	7,965	2,605
Ranchi Road Refractories Plant	4,069	343	2,841	213
Bhilai Refractories Plant	22,541	2,138	19,016	4,203
India Firebricks & Insulation Co. Ltd.	25,411	1,859	17,468	333

3.4.3 Financial Results :

Bharat Refractories Limited is likely to incur a loss of Rs. 1280 lakhs during 1984-85 as compared to a loss of Rs. 1198.34 lakhs in 1983-84 (after providing depreciation and interest). India Firebricks & Insulation Company Limited is likely to incur a loss of Rs. 148 lakhs in 1984-85 as against a loss of Rs. 181.09 lakhs in 1983-84 (after providing for the depreciation and interest).

The main reason for continuing losses at Bhandaridah Refractories Plant is that the production of the plant during first six months of 1984-85 was affected adversely for want of orders from steel plants. Production in the plant was also affected due to unprecedented power cuts. At Ranchi Road Refractories Plant, lack of orders for suitable blend of high alumine bricks has proved to be a handicap in the production planning. Bhilai Refractories Plant has been facing shortage of dead burnt magnesite, which is the principal raw material for production of basic bricks. In addition, some of the presses in Bhilai Refractories Plant remained out of operation for capital repairs. In the subsidiary company, IFICO, production was affected due to shut down of one tunnel kiln for change over from oil to gas and shortage of furnace oil in November 1984. In the first week of November, production was affected in all the plants due to disturbances. Lack of demand for the products coupled with unremunerative selling prices had adversely affected the working of the different units. It is expected that the performance of the company would improve gradually.

3.4.4 Pithoragarh Magnesite Project :

The principal raw material for production of basic refractories is dead burnt magnesite. With a view to having a captive sources of dead burnt magnesite for the Bhilai Refractories Plant and to substitute imports, Government sanctioned in October, 1982 the setting up of a Rotary Kiln. Complex for dead burning of magnesite at Dewalthal in Pithoragarh District of Uttar Pradesh at a total cost of Rs. 14 crores.

MECON is doing Consultancy services for the project. The capital cost has since been updated based on the prices prevalent in second quarter of 1984-85. The revised cost estimates will be sent to the Public Investment Board for their clearance. Negotiations with the various State agencies for the development of various infrastructural facilities have been made and they are likely to take up the work shortly.

3.4.5 Research and Development

The subsidiary company IFICO is already having a collaboration agreement with the Research & Development Centre for Iron and Steel, Steel Authority of India Limited, Ranchi, for development of "teeming and other special types of refractory items for the purpose of improvement in quality, performance and import substitution".

3.4.6 Foreign Collaboration :

With the increased stringency of the operational conditions of steel making, an urgent need has been felt for continuous upgradation of the quality of refractories or development of newer kinds of products. There is a growing awareness that the growth and development of both Steel and Refractory industries go apace in as much as the refractory industry provides critical input to the Steel Industry on a continuous scale. It was, therefore, felt that the desired level of sophistication could be attained expeditiously by acquiring technical know-how from abroad.

With a view to exploring the possibility of technical collaboration, a four-member team comprising representatives of DGT, BRL and SAIL visited Japan and held discussions with several renowned Japanese refractories manufacturing firms. The team has already concluded a Memoranda of Understanding for transfer of technology with leading Japanese firms like Kawasaki Refractories Co. Limited. Negotiations are in an advanced stage for transfer of technology in respect of Coke Oven Silica

bricks from Shinegawa Refractories Limited. Necessary action is in hand to conclude the contract.

3.4.7 Manpower :

The total number of employees of the Company as on 31-12-1984 is given below :

Name of Unit	Total	SC.	S.T.	Ex. Service-men	Women	Physically Handicapped
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Bhandaridah Ref. Plant	874	109	60	9	99	1
Ranchi Road Ref. Plant	353	30	34	2	13	2
N. S. Mines	246	2	112	2	13	2
Bhilai Ref. Plant	1572	186	267	60	13	11
Head Office	110	4	2	1	..	..
Pithoragarh Magnesite Proj.	20	2	..	6	..	..
India Fire-bricks & Insu. Co. Ltd.	1138	143	154	7	..	13
	4313	376	629	87	138	29

3.4.8 Implementation of Official Language Act :

All the operational units, Head Office and subsidiary Company have been notified in the Gazette in terms of rule 10(4) of the Official Language Rules, 1976 that the Staff of these units have acquired working knowledge of Hindi. Implementation Committees are meeting regularly in all the units and Head Office for speedy implementation of the instructions being received from Government from time to time.

3.4.9 Safety Measures :

Safety measures are being provided in all the plants as per provisions of the Factories Act, 1948.

3.4.10 Engagement of Contract Labour :

In different units and subsidiary, contract labourers are engaged on non-perennial jobs only. However, contract labourers are given regular appointment against vacancies subject to their names being sponsored by the local employment exchange. Minimum statutory wages are being paid to contract labourers. In addition, they are being allowed other benefits like Provident fund, E.S.I. leave and welfare facilities.

3.4.11 Workers participation in Management :

According to the revised directives issued by the Govt. in December, 1983, the different units have formed shop floor and plant level committees and the working of these committees is being reviewed.

3.4.12 Industrial Relations :

The industrial relations in all the units and subsidiary have generally been peaceful.

Visakhapatnam Steel Project

3.5 Project Profile :

3.5.1 Visakhapatnam Steel Project of Rashtriya Ispat Nigam Limited is the first shore-based integrated Steel Plant being set up at Visakhapatnam in Andhra Pradesh with a capacity of 3.4 million tonnes of liquid steel per annum. This plant is designed to adopt some of the most modern technologies in coke, iron and steel production like 7 metre tall coke oven batteries with dry quenching facilities; big blast furnaces of 3200 cubic meter each with bell-less top charging facilities, and continuous casting of steel and most modern rolling mills. The project will have facilities for extensive treatment of effluents for ensuring proper environmental protection. The production capacity of VSP at 3.4 MT phase is envisaged as follows :-

	MT
Light & Medium Merchant Mill	0.71
Wire Rod Mill	0.60
Universal Deam Mill	0.80
Medium Merchant Mill	0.70
Saleable billet	0.17
	2.98

3.5.2 Rephasing of the Commissioning Schedule.

Originally the project was proposed to be completed in two phases-the first phase of 1.2 million tonnes molten Steel per annum capacity in four years and the entire capacity of 3.4 million tonnes in six years i.e., in 1986 and 1988 respectively. On a review of progress of work as well as fund availability position, the commissioning schedule has since been revised and the first phase of the project is now expected to be completed in 1988 and the second phase in 1991.

3.5.3 Progress of Construction

The progress of work with reference to the revised schedule so far has been generally satisfactory. Till December 31, 1984, 1.26 million cubic meters of concreting work has been completed. Similarly 1.4 lakh tonnes of structural fabrication, 0.51 lakh tonnes of structural erection, 7670 tonnes of equipment erection and 23369 tonnes of refractory erections have been completed. The establishment of external infrastructure like water supply, power supply, rail links, port facilities, Iron Ore and Coal Supplies etc., for the operational requirements of the plant are in progress.

3.5.4 Finance

The budget provision for this plant for the year 1984-85 is Rs. 480 crores which includes buyers credit of Rs. 75 crores. In addition a supplementary grant of Rs. 160 crores has also been provided. The cumulative expenditure upto end of December 1984 is Rs. 1308.87 crores.

3.5.5 Personnel-Manpower

The total number of employees of the project as at the end of December 1984 and the break up of the Scheduled Castes, Scheduled Tribes, etc, are given below:

Group	Total employees	on 24-12-1984				
		S.C.	S.T.	Ex. Service men	Physically Handicapped	Women employees
'A'	837					
'B'	76	50	3	3		14
'C'	1587	6		3	1	5
'D'	772	205	20	100	9	60
(excluding sweepers)		137	6	84	16	16

'D'	30	16	..	2	..	..
(sweepers)						
TOTAL	3302	414	29	192	26	95

The Government Policy with regard to reservation of posts for Scheduled castes and Scheduled tribes and grant of relaxation with regard to age, qualification and experience have been kept in view while filling up the posts. The project has also provided training facilities to enable SC/ST candidates to acquire requisite skills for the jobs. A technical complex is being constructed to provide extensive training to technical personnel.

In conformity with the policy of the Government to consider employment to one able-bodied member of each household of displaced families the project has given preference for employment to displaced persons. As at the end of December, 1984, the project has provided employment to 1274 displaced persons. In addition, construction agencies engaged in the project have provided employment to 4327 displaced persons

3.5.6 Contract Labour

Construction work is being got done through NPCC, HSCL, public sector companies and other contractors who are employing the labour according to the requirements. VSP has not employed any contract labour directly.

As at the end of December, 1984, 32,377 persons were employed as labour by various agencies engaged by VSP for different site works. There is a contract labour cell in VSP to supervise the proper implementation of labour laws. There is also a separate Assistant Commissioner located in Visakhapatnam, plant from the State Government frequently and ensures the implementation of health and welfare measures for contract labour.

3.5.7 Workers' participation in Management :

VSP at present has many project level committees with representatives from workmen and Management like Provident Fund Board of Trustees, Community Welfare Committee, Town Development Committee, Sports Committee. Advisory Committee etc.

3.5.8 Safety Measures

VSP has a safety Advisory Committee and a Department to examine the site conditions and to recommend measures for prevention of accidents and also to prescribe safety aids and safety appliances for the use of various categories of personnel exposed to job hazards. Safety weeks are also celebrated to make the various categories of personnel aware of job hazards and preventive measures for avoidance of accidents.

3.5.9 Indigenisation

The designing of Visakhapatnam Steel Project has been done keeping in view the need to maximise indigenous participation at all levels. The total foreign exchange component involved is only Rs. 679 crores in the sanctioned project cost of Rs. 3897 crores. The procurement policy for the equipment has been to utilise indigenous sources to the maximum extent. Civil, Structural works and Equipment erection are being done entirely with indigenous resources. Consistent efforts are being made through meetings with various associations and manufacturers for procuring the equipment indigenously.

3.5.10 Energy conservation Measures

The design of the Visakhapatnam Steel Project has been envisaged keeping in mind the need to minimise the energy consumption. The energy conserving measures have been contemplated in steam system, secondary power generation system and fuel system. As a result, the specific energy consumption is now estimated at 7.74 million k-cal per tonne of saleable steel as against the earlier estimate of specific energy consumption of 9.03 million k-cal of energy per tonne of saleable steel envisaged in the Comprehensive Revised Detailed Project Report (CRDPR).

3.6 Metal Scrap Trade Corporation Limited

PART-1 :

3.6.1 (1) Main Functions :

Metal Scrap Trade Corporation Ltd. is the canalising agency for the following items of scrap :—

- (i) Steel Melting Scrap including Alloy Steel Scrap.
- (ii) Sponge Iron.
- (iii) Old Ships for breaking.

(iv) Re-rollable scrap.

(v) Pig Iron Chips.

Export of

(vi) Various categories of ferrous scrap.

It also acts as selling agents for disposal of scrap arisings from Steel Plants and other Public Sector Undertakings.

3.6 (2) Organisational Structure :

- (i) The President of India holds 56 percent of share capital of the Corporation and the balance 14 percent is held by other share-holders in Private Sector.
- (ii) The Corporation is headed by the Chairman-cum-Managing Director who is assisted by four General Managers in charge of Foreign Trade, Domestic Trade, Finance and Accounts, Market and Development.

PART-II :

(1) Performance

The performance of the Company during 1983-84 and 1984-85 (upto December 1984) is given below :—

Name of Item	1983-84		1984-85(upto Dec. 84)	
	Quantity	Value	Quantity	Value
I. IMPORT				
(i) Carbon Steel Melting Scrap	720	12364	539	8209
(ii) Sponge Iron	23.7	339	53	824
(iii) Stainless Steel Scrap	4.7	596	6.4	738
(iv) Old ships for breaking	432	3050	300	2808
	84	180	48	122
II. EXPORT				
		3170	160	2269
III. DOMESTIC SALES :				
(i) Arisings of Steel Plants.	214			920
(ii) Other Public Sector Undertakings	NIL			

1.1 In addition to its traditional activities, MSTC during 1983-84, undertook new activities by undertaking sale of scrap on agency basis on behalf of a number of Public Sector Organisations. The number of such organisations is now forty. Agreement has also been executed with Govt. of India for disposal of scrap available from Defence Units.

5.6.3 Financial Results :

The Company has been maintaining a steady rate of 20 per cent dividend. An all time record profit of Rs. 30.40 million before tax has been achieved during the year 1983-84 against Rs. 20.80 million in 1982-83. The estimated gross profit during 1984-85 is Rs. 39.50 million.

3.6.4 Employment Statistics

As on 31st December, 1984, a total number of 180 persons were employed in the Company at its Head Office in Calcutta and also three regional offices at Bombay, Delhi and Bangalore including a Branch Office at Bhavnagar, Gujarat. Out of the total number of employees as aforesaid, 25 belong to SC/ST. There are 15 women employees besides four Ex-Servicemen and two physically handicapped persons.

3.7 Ferro Scrap Nigam Limited

PART-I:

3.7.1 Organisational Structure and Main Functions :

The Ferro Scrap Nigam Limited (FSNL) is a joint sector company in which the Metal Scrap Trade Corporation Limited holds 60 percent equity shares with the remaining 40 percent being held by M/s Harsco Corporation Inc. USA. The Company undertakes recovery and reprocessing of scrap from slag and refuse dumps in the steel plants in Jamshedpur, Rourkela and Bhilai Steel Plant from 1983-84.

PART-II:

3.7.2 Performance

The Company had been processing and despatching processed scrap @ about 3.76 lakh tonnes annually during the first four years of its operations and this increased to 4.48 lakh tonnes during 1983-84, due to scrap recovery work at BSPP also being taken up during that year. For the current year (1984-85), a despatch target of 4.51 lakh tonnes has been fixed, of which about 3.25 lakh tonnes has been achieved upto December, 1984.

3.7.3 Future Programme :

Keeping in view the availability of the scrap arisings in the various steel plants, the Company proposes not only to expand the capacity in its existing units augmenting the resources in terms of equipment, manpower etc., but also to take up scrap processing in other steel plants like Bokaro and Vizag, during the next five years. It has accordingly drawn up a plan for replacement/renovation of the ageing equipment and procurement of additional machinery. On the assumption that the investments materialise, the Company will be in a position to process 820 thousand tonnes a year from 1988-89 onwards, as against the present level of 451 thousand tonnes annually.

3.7.4 Financial Results :

For processing the slag and reclaiming iron and steel from the sums FSNL gets service charges from the steel plants. Based on the service charges income of Rs. 846 lakhs in 1983-84 the gross profit of FSNL was Rs. 465 lakhs as against a figure of Rs. 473 lakhs of service charge income and Rs. 117 lakhs gross profit in the year 1982-83. The income from service charges during 1984-85 is expected to be Rs. 841 lakhs and gross profit Rs. 177 lakhs. The actual income service charges realised upto December, 1984 was Rs. 576 lakhs and gross profit Rs. 129 lakhs. The gross profit during 1984-85 would be lower as the service charges realised during 1983-84 included escalation claims for earlier years.

3.8 National Mineral Development Corporation Limited

3.8.1 The National Mineral Development Corporation Limited (NMDC) was incorporated on November 15, 1958 as a Government Company for developing and exploiting the mineral resources of the country (other than coal, oil, natural gas and atomic minerals).

Presently, on the production side, the activities of NMDC are confined to iron ore and diamond. On the exploration, planning and development side, its investigation planning and consultancy wings are dealing with various materials such as iron ore, diamond, limestone, dolomite, gypsum, graphite, tungsten, tin, sapphire, etc. In respect of iron ore, the NMDC is a producer for exports only. The export of iron ore is canalised through the MMTC and Japanese Steel Mills are the major buyers of iron ore produced by the NMDC. The following units are under the control of NMDC.

A. PRODUCTION PROJECTS STATE IN WHICH LOCATED

Iron Ore

Bailadila-14
Bailadila-5
Donimalai

Madhya Pradesh
Karnataka

Diamond

Panna Diamond Mining Project (Majhgawan Mine)

Madhya Pradesh

B. PROJECTS UNDER CONSTRUCTION

Iron Ore

Bailadila-14 Expansion and Modification Scheme (Bailadila 11-C)
Fine Ore Handling Scheme (Bailadila-5)
Dolomite
Machkot Dolomite Project

Madhya Pradesh

3.8.2 Finance

The authorised capital of the Corporation is Rs. 150 crores. The equity capital as on 31-12-84 was Rs. 9.13 crores. Government loans outstanding as on 31-12-84 amounted to Rs. 37.10 crores.

3.8.3 Production

Production in the units of NMDC during 1983-84 and 1984-85 is given below:—

Name of the Project	(In lakh tonnes)							
	1983-84 (Actuals)		1984-85 (Target)		1984-85 Apr-Dec (Act)		Jan-Mar	
Lumps	Fines	Lumps	Fines	Lumps	Fines	Lumps	Fin	
Bailadila-14	20.09	6.40	19.00	6.74	14.25	4.46	5.11	1.89
Bailadila-5	25.02	12.07	30.00	14.00	19.90	10.99	9.29	3.82
Donimalai	7.49	6.50	9.50	8.50	7.84	6.71	2.20	2.04
Panna Diamond Mining Project (in carats)	13416		15000		10589		4221	

Sales turnover during the year 1983-84 was Rs. 100.03 crores as compared to Rs. 113.56 crores during the previous year. During 1984-85 (upto December, 1984) the sales turnover has been Rs. 72.93 crores.

3.8.4 Production Performance

Iron Ore : The total targetted production of lump plus fines from Bailadila-14 during April to December, 1984 has been achieved with actual production at 18.71 lakh tonnes against the target of 18.74 lakh tonnes.

The target of production from Bailadila-5 during April to December, 1984 has been fulfilled with actual production at 30.89 lakh tonnes against the target of 30.89 lakh tonnes.

Production at Donimalai during April to December, 1984 was higher than the target, the actual production being 14.55 lakh tonnes against the target of 13.76 lakh tonnes.

The recession in the international steel industry, particularly in Japan, (the principal buyer of Indian iron ore) continues. However, there are sign of slow recovery in the coming years.

3.8.5 Diamonds

The actual production of diamonds during April to December, 1984 was 10,589 carats against the target of 10,779 carats. The slight shortfall was mainly due to lower quantum of tuff treatment because of harder material and lower plant availability. The sale of diamonds during April to December, 1984 was 8572 carats for 106 lakhs.

3.8.6 Working Results

During 1983-84, the NMDC earned a profit of Rs. 0.78 crores as compared to Rs. 14.52 crores during 1982-83. During the period April to December, 1984, the NMDC has incurred a loss of Rs. 9.22 crores. The reason for the declining profitability increasing loss is that the international market for iron ore has been very poor in the last two years. The FOB(T) prices of iron ore have come down by about 25 per cent in 1984-85 as compared to 1982-83. Moreover, MMTC continues to pay inadequate prices for export of iron ore to NMDC. The entire cut in the export prices is being passed on by MMTC to NMDC in the

residual price system without passing on any benefit on account of appreciation in the Dollar-rupee exchange rate. This has resulted in heavy losses.

Based on the recommendations of the BICP Report 1984 regarding payment of fair price for NMDC iron ore, the Department of Steel has sent a note for consideration and approval of the Committee of Secretaries seeking implementation of the BICP Report (as modified at the instance of the Department of Steel) w.e.f. 1-4-1984.

In the meanwhile, the Ministry of Commerce has been requested to issue directions to MMTC to implement the BICP Report and NMDC has been advised to raise bills on MMTC based on the price recommended by BICP for the period 1-4-84 onwards.

3.8.7 New Projects

(i) Bailadila 11-C

Bailadila 11-C deposit is being developed to supplement and replace the Bailadila-14 deposit, the production of which will be dwindling year by year. The revised production cost of Bailadila 11-C is Rs. 19.70 crores. An annual production of 2.8 million tonnes of lump and fines is expected from Bailadila 11-C. The major part of iron ore produced here is identified as a source of supply for Visakhapatnam Steel Plant. The project is expected to be completed by June, 1985.

(ii) Fine Ore Handling Scheme (Bailadila-5)

Government have sanctioned this project for handling fine ore at Bailadila-5 including reclamation and loading facilities at an estimated cost of Rs. 25.94 crores in September, 1982. The project which was scheduled to be completed in September, 1985 is likely to be delayed because of delay in the construction of the siding.

(iii) Machkot Dolomite Project

National Mineral Development Corporation Ltd., has been assigned the task of developing dolomite deposits for the supply to Visakhapatnam Steel Plant in Bastar district of Madhya Pradesh. The State Government had rejected NMDC's mining

lease application and NMDC has filed a revision application. Simultaneously NMDC have identified alternative deposits of dolomite in Bilaspur District. The Department of Steel have written to State Government for reconsideration of their stand.

3.8.8 Industrial Relations

Industrial relations during April—December, 1984 were peaceful and cordial.

Personnel

The details of the employees in the NMDC as on 30-11-84 are indicated below :

Group	Total No. of Regular Employees as on 30-11-84	No. of Scheduled Caste Employees (Out of Col. 2)	No. of Scheduled Tribe Employees (out of Vol. 2)	No. of Women Employees (out of Col. 2)
1	2	3	4	5
A	545	22	2	11
B	638	34	6	20
C	3371	430	422	135
D (Exc. Sweepers)	1855	334	1	128
D (Sweepers)	127	100		33
TOTAL	6536	920	992	327

3.9 Mandovi Pellets Limited

3.9.1 National Mineral Development Corporation (NMDC) is participating on behalf of Government in Joint Sector enterprise Mandovi Pellets Limited (MPL) which was approved in 1975 to produce 1.8 million tonnes of blast furnace grade iron ore pellets. The plant started production in 1979 as a 100 per cent export oriented unit. NMDC and M/s. Chogule and Company Private Limited each contributed to the extent of 1/3rd of the equity capital of this Company, the remaining 1/3rd being contributed by the general public/financial institutions. Mandovi Pellets Limited had entered into a long-term agreement with Japanese Steel Mills for export of a total quantity of 18.32 million tonnes of pellets at a rate of 1.82 million tonnes per year over a period of 10½ years starting with financial year 1978-79. Due to six

months delay in commissioning of the plant, Mandovi Pellet Limited could not ship any pellets in 1978-79. In the following two years 1979-80 and 1980-81 also, the company could export only 0.66 million tonnes and 0.88 million tonnes respectively. The reason for shortfall in production was inadequate supply of Power.

3.9.2 The Mandovi Pellets Limited had to be subsequently closed down in 1981 as the manufacture of pellets became economically unviable due to high furnace oil prices and shortage of power, combined with fall in pellet prices in the international market.

3.9.3 An agreement was executed whereby the Japanese Steel Mills agreed to take 2.3 million tonnes of iron ore fines instead of pellets for the year 1981-82. The Japanese Steel Mills also agreed to pay a premium of \$ 4.85 in 1981-82 per tonne approximately over and above the price of fines. Due to continued recession in steel industry, this agreement was further extended for another 3 years i.e. 1982-83 to 1984-85 but the premium was reduced to \$ 4.5 per tonne of fines. The contract for supplying fines was assigned to M/s. CCPL who also paid contribution to MPL for this deal.

3.9.4 Mandovi Pellets Limited incurred a loss of Rs. 14.39 crores during the period of its operation. However, the company made profits during its closure in the last four years on account of premium given by Japanese Steel Mills and the contribution paid by CCPL. The net loss was thus reduced to Rs. 8.53 crores as on 31-3-1984.

The 3-years contract for supply of fines expires on 31st March, 1985. The total financial liability of Mandovi Pellets Limited as on 31-3-85 will be Rs. 468,307,000, which includes foreign liabilities of Rs. 208,426,000.

3.10 Manganese Ore (India) Limited

3.10.1 Manganese Ore (India) Limited is the largest producer of high grade manganese ore in the country. The Company originally started as the Central Provinces Prospecting Syndicate in early 1896. Later, it became the C.P. Manganese Ore Company Limited (a Company registered in London). The Company was

incorporated under the Indian Companies Act, 1956, in June 1962. It became a fully owned Government Company in October 1977. The shares of the Company are held by the Government of India, Government of Madhya Pradesh and Government of Maharashtra in the ratio of 52.18 : 22.61 : 25.21 respectively. The high grade manganese ore is used for producing ferro manganese, which is used in the manufacture of steel. Manganese being a strategic mineral with the limited proven reserves in the country, Government's policy has been against permitting export of high quality ore and for restricting export of low grade ore to the minimum level consistent with the need for earning foreign exchange.

3.10.2 Finance

The authorised capital of the Company is Rs. 6 crores and the paid up capital as on 31st December, 1984 is Rs. 2.78 crores.

3.10.3 Production

In 1983-84, Manganese Ore (India) Limited produced from its various mines 4,43,811 tonnes of manganese ore of various grades against the target of 4,25,000 tonnes as compared to 4,71,299 tonnes during 1982-83. From April to December 1984, the Company produced 3,08,880 tonnes of manganese ore against a target of 3,09,271 tonnes. The target for 1984-85 is, 4,32,500 tonnes. It had exported 52,945 tonnes of ore during this period and about 1.0 lakh tonnes of ore is likely to be exported during the remaining period of the year. The total sales during the period April-December 1984 were 2,80,659 tonnes valued at Rs. 1,136.04 lakhs against the sales target of 2,88,600 tonnes. The sales during the remaining period is expected to be 1,69,400 tonnes valued at Rs. 843.96 lakhs. The Company has undertaken a number of measures towards cost reduction.

3.10.4 Working Results

Manganese Ore (India) Limited had been consistently making profits and declaring dividends. During the year 1983-84, however, the Company incurred a loss of Rs. 27.31 lakhs after providing for depreciation. Apart from lower sales realisation, the main reasons for this loss were an increase in interest charges due to increase in working capital needs and increase in depreciation rates. Due to loss incurred by the Company, it was not

in a position to distribute any dividend for the year 1983-84. In 1984-85 the company has undertaken certain cost reduction measures. It has also increased price of ferro grade ore with effect from the middle of January, 1985. Nevertheless, the Company is expected to incur a loss of about Rs. 63 lakhs in 1984-85 due to additional expenditure of Rs. 60 lakhs on account of re-categorisation of labour from unskilled to skilled and continuing sluggish export market for ferro alloys.

3.10.5 Capital Schemes

The Company is considering redesigning of Ukwa Mine and optimisation of production from all mines of the Company in line with the recommendations of the Company's Consultants M/s. Seltrust Engineering Ltd., London. The Company has taken up the programme of deepening of the Holmes Shaft at Balaghat Mines in order to increase the production of high grade low phos ore. The setting up of an EMD/EMM Plant by the Company is also under consideration which will substantially improve the Company's profitability and cash flow.

3.10.6 Safety Measures

The main activity of the Company is mining, mostly underground. The Company has taken particular care to ensure safety of its workers. Apart from complying with the rules and regulations promulgated by Government, Pit Safety Committees are functioning in all the mines. These Committees meet at least once every month to analyse causes of accidents and adopt measures for their prevention. Safety Campaigns are undertaken to prevent accidents. One of the Chief Mining Engineers of the Company functions as Chief Safety Officer and inspects the Mines.

3.10.7 Workers Participation in Management

Various consultative forums are already functioning in different units of the Company for the effective participation of workers in the management functions. Workers Committee. Canteen Management etc., have been functioning satisfactorily at each unit. Joint Management Councils have also been constituted at different units. The problems which cannot be solved at the unit levels are referred to the Apex Body functioning at the Corporate level. One of the Workers' Representatives has also been appointed on the Board of Directors of the Company.

3.10.8 Personnel

The details of employees in the Company as on 31-12-1984 are indicated below :—

Group	S.C.	S.T.	Others	Total
A	5	2	156	163
B	5	5	116	126
C	234	230	990	1,454
D	1,572	32,29	4,449	9,300
Sweepers	114	..	..	114
	1,930	3,466	5,761	11,157

3.10.9 Progressive use of Hindi

For the progressive use of Hindi, in MOIL, the Company has formed a Hindi Cell at Head Office under the Deputy General Manager (Personnel). The Company has also formed Implementation Committees at Head Office and at the Mines of the Company. These Committees inspect the implementation of Hindi as per the Official Languages Act at Head Office and at Mines.

3.11 Kudremukh Iron Ore Company Limited

3.11.1 The Kudremukh Iron Ore Company Limited (KIOCL) was incorporated in April, 1976 for the management and the implementation of the Kudremukh Iron Ore Project. The Project has a designed capacity of 7.5 million tonnes of iron ore concentrate and was set up to meet the long term requirements of Iran. The Sale and Purchase Contract with Iran envisaged the supply of 150 million tonnes of iron ore concentrate over a period of 21 years commencing from August, 1980. Iran also agreed to make available a loan not exceeding US \$ 630 million to cover the cost of the project and related infrastructure. Against this loan, Iran paid only US \$ 255 million. The project was, however, completed with the balance funds provided by the Government of India.

3.11.2 The Kudremukh Iron Ore Project was completed on schedule and was ready to commence the supply of concentrate in accordance with the provision of the contract with Iran but Iran indicated its inability to lift the material. The company was, therefore, faced with the problem of finding alternate sources for the disposal of the material.

Pellet Plant

3.11.3 In order to overcome the above difficulties in May, 1981 the Government sanctioned the erection of a pellet plant of 3.00 MT/year capacity located at Mangalore for the conversion of 3.00 MT per annum of Kudremukh iron ore concentrate into pellets. This was in the context of a forecast that markets for pellets will be better than concentrate. The sanctioned capital cost of this project is Rs. 87.05 crores which is expected to be revised to Rs. 103.56 crores. Work on the project is in progress and the project is expected to be commissioned by June, 1985.

Production and Despatches :

3.11.4 The vigorous efforts made by the company for locating alternate markets resulted in entering into contracts with Romania, Czechoslovakia, and Bahrain for the supply of iron ore concentrate. The company had, to restrict its production to meet the demand of these alternate buyers, although it is capable of producing at its designed capacity. The company accordingly planned a production of 1.65 million tonnes of iron ore concentrate during 1984-85. Against this in the period April-December, 1984, it has already achieved a production of 1.245 million tonnes. For 1985-86 the company has planned a production of 2.50 million tonnes of concentrate and 0.50 million tonnes of pellets.

3.11.5 During 1984-85 the despatches of concentrate to Romania, Czechoslovakia and Bahrain are planned at 1.65 million tonnes against which the company has already despatched 1.302 million tonnes. The target of sales during 1985-86 is 2.00 million tonnes of iron ore concentrate and 0.50 million tonnes of pellets.

Finance

3.11.6 Due to the restricted production for the reasons beyond the control of the company, KIOCL incurred a loss of Rs. 69.69 crores during 1983-84. This included a sum of Rs. 35.52 crores as depreciation and deferred revenue and Rs. 36.06 crores as interest on Government loans. As the economic viability of the company was based on the agreement with Iran, the Government have reconsidered the position regarding the financing of the company and have decided to change its financial pattern by converting all the outstanding plan loans along with accrued interest thereon upto 31st March, 1984 into equity.

3.11.7 Keeping the financial restructuring of the company in view, the authorised capital of the company has been raised from Rs. 310 crores to Rs. 675 crores. The paid up capital of the company as on 31-12-1984 was Rs. 307.20 crores.

Personnel :

3.11.8 The total number of employees on the rolls of the company as on 31st December, 1984 is as follows :—

Group	Total No. of employees	Scheduled Caste	Scheduled Tribes	Ex-Service men	Women
A	344	13	2	6*	9
	+40T	+2T			+3T
B	56	2		1	5
C	1178	104	10	54@	80
	+51 T	+2 T			
D	219	48	32	6E	11
	37	32	3		7
D (Sweepers)					
	1834	199	47	67	112
	+91 T	+4 T			+3T
Total					

*One Ex-serviceman is also a physically Handicapped.
 @Two employees also belong to Scheduled Caste Category.
 One employee also belongs to Scheduled Caste Category.
 T Trainees.

Employees Participation in Management :

3.11.9 In terms of the Government of India's scheme of Employees Participation in Management (1983) the company has set up 9 shop level councils and 1 joint council comprising equal number of representatives from the management and the union. These councils meet periodically to discuss measures for improving production and productivity.

Contract Labour :

3.11.10 The company does not employ contract labour as a matter of policy. Only jobs of casual nature are got done through contractors. In all such cases provisions of the Contract Labour (Regulations and Abolition) Act, 1970 and obligations under the Act, as principal employer, are implemented.

Safety Measures :

3.11.11 Apart from an independent Safety Department, every Department of the company has a Safety Committee which meets once in a month. Safety campaign is organised for a week every year. All employees have been provided with the safety rules compiled by the company for each work area. The company has been awarded shields and medals by the Mines Safety Association for the best safety measures adopted in the company.

Ancillary Industries :

3.11.12 The company had prepared a detailed report on the ancillary units to be set up for the Kudremukh project. The State Government has constituted a Committee which includes a representative of the company, to coordinate and ensure smooth development of the ancillaries for the project. The company has assured all technical assistance and guidance to the entrepreneurs selected by the committee for the purpose.

3.12 Metallurgical and Engineering Consultants (India) Ltd. (MECON) was set up in 1959 as Central Engineering and Design Bureau of SAIL and later incorporated as a Company on 31st March, 1973. It has emerged as a premier consultancy and design organisation in the public sector for metallurgical industry. Its business includes the following :—

- (a) rendering technical consultancy, design and engineering and other technical project management services for setting up plant and machinery in ferrous and non-ferrous metallurgical industries;
- (b) design and supply of equipment for coke oven batteries (including 7 metre high code ovens) dry coke cooling plants; and rolling mills;
- (c) design and engineering of processing lines for ferrous and non-ferrous metals, etc.

Assignments in India :

3.12.2 The important assignments which Metallurgical and Engineering Consultants (India) Limited is handling are as follows :—

- (a) Expansion of Bokaro Steel Plant from 1.7 Mt to 4.0 Mt capacity involving preparation of the working drawings, ordering specifications and providing site supervision and associated consultancy work. (This assignment has been completed).
- (b) Expansion of Bhilai Steel Plant from 2.5 Mt to 4.0 Mt capacity involving preparation of working drawings, ordering specifications, construction supervision and associated consultancy work. (More than 95 per cent of this assignment has been completed).
- (c) Pelletisation plant of 3.0 Mt capacity of KIOCL at Mangalore involving comprehensive engineering services including project management. (Design and Engineering work completed. Plant is presently under erection).
- (d) Design of plant and equipment and systems including supply, erection and commissioning work in the area of Coke Oven Battery (without supply), Rolling Mills, Gas Cleaning Plant for Vizag Steel Plant. Work on these assignments are continuing.
- (e) Consultancy services for modernisation proposals for Durgapur Steel Plant, Rourkela Steel Plant and Indian Iron and Steel Company Limited.
- (f) Design, engineering and consultancy services for various Defence establishments in the country.
- (g) MECON has also received a few other assignments from different sectors of industry like Maruti Udyog Limited, The Associated Cement Companies Ltd. and various Defence Establishments. All those assignments are presently being carried out.

3.12.3 Assignments Abroad :

MECON's contracts for Consultancy, Project Management and Technical Services in foreign countries :

- (a) Construction of a million tonne per annum capacity Direct Reduction integrated Steel Plant at Warri, Nigeria;
- (b) Construction of a 1.3 Mt per annum capacity Blast Furnace based integrated Steel Plant at Ajaokuta, Nigeria;
- (c) Construction of 4500 houses Township complex at Warri, Nigeria.

MECON provides total consultancy, project monitoring and site supervision services for this 1.0 Mt capacity Direct Reduction integrated steel plant from concept to commissioning. After the successful commissioning of this million tonne capacity steel plant near Warri in Nigeria in January 1982, MECON is presently executing an assignment for setting up a plant Design Bureau for this steel plant.

Work on the 1.3 Mt capacity integrated steel plant at Ajao-kuta is under progress. MECON is rendering Project Management and Technical Services and at present 45 MECON engineers are deputed in Nigeria for this job. The two rolling mills of priority commissioning units under Stage-I have already been commissioned.

The steel township complex for Delta Steel Company at Warri with 4500 dwelling units is nearly completed including the infrastructure facilities.

3.12.4 Expertise beyond Normal Consultancy and Engineering Services and MECON's major contribution towards bringing technical know-how GAP.

MECON has entered into basic know-how licence agreements with various foreign companies as follows :

- (i) Know-how licence agreement with M/s. Wean United of USA for Rolling Mills and Auxiliary Equipment in 1969;
- (ii) Know-how licence agreement with V/o Tiajpromexport of Moscow, USSR for detailed engineering for metallurgical industries in 1970;
- (iii) Know-how licence agreement with M/s. Creusot-Lore of France for Converter Gas Cleaning Plant (basic agreement with SAIL and operated by MECON) in 1978;

- (iv) Know-how licence agreement with V/o Tiajpromexport of Moscow for Tall Coke Oven Batteries in 1980;
- (v) Know-how licence agreement with V/o Tiajuromexport of Moscow for Dry Coke Cooling Plants in 1980;
- (vi) Know-how licence agreement with M/s SMS Schloemann-Siemag of West Germany for long project rolling mills in 1981;
- (vii) Co-operation agreement with M/s. Tractionel International of Belgium in the field of Thermal and Hydel Power Plant, High Voltage Transmission Line and High Voltage Substation in 1981;
- (viii) Co-operation agreement with US Steel Engineers and Consultants of USA for design and engineering know-how for Phosam Process in 1981.
- (ix) Co-operation agreement on Environmental Protection with TUV Rheinland, West Germany.

3.12.5 Contract Labour Position :

MECON does not normally appoint contract labour for its activities.

3.12.6 Industrial Relations and Workers Participation :

The Industrial Relations situation in MECON ever since its inception in 1973 has been generally good. This has been possible because of healthy co-operation existing between MECON Management and the MECON Employees' Union, a non-political union and has been recognised by the Management on the recommendation of the State Govt. The executive staff of the organisation, who constitute more than 50 per cent of the total strength of the organisation are represented by the MECON Executives' Association, registered under the Societies' Registration Act. This Association has also been recognised by the Management. The major issues relating to the employees like wages, incentive and promotion policy etc. are periodically discussed with the Union and settlement for specified period are arrived at.

A system of participation in management by the employees both at the departmental level as well as at the corporate level exists in the Company. Zonal Committees at departmental level

discuss the subjects related to job, organisation, target, quality of work etc. and send their suggestions to the higher management wherever necessary. Besides there are other Committees to cover the issues relating to welfare, housing, medical, schools, sports, provident fund and gratuity etc. In addition to the above, management also keeps constant touch with the Employees' Union at the corporate level in order to brief them about the work situation and prospects relating to the growth of the organisation and other problems.

3.12.7 Capacity Utilization etc. :

MECON is an engineering organisation and not a manufacturing unit. Its main assets are a team of competent and qualified engineers and technical staff. The Company has at its disposal about 2.2 million engineering manhours and 1 million drafting manhours per annum. In terms of preparation of working drawings MECON has the capacity to prepare about 25000 working drawings per annum, which means the company can prepare working drawings for three integrated steel plants simultaneously. Capacity utilisation of engineering manhours during the year 1984-85 (upto December) has been around 79 per cent on chargeable jobs of which detailed engineering jobs represents about 40 per cent.

3.12.8 Personnel :

The total number of employees in the company as on 31-3-84 was 3682 out of which 229 are scheduled castes and 451 are scheduled tribes. Further, the company has also provision for providing employment to ex-servicemen. The percentage of vacancy filled by ex-servicemen till date is 5.26.

3.13 Hindustani Steel Works Construction Limited :

3.13.1 Hindustani Steel Works Construction Limited (HSCL) was incorporated in June, 1964, to mobilise indigenous capability for undertaking construction work of the integrated steel plants in the country. Subsequently, HSCL diversified its activities and is now handling works relating to construction of dams, bridges, silos, power plants, industrial plants, mining complexes, metro railway, township ancillary buildings etc. The company has a full-fledged design wing and also has a large fleet of heavy construction equipment.

Some of the important construction projects presently under execution by the company are as under :—

A. Steel Sector :

- | | |
|-------------------------------|---|
| 1. Bokaro Steel Plant | 4 MT Expansion - CRM, CPP, BEP, HRM. |
| 2. Bhilai Steel Plant Mill-II | 4 MT Expansion, Co., CRMBYS, Plate. Expansion to school building. |
| 3. Salem Steel Plant | CPP Civil works, Coke Oven Repair Works. |
| 4. Rourkela | CPP, Rebuilding of Battery No. 4. Civil works. |
| 5. Durgapur | Coke Oven Battery Repairs. |
| 6. Alloy Steel Plant | Civil and Structural works at BF, SMS and RMHS Zones. |
| 7. IISCO/Burnpur | |
| 8. Vizag Steel Plant | |

B. Works outside Steel Sector :

- | | |
|--------------------|--|
| 1. NPPC Farakka | Civil and Structural works. |
| 2. NTPC Ramagundam | Steel Structural Fabrication and Erection. |
| 3. NTPC Singrauli | |

C. Overseas Projects :

School Building Project in Eastern and Western Sectors of Libya.

3.13.3 Finance :

The authorised capital as also paid up capital as on 31-3-84 was Rs. 20.00 crores. Govt. loan outstanding as on the said date amounted to Rs. 27.74 crores of which Rs. 11.15 crores is on non-plan account.

3.13.4 Working Results

The Company's turnover during the year 1983-84 was Rs. 160.10 crores as against Rs. 165.00 crores during the year 1982-83. The budgeted turnover for the year 1984-85 is Rs. 172.32 crores.

The net loss for the year 1983-84 works out to Rs. 16.09 crores as against the net loss of Rs. 11.90 crores in the year 1982-83. The increase in loss was mainly due to rise in cost of surplus labour, increase in interest burden and drop in the turnover of foreign works which was due to non-availability of funds with the clients on account of acute financial crisis in Libya for quite some time.

3.13.5 Contract Labour position :

There are about 150 contractors and 550 PRWS presently employed in HSCL. Total number of workers engaged by them for HSCL is around 23,500. The number of workers varies widely from one unit to another depending upon the quantum and nature of work which changes from time to time. The jobs for which these agencies are employed are mostly in civil engineering structural fabrication, and structural erection, equipment erection etc. Besides these, to some extent they are also employed in mechanical and electrical erection works to supplement the work being done by the departmental workers in these areas. At present surplus departmental workers are not capable of taking up civil engineering and structural fabrication works. To enable them to take up these jobs, it would require re-mustering of the present categories of departmental workers so that sufficient number of barbenders, re-inforcement fitters, markers etc. could be available. To achieve these objectives the willingness and aptitude of the present workers for doing jobs other than what they are doing now would have to be assessed and suitable training programme will have to be evolved.

3.13.6 Safety Measures :

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

- Safety organisations are functioning in all the major units with independent safety engineers reporting to respective General Managers/Project Managers. In smaller units the Resident Engineer is incharge of safety organisation.
- Contractor's engaged at various HSCL sites are appraised 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 requirements of various work sites in HSCL.

3.13.7 Industrial Relations

Industrial Relations situation during the year 1983-84 has remained by and large peaceful. Three meetings of the Joint Forum were held during the year 1983-84. This Forum was con-

stituted at the Apex-level with the representatives of the major national trade unions to discuss the issues having company wide effect. Presently the issues of wage revision of workers, revision in fringe benefits and promotions etc. are under discussion in the Forum.

3.13.8 The personnel position as on 31st December, 1984 is indicated below :—

Category	Total No. of Employees	S.C.	S.T.	Female Employees	Ex- Service men	Physically Handi- capped Persons
1	2	3	4	5	6	7
A	1840	47	12	5	19	2
B	625	34	3	6	3	1
C	15330	1660	785	120	191	29
D	5640	1390	2250	1313	4	10
Total	23435	3131	3050	1444	217	42

3.14 Neelachal Ispat Nigam Limited.

3.14.1 Neelachal Ispat Nigam Limited was formed by Government of India on 27-3-1982 to set up the second steel plant in Orissa. The site for the proposed plant has been selected in Daitari region.

3.14.2 In view of the huge investment requirements and the recurring losses of the steel plants based on blast furnace route of iron making as also the limited resources of coking coal, Government have been exploring the possibility of using alternative technologies which can utilise non-coking coal. After a careful consideration of new technologies, a cost effective proven technology of Direct Reduction/Electric Arc Furnace (Sponge iron route) which uses non-coking coal has been identified for the project. Consequently MECON (the consultants) have been asked to discontinue the preparation of DPR based on blast furnace route and instead they have been engaged to prepare a feasibility report for the plant based on the new technology with a capacity of 1.5 lakh tonnes of sponge iron and 2.10 lakh tonnes of finished steel in the first phase. For this purpose the suitability of raw materials is being tested and other relevant studies

are being carried out. A temporary site office-cum-residential complex is under construction at the project site. Soil investigation has been completed and land acquisition work is in progress. Survey of the site is nearing completion.

3.15 Vijayanagar Steel Limited.

3.15.1 A new Company viz. Vijayanagar Steel Limited was formed to implement the Government's decision to set up a steel plant in Vijayanagar at Karnataka.

3.15.2 Earlier the idea was to set up an integrated steel plant based on the conventional blast furnace technology. However, later on, taking into account the huge investment required and the recurring heavy losses of steel plants based on the blast furnace route of iron making, as also the limited resources of coking coal and the long lead of coking coal mines to the proposed plant in Karnataka, Government felt it expedient to consider alternative technologies such as Direct Reduction/Electric Arc Furnace route of steel making which can utilize non-coking coal. Meanwhile, the Sponge Iron Plant in Kothagudem (Andhra Pradesh) of Sponge Iron India Limited based on Direct Reduction technology had been commissioned in December, 1980 and the suitability of this technology to raw materials proposed to be used in the Vijayanagar Steel Plant was established. Accordingly, it was decided in June, 1982 that a DPR be got prepared for a plant based on the Direct Reduction technology. MECON were assigned the preparation of this Report for a plant of 0.5 million tonnes to 0.6 million tonnes capacity capable of further expansion to a capacity of 1 million tonne based on the Direct Reduction—Electric Arc Furnace route using lump iron ore and non-coking coal. The DPR was prepared and submitted by MECON in August, 1983.

3.15.3 Other emerging technologies of Direct Reduction which utilise non-coking Coal for preparation of liquid hot metal like KR process and INRED process were also evaluated. As these technologies are still in a developmental stage, it was decided that the Vijayanagar Steel Plant be set up in a phased manner on the sponge iron electric steel making route as recommended by MECON in the DPR. MECON who were assigned the preparation of a Report for implementation of the First Phase of the project have submitted it in Oct, 1984.

3.15.4 This Report envisages production of 150,000 tonnes of sponge iron and 210,000 tonnes of finished products in the

shape of light structurals and bars. The capital cost if the first phase (including captive Power generation)) has been estimated at Rs. 422 crores.

3.15.5 Preparatory/Preliminary work such as land acquisition, survey, soil investigations, investigations on permanent water supply etc. have already been completed.

3.16 Companies of the Bird Group

3.16.1 The erstwhile Bird and Company Limited was taken over by Government with effect from 25th October, 1980. Under Section 4(1) of the Bird and Company Limited (Acquisition and Transfer of Undertakings and other Properties) Act, 1980, shares held by the Bird and Company Limited in certain other Companies specified in Schedule I to the Act stood transferred to the Central Government. Such Companies included six Investment Companies of the Bird Group. These have been amalgamated in September 1984, into one company known as Eastern Investment Limited, under a notification issued by the Department of Company Affairs.

3.16.2 The Department of Steel looks after the affairs of the following companies of the Bird Group as a share holder on behalf of the President; the percentage of share capital of each Company held by the President of India is specified below:—

1. The Orissa Minerals Development Company Ltd.	14.20
2. The Karanpura Development Company Limited	31.25
3. The Kumardhubi Fireclay & Silica Works Ltd.	8.00
4. The Bisra Stone Lime Company Limited	one out of 5,00,000 shares.
5. Eastern Investment Limited	34.77

Scott & Saxby Limited is a fully owned subsidiary of the Karanpura Development Company Limited.

3.16.3 The Orissa Minerals Development Company Limited is engaged in the mining of iron ore and manganese ore. The Iron Ore and manganese ore are supplied to Steel Plants, mainly Durgapur Steel Plant, IISCO and lately to Bokaro Steel Plant. High grade manganese ore produced by the Company is also supplied to ferro manganese producers. Some quantity of the ores is exported through MMTC. The Company produced 512047

tonnes of iron ore and 78,988 tonnes of manganese ore during 1983-84 (July 1983 to June 1984). It incurred a net loss of Rs. 20.84 lakhs during 1983-84 (July 1983 to June 1984) including depreciation.

3.16.4 The Karanpura Development Company Limited : The Company has two distinct lines of activity, namely, mining of limestone and clay and manufacture of refractories. The manufacture of refractories is a highly losing proposition, because the equipment is old, the technology is outdated, products are of poor quality and the market is highly competitive and restrictive. For all these reasons the refractory unit of the Company is closed. The lime stone produced by this Company is mainly supplied to cement plants. The Company produced 43,959 tonnes of minerals during the year 1984. It incurred a net loss of Rs. 23.08 lakhs during 1984.

3.16.5 Scott and Saxby Limited : is a fully owned subsidiary of Karanpura Development Company Limited. Its activities are sinking of deep tubewells, soil testing, construction of tubular structures, supply of pumps and spares, repairing and maintenance of pumps and tubewells, laying of pipelines for supply of water in plantations for drinking and industrial use in factories and for irrigational purpose and trading in pumps, motors and spares and their installation. The turnover of the Company during 1984 (upto November 1984) was of the order of Rs. 70.02 lakhs during 1984. It incurred a loss of Rs. 22.95 lakhs during this period.

3.16.6 The Kumardhubi Fireclay and Silica Works Limited : is one of the major producers of refractories in the country. It has an installed capacity of 1,35,000 tonnes for refractories, mainly firebricks, high alumina bricks and silica bricks. The Company produced 49,000 tonnes of refractories valued Rs. 874.42 lakhs during the year 1984. The production was lower due to depressed market demand coupled with non-availability of suitable raw materials. The Company incurred net loss of Rs. 139.31 lakhs during 1984.

3.16.7 The Bisra Stone Lime Company Limited : is engaged in the mining of lime stone and dolomite. It supplies limestone and dolomite to steel plants at Jamshedpur (TISCO), Durgapur, Burnpur (HISCO) and Rourkela. The Company produced 6,64,980 tonnes of limestone and 3,79,523 tonnes of dolomite in 1983-84. It incurred net loss of Rs. 56.46 lakhs in 1983-84.

3.16.8 Eastern Investments Limited : is an investment Company with income from dividend and interest on its investments. The Company as it exists at present has been formed by amalgamation of six other investment companies of the Bird Group. The Company incurred a loss of Rs. 3.08 lakhs in 1984.

3.17 Mineral Development Board

3.17.1 The Mineral Development Board is the successor organisation to the erstwhile Iron Ore Board which was registered as a Society in January, 1973, as a nodal agency for ensuring systematic co-ordinated and integrated development of iron ore deposits in the country and to ensure conservation and optimum utilisation of iron ore. In 1978, it was considered necessary to enlarge its scope to cover some minerals. Consequently the Board was renamed as Mineral Development Board from 15th June, 1979. At present its activities cover 27 minerals listed below :

- | | | |
|---------------|-----------------|----------------------|
| 1. Iron Ore | 10. Sillimanite | 19. Fluorite |
| 2. Manganese | 11. Magnesite | 20. Graphite |
| 3. Chromite | 12. Tin | 21. Chinaclay |
| 4. Vanadium | 13. Tantalum | 22. Quartz/Quartzite |
| 5. Titanium | 14. Columbium | 23. Silica Sand |
| 6. Nickel | 15. Cobalt | 24. Mica |
| 7. Molybdenum | 16. Fireclay | 25. Dolomite |
| 8. Tungsten | 17. Asbestos | 26. Calcite |
| 9. Kyanite | 18. Barytes | 27. Calcareous Sand |

The Board besides functioning as Adviser to Government on mineral development, is also engaged in preparing perspective plans for resource development and conservation, undertaking sponsoring exploration, analysis, market surveys or other special studies for best possible utilisation of scarce mineral resources in the country.

3.17.2 Composition of the Board

The constitution of the Board provides for a total membership not exceeding 15 including Chairman and Member Secretary, nominated by the Government of India. At present it has a Chairman, a Member Secretary and 13 Members representing various Ministries and organisations involved in mining industry. It also has non-official members having wide experience in mineral development and conservation. The Board's expenses are met entirely by grants from Central Government.

3.17.3 Activities

Apart from its advisory functions in regard to 27 minerals entrusted to it by the Ministry of Steel & Mines, the Board acts as a collaborative and catalytic agency for resources augmentation, development and utilisation of minerals. Identification of thrust areas, bringing in process technologies from laboratories of industrial application with a view to make the best use of resource endowments, documentation of mineral resources in regard to their availability, optimum usage etc. are given the highest importance.

3.17.4 Schemes and Studies

The Mineral Development Board continued its efforts in the area of resource development of Tungsten. Projects in the field of refractory metals and refractory minerals, with special reference to beneficiation of low grade materials, and their utilisation were launched. The Board is collaborating with SAIL in studying the problems connected with the identification of the new sources as well as augmenting the availability of good quality limestone and dolomite supply for steel industry.

3.17.5 Iron Ore

The Board has established the feasibility of beneficiation of iron ore slimes. The Board launched studies on the use of beneficiated ultra fines along with the sinter fines in the sinter strands of the existing steel plants. The study is being conducted by Rourkela and Bokaro Steel plants using beneficiated slimes of Barsua and Kiriburu respectively.

3.17.6 Manganese

The Board-sponsored study of WAD has established that this material can be a major source of low grade manganese. The report has been circulated to the different Government departments for information. It is proposed to extend the study to other manganese bearing areas in Madhya Pradesh, Maharashtra and Goa.

A large quantity of fines are generated at ferro manganese plants. The Board has initiated studies to find the possibilities of utilisation of these fines as also the use of dephosphorised manganese concentrate for production of manganese sinters. The studies are in progress and the preliminary results achieved so

far, are encouraging. After establishing the technical feasibility, the economics of this process will be studied for commercial use of the process.

3.17.7 Tungsten

The Board's interest in the development of tungsten (W) resources remains unflagging. Additional drilling work in Degana has been approved and work is in progress. This exploration work in Degana has brought out the possibilities of the granite itself containing around 0.1 to 0.2% WO_3 . This means that a substantial quantity of the granite material hitherto considered barren will become a source of tungsten. This will greatly change the economics of operating this area.

The Board has also initiated exploration of tungsten in the graphite area of Andhra Pradesh at Burugubunda, through NMDC. The deposit, though small, reveals higher tungsten content (around 0.5% WO_3). The work is in progress. The Board is closely watching the efforts of Kerala Mining Exploration Development Project in the field of Tungsten exploration at Agali in Kerala. The grade of the ore is around 0.5 to 2.0% WO_3 which compares very favourably with the major deposits of the world.

M/s. Golder Associates of U.K., who were entrusted with the work of developing an acceptable (65% WO_3) grade concentrate from tungsten bearing alluvial material of Degana, have failed to generate the desired grade concentrate. However their work brought about certain facts based on which a simple method of beneficiating the alluvial tungsten by a combination of physical beneficiation methods was conducted by Regional Research Laboratory, Bhubaneswar. The laboratory level studies have shown that 55 to 65% WO_3 concentrate could be obtained with satisfactory recoveries. Bulk sample testing is in progress.

3.17.8 Vanadium

A brief report of the exploration of Khuripar vanadium deposit was given to Maharashtra Electro-smelt for their study, as they plan to convert their electric pig iron making facility to make ferro vanadium.

3.17.9 Refractories

The beneficiation and agglomeration projects of Kyanite Sillimanite and Magnesite are in progress. The Board has also initiated on the site beneficiation study of Almorah magnesite through Regional Research Laboratory, Bhubaneswar. Further work is in progress.

3.17.10 Nickel/Cobalt/Chrome from Chromite Mines over Burden

A study sponsored by the Board through Regional Research Laboratory, Bhubaneswar has established the possibility of pre-concentration of this over-burden material into nickel rich and chrome rich fractions. Bulk samples testing to find out the techno-economics of this process is being undertaken. With the cooperation of the Industrial Development Corporation of Orissa.

The Board has also completed an inhouse study on the contemporary technologies for production of nickel from its oxide ores and their relevance to indigenous production of nickel and cobalt. The study has recommended a detailed economic assessment of adopting acid leach process and suggested that beneficiated overburden material could be a potential source for the production of these strategic metals.

3.17.11 Others

The Board has successfully completed the resource audit of the minerals of Rajasthan. This has brought out the mineral potential in the different districts of Rajasthan.

The Board's studies to assess the impact of different mining technologies on programmes, employment, cost-efficiency and limits to choice of technology brought out some interesting findings. The report is being circulated to the Government Departments for information.

The Board continues to prepare the status reports. The Status Report of vanadium and Nickel have been finalised. The draft report on chromite has been circulated for comments. A report on titanium is under preparation.

CHAPTER IV

TATA IRON AND STEEL COMPANY LIMITED

4.1 Tata Iron and Steel Company Limited (TISCO), the only integrated steel plant in the private sector, is the oldest plant in the country and consists of an integrated steel plant at Jamshedpur, captive collieries at Sijua, Jamadoba and West Bokaro and an iron ore mine at Noamundi in Bihar. TISCO embarked on a modernisation programme in 1980 and in the first phase of modernisation, the major units (L.D. Plant oxygen Plant and Lime Calcining Plant) were commissioned during March, 1983. With the commissioning of these Units, the annual installed capacity has increased to 2.0 M.T. of hot metal, 2.16 M.T. of ingot steel and 1.74 M.T. of saleable steel.

Production

4.1.2 The Production Performance of this Plant in recent years is as follows :—

Year	(In '000 tonnes)	
	Steel Ingots	Saleable Steel
1980-81	1,875	1,537
1981-82	1,962	1,606
1982-83	1,946	1,621
1983-84	1,929	1,626
1984-85	1,510	1,233
1984-85 (April to December, 1984)		

It is expected that subject to adequate inputs (particularly coking coal and scrap) being available; total crude steel production for the year will be 2.00 million tonnes and the gross saleable steel 1.70 million tonnes. The Production plan for 85-86 envisages crude steel production of 2.16 million tonnes and gross saleable steel of 1.74 million tonnes.

Steps have been taken by TISCO to control costs of items within the control of the Company's operation. For this purpose, a special cost reduction programme has been formulated after identifying and selecting specific areas like reduction in coke

rates, improvement of productivity, energy optimisation, yield improvement, bye-products/wastes utilisation, effective maintenance etc.

Financial Performance

4.1.3 TISCO has reported a profit of Rs. 18.96 crores (before tax) for April to September, 1984 as against a profit of Rs. 0.16 crore (before tax) for the corresponding period of 1983. The profitability has increased mainly due to a revision in prices of steel materials announced by the Joint Plant Committee (JPC) with effect from 22-6-84 as well as additional production and sale of steel materials.

Indigenisation

4.1.4 The company has developed indigenous sources for quite a few spares which used to be imported. Efforts at import substitution and indigenisation have resulted in estimated saving of Rs. 50 lakhs of the foreign exchange during the year 1984.

Modernisation

4.1.5 Second phase of the modernisation programme of M/s. TISCO has been approved by the Government. This is to be completed by 1985-86 and this will enhance their crude steel capacity from 2.16 million tonnes to 2.45 million tonnes and saleable steel capacity from 1.74 million tonnes to 2.1 million tonnes.

Workers Participation

4.1.6 TISCO has 41 joint departmental councils inside and outside its works. Workers participation through the recognised unions has been established in almost all the areas and has contributed a lot towards harmonious industrial relations.

Contract Labour

4.1.7 A comprehensive study was undertaken by TISCO to identify those permanent and perennial jobs which are to be departmentalised. Following this study, nine jobs identified as perennial in nature, have been departmentalised.

Tribal Sub-plan

4.1.8 TISCO has its own plans for tribal welfare through Joint Committee for Adivasi Affairs, Community and Rural Development Programmes. Need based financial assistance is

extended by TISCO to deserving Adivasi students for studies. Special programmes are in vogue to promote sports and allied activities amongst them.

Safety Measures

4.1.9 A full fledged Safety and Accident Prevention Service Department carries out various safety activities and programmes. A sum of Rs. 1.5 crores approximately is spent by TISCO every year for procurement and supply of safety appliances.

Energy use and conservation

4.1.10 An Energy Management Programme implemented by TISCO has helped to attain an overall energy consumption figure of 11.50 million kilo calories per million tonne of finished steel. TISCO has drawn a long term ten year programme for further reduction/conservation, which will help TISCO to curtail overall energy consumption by about 10% in the coming years.

4.2 Mini steel plants

4.2.1 Mini steel plants alongwith the re-rolling mills are playing an important role in the Indian Economy. Integrated Steel Plants produce mainly mild steel in bulk quantities. Electric Arc Furnaces produce alloy, special and stainless steel in addition to mild steel.

4.2.2 At present 153 units have been given Industrial/COB licences with a total capacity of 3.89 million tonnes of steel ingots/cast billets per year. Out of these 150 units with a capacity of 3.94 million tonnes have been commissioned and started commercial production. In addition to this, 18 existing units and 15 new units have been issued letter of intent for a further capacity of 0.85 million tonnes per year. Besides these, there are about 50 electric arc furnaces units under DGTD having Industrial/COB licences for manufacture of steel castings. These units also produce some quantity of steel ingots by way of diversification.

The production of working units who are reporting production to the Iron & Steel Controller, during the last three years is at Annexure I.

4.2.3 In view of critical power situation and other constraints the average capacity utilisation of the working electric arc furnace units vary from 65 per cent to 75 per cent.

4.2.4 In order to enable the Mini Steel Plants to achieve higher capacity utilisation and also to improve economic viability of these units, Government have taken the following measures :—

- (a) Electric arc furnace units which have achieved consistently 80 per cent production of their licensed capacity during any of the previous two years are being considered for substantial expansion upto a maximum of 100% of their existing licensed capacity.
- (b) The existing electric arc furnace units are permitted to freely diversify into production of all grades of carbon and alloy steel including stainless steel/heat resisting steel upto their licensed capacity.
- (c) The existing electric arc furnace units are being permitted to install captive rolling mill with a view to encourage formation of composite units provided the interest of small scale units in that region are not affecting.
- (d) These electric arc furnace units are allowed to install balancing facilities like continuous casting machine, conditioning facilities etc.

4.2.5 By availing all these facilities is expected that capacity utilisation of electric arc furnace units will improve and they will be able to reach a production of 2.6 million tonnes by 1985-86 subject to availability of power which is the main constraint for increasing production.

4.3 Re-rolling Industry

4.3.1 A large capacity for rolling of finished steel—mainly bars and rods—from semis obtainable from the integrated steel plants/Mini steel plants, as well as re-rollable scrap materials came up in the private sector. A technical Committee set up by the Department of Steel assessed the capacity of these units at 20.68 million tonnes. Most of these units were not having Industrial Licences. In order to regulate further growth of the steel-re-rolling industry, it was decided to bring it under the licensing policy. As per Government of India Notification dated 18-8-81 all steel re-rolling mills in small, medium and large sector must obtain Industrial/COB licences. About 1500 applications have been received in response to this notification and 474 units have been issued Industrial/COB Licences. Although the capacity of this sector is high, actual production has been only

2 million tonnes. The cumulative production figures of the re-rolling units (both with and without electric arc furnace) who are reporting production returns to Government is at annexure I.

4.4 Steel Wire Drawing Industry

4.4.1 There are 71 steel wire drawing industry in medium and large scale sector with a licensed capacity of about 0.84 million tonnes per year. In addition to this about 600 units are reported to be in existence in the small scale sector having an estimated installed capacity of about 0.8 million tonnes.

4.4.2 The production performance of these units as a whole showed a marked decline during 1984-85 due to lack of demand. High carbon steel wire rods for stringent application, low medium and alloy steel wire rods which are not available indigenously are being allowed to be imported as required.

4.4.3 In order to develop this industry Government have taken the following measures :—

- (a) Import of carbon steel wires of size 26 SWG and thicker and stainless steel wires of 30 SWG and thicker has been restricted to encourage indigenous production.
- (b) Diversification in production of all grades of carbon alloy and stainless steel wires except for mild steel wires of size thicker than 12 SWG has been allowed to the existing units.

4.4.4 Production of steel wire drawing units in the organised sector during the last three years is at Annexure II.

4.5 Cold rolled steel strip manufacturing Industry

4.5.1 There are 34 cold rolled steel strip manufacturing units in the organised sector with a licensed capacity of 0.32 million tonnes per year. Due to some scarcity in availability of HR coils production of some of the units have suffered. However, arrangements have been made for import of HR coils to improve the availability of raw material.

4.5.2 In order to give more flexibility in production and also for improving economic viability Government have allowed the existing units to diversify freely into production of all grades of carbon and alloy steel including stainless steel strip with indigenous raw material.

4.5.3 Production of cold rolled steel strips in the organised sector during the last three years is at Annexure III.

4.6 Tinplate Industry

4.6.1 Besides, Rourkela Steel Plant there are two more units in the private sector for production of tinplates. Total capacity of these three units are 0.3 million tonnes of electrolytic tinplate per year. All these three units use imported tin mill black plates as their raw material.

4.6.2 To help the indigenous industry to become economically viable TMBP coils are allowed to be imported under concessional rate of import duty of 20 per cent. As this concession is given on a piece-meal basis, production of the industry as a whole is suffering badly.

4.6.3 The production of the above two units during the last three years is at Annexure II.

4.7 Ferro Alloys

4.7.1 At present there are 24 licensed units having a total licensed capacity of 0.59 million tonnes per year for production of ferro manganese, ferro silicon, ferro chrome including charge chrome, ferro vanadium, ferro molybdenum, ferro titanium, ferro columbium etc.

4.7.2 Besides, units in the organised sector there are a large number of units in the small scale sector who produce low carbon ferro alloys in aluminothermic process.

4.7.3 Production of different ferro alloys during the last three years in the organised sector is at Annexure IV.

4.8 Sponge Iron Industry

4.8.1 Sponge iron can substitute scrap as an input material to electric arc furnaces. Its production with non-cooking coal being feasible, it has got special significance in Indian condition where availability of metallurgical coal is limited. 10 units with a total capacity of 1.7 million tonnes have been licensed. 50% of the capacity is based on non-coking coal and the rest on gases as reductant. Production during the last 3 years indicated in the statement is at Annexure IV.

4.9 Pig Iron

4.9.1 In addition to Integrated Steel Plants two units are having industrial licence for a total licensed capacity of 0.136 million tonnes per year. One more unit has also been issued letter of intent with a capacity of 0.15 million tonnes per year. At present only one unit is in production. The other unit has stopped production due to power scarcity as well as low indigenous demand.

4.9.2 Production of pig iron by the private sector unit during the last three years is at Annexure IV.

4.10 GP/ GC Sheets

Letter of Intent have been issued to 12 units for a capacity of 4,25,000 tonnes per annum to augment production.

4.11 Hot Rolled Strip Units

4.11.1 There are three units with a licensed capacity of 0.058 million tonnes per year in the organised sector. Besides 11 more units have been issued letter of intent for a total licensed capacity 0.44 million tonnes per year.

4.11.2 Production of HR strip unit in the organised sector for the last three years is at Annexure IV

ANNEXURE I

Production of Steel items during 1981-82 to 1984-85 (April to December '84)
for Annual Report 1984-85

(In '000 tonnes)

Name of the Industry :

	Mild Steel	Medium/ High carbon	Alloy Steel	Total	L.M. for Castings
I. Electric Arc Furnace :					
1981-82 . . .	1430	294	437	2161	139
1982-83 . . .	1590	276	368	2234	186
1983-84 . . .	1674	368	382	2424	231
1984-85 . . .	940	206	261	1407	137
(April-December, 1984)					

(In '000 tonnes)

	Rolled Products
II. Re-rollers	
1981-82 . . .	1422
1982-83 . . .	1630
1983-84 . . .	1852
1984-85 . . .	1010

(April '84 to
December, 1984)

ANNEXURE II

(In '000 tonnes)

	Mild Steel	Medium/ High Carbon Steel	Alloy Steel	Stainless Steel	Total
III. Wire Drawing :					
1981-82 . . .	248	99	8	2	357
1982-83 . . .	203	100	14	1	318
1983-84 . . .	154	111	8	1	274
1984-85 . . .	82	57	4	0.3	143.3
(April—December '84)					

(In '000 tonnes)
Total

	Oilcan Size	Non- Oilcan Size	Total
IV. Tinplate :			
1981-82 . . .	33	25	58
1982-83 . . .	31	24	55
1983-84 . . .	42	29	71
1984-85 . . .	45	21	66+6*
(April—December '84)			

*Details of B.S.P. not available.

ANNEXURE III

(In '000 tonnes)

	Mild Steel	Medium Carbon Steel	High Carbon Steel	Alloy Steel	Stainless Steel	Total
V. Cold Rolled Strips :						
(a)						
1981-82	119	9	6	0.4	7	141.4
1982-83	114	10	5	0.3	7	136.3
1983-84	130	10	5	0.7	8	153.7
1984-85	68	5	4	0.6	4	81.6
(April—December '84)						

	Mild Steel	Stainless Steel	(In tonnes)
(b) Hot Rolled Strips :			
1982-83	321	12,700	
1983-84	94	10,378	
1984-85	168	5,380	
(April—September '84)			

ANNEXURE IV

(In '000 tonnes)

	Ferro Manganese	Ferro Silicon	Ferro Chrome	Silico Manganese	Others	Total
VI. Ferro Alloys						
1981-82	206	54	34	8		306
1982-83	167	41	40	4		255
1983-84	154	47	33	3		265
1984-85	91	32	15	7	24	169
(April—December '84)						
Total						
VII. Sponge Iron :						
1981-82		27				
1982-83		30				
1983-84		54				
1984-85		41				
(April—September '84)						
Total						
VIII. Pig Iron :						
1981-82		105				
1982-83		82				
1983-84		75				
1984-85		24				
(April—September '84)						

(In '000 tonnes)

(In '000 tonnes)

CHAPTER V

RESEARCH & DEVELOPMENT CENTRE IN STEEL SECTOR

5.1.1 The priority set by the Company in its research and development activities aims at introducing new technology, reducing costs, improving yield and quality of products. For pursuit of these objectives, the Company's Research & Development Centre at Ranchi needed infrastructural facilities for undertaking diagnostic and analytical research, as well as a pool of research scientists. A fully equipped laboratory complex, inclusive of an Information and Documentation Centre and a Computer Centre, has become partly operational and is expected to be completed in all respects during 1985.

5.1.2 Sponge Iron Pilot Plant

The sponge iron pilot plant located at Ranchi had completed thirteen production campaigns by 31 March 1984. Studies are being conducted here to identify suitability of various iron ore and coal sources for spong iron production alongwith research for developing the most suitable technology to match raw materials and inputs available indigenously.

5.1.3 Research Projects & Assignments

In conformity with R&D plan and national priorities, the Centre was pursuing 244 research projects and assignments as on 31 March 1984, of which 55 were taken up during the year under review. Besides these, the Centre had completed 57 projects, including 12 during the year, with associated technological benefits to the plants concerned.

5.1.4 Collaborative Research

The Centre has been working jointly also with the Ferrous Metallurgical Research Institute of the USSR on certain research projects at Bhilai Steel Plant for process optimisation and product development. Of 21 research projects taken up so far under this collaboration, 6 have been completed with significant benefits to the plant. Certain activities of research projects

are also assigned to universities, engineering colleges, research institutes and laboratories depending upon expertise available with them. In the programme of collaborative research work with CSIR laboratories, 23 projects are being pursued, of which 2 have been completed.

5.1.5 Tackling Basic Problems

The basic problem which confronts the Indian Iron and Steel Industry is the poor quality of raw materials. For tackling the problem of high ash in coking coal as well as conserving the problem of high ash in coking coal as well as conserving depleting reserves of the same, a number of research activities are in progress. A study at the pilot plant scale for upgradation of coal washery fines through froth floatation technique has been completed at Durgapur Steel Plant and this had been recommended for incorporation under the modernisation scheme of its washery. Efforts are also simultaneously being made to identify developed technologies and introduce these in India, such as, partial briquetting of coal charge and coal dust injection in blast furnaces, which are being introduced at Bhilai Steel Plant.

5.1.6 Economy in Fuel & Energy

The Centre is making efforts to identify and introduce various means of effecting economy in fuel and energy as well. The improvements brought about in thermal performance of soaking pits in Bhilai Steel Plant have resulted in decrease in specific fuel consumption by 6-7 per cent. The introduction of optimum thermal and oxygen lancing regime in open hearth furnaces of Bhilai Steel Plant indicated a fuel saving to the tune of 6 per cent.

5.1.7 New Technologies Developed

Some technologies developed by the Centre are being introduced in the steel plants as follows: (i) The technology of lime dust injection, after its successful development in Kalinga Iron Works, is now being upscaled and introduced in one of the blast furnaces of Durgapur Steel Plant. (ii) External desulphurisation of hot metal using cheaper desulphuriser is planned to be incorporated in the 4 million tonne expansion of Bhilai Steel Plant as well as under the modernisation scheme of Durgapur Steel Plant. (iii) Steps are being taken to create facilities for production of cold bonded pellets in the medium sized blast furnaces of the Indian Iron and Steel Company Limited. (iv) The injection system for lime flourspar powder

is now being introduced in a 50 tonne electric arc furnace of Alloy Steels Plant after successful development of the technology for production of low phosphorous steel in 10-tonne electric arc furnace of the plant.

5.1.8 Developing High Value Steels

Efforts are being made to develop substitutes for a variety of high valued steel currently being imported for critical applications in different engineering and core sector industries. Some of the important, special and critical steels already commercialised are (i) microalloyed high strength plates and structurals for use in shipping industry, power transmission, construction of bridges and buildings, etc; (ii) boron treated deep drawing steels with moderate forming applications for use in the automobile industry; (iii) weather resistant steels for the Indian Railways; (iv) dual phase steels with superior formability and potential for reducing weight in automotive component and (v) aluminium killed extra deep drawing quality steels for extensive use in automobile industry. Many of these developments have been continuing for sometime and significant progress was made on these during the year.

5.1.9 New Emerging Technologies for Iron Making

In the light of quality problems of Indian Coal, coupled with serious threat to conventional routes of iron making, which involves heavy capital investments, the Centre has been entrusted with the task of locating promising non-conventional technologies which could be considered for new steel plants in the future. From the point of view of India KR process being developed by Messers KORF Engineering, West Germany and INRED process being developed by Messrs Boliden, Sweden, presently appear promising. Besides arranging testing of indigenous raw materials abroad, the Centre is now negotiating with them for transfer of those technologies to India with a view to their phased development through pilot demonstration plant scale investigations for effective commercialisation in the future.

5.1.10 Centre for Engineering & Technology

The Centre for Engineering and Technology established as an in-house organisation to work in close coordination with the plants, the Research & Development Centre and other consultancy organisation to assist in pursuing the Company's programmes for introduction of new technologies and revamping and modernisation of plant and equipment, completed during

the year, among others, a study on reasons inhibiting the steel plants from achieving project report norms. Important among other assignments presently being pursued by this Centre are transfer of technology agreement for various technologies considered by the Technology Planning Committee, updating of the detailed project report for Salem Steel Plant, feasibility report on setting up of a plant for longitudinally welded pipes and modernisation of the Company's stockyards.

5.1.11 Centre for Raw Materials & Mines

Another Centre for Raw Materials and Mines has been established at Ranchi. This Centre has taken up preparation of a raw materials corporate plan for the next ten years for the Company, besides an assessment of measures necessary to ensure that operations in captive mines do not contribute to deterioration of ecological conditions.

5.1.12 Environmental Preservation

Being fully conscious of the importance of environmental preservation, the Company has taken steps to control some of the areas of water and air pollution which have been identified. An elaborate programme on this has also been prepared for implementation during the Seventh Plant period. Special attention is paid to pollution control and afforestation in the captive mines as well.

CHAPTER VI

RAW MATERIAL FOR STEEL PRODUCTION

6.1 Iron Ore

India is well endowed with resources of iron ore both in terms of quality and quantity. The larger deposits are concentrated in five more or less distinct areas viz, the Bihar-Orissa belt, the Bailadila-Dilla-Rajhara area of Madhya Pradesh the Bellary Hospet area in Karnataka, Ratnagiri, district in Maharashtra and in Goa.

The Iron Ore Mines in the country can be classified broadly as :—

- (i) 'Captive' mines owned and operated by the integrated steel plants, for their own use.
- (ii) Large mechanised mines owned and operated by public sector organisations; and
- (iii) Smaller mines operated by private individuals or companies on manual or semi-mechanised lines.

The production of iron ore (including concentrates during the year 1984 is expected to be 41.0 million tonnes as against the recorded figure of 38.7 million tonnes in the previous year. Statewise projections indicate that Goa would be the chief iron ore producer accounting for 13.8 million tonnes or 33.7 per cent of the total production during 1983 followed by Madhya Pradesh 8.7 million tonnes (21.1 percent), Bihar 7.00 million tonnes (17.0 percent), Orissa 6.1 million tonnes (14.8 percent) and Karnataka 4.5 million tonnes (11.0 percent). The remaining production would be accounted for by Andhra Pradesh Maharashtra and Rajasthan.

Despatches of iron ore (including concentrates) in 1984 are estimated at 41.5 million tonnes, the share of internal consumption and exports being 16.5 million tonnes (39.7 percent) and 25.0 million tonnes (60.3 percent) respectively.

6.2 Manganese Ore

Production of manganese ore during the year 1984 is projected at 1.08 million tonnes as compared to the recorded figure of 1.28 million tonnes during 1983. Orissa, Madhya Pradesh, Maharashtra and Karnataka would be the principal producing states accounting for 36 percent, 20 percent, 19 percent and 18 percent respectively of the total production of manganese ore in 1984.

Despatches of manganese ore from the mines are estimated at 1.05 million tonnes in 1984 of which 0.73 million tonnes (69 percent) are for internal consumption and 0.32 million tonnes (31 percent) for exports.

6.3 Chromite

The production of chromite during 1984 is estimated at 434 thousand tonnes as against the recorded figure of 365 thousand tonnes in 1983. Orissa is expected to continue as the principal producing state and would account for 375 thousand tonnes or 86 percent of the total production followed by Karnataka 59 thousand tonnes or 14 percent.

The total despatches of chromite in 1984 are estimated at 307 thousand tonnes of which 142 thousand tonnes (46 percent) are for internal consumption and 165 thousand tonnes (54 percent) are for exports.

CHAPTER VII

PROGRESSIVE USE OF HINDI

7.1 The Government's policy relating to the use of Hindi for official purposes as contained in the Constitution, the Presidential Orders, the Official Languages Act and Rules is being implemented in the Deptt. of Steel. The annual programmes framed by the Department of Official Languages for the progressive use of Hindi for Official purposes and the general orders issued by them are also being implemented.

7.2 The work relating to the progressive use of Hindi in the Department of Steel is under the administrative control of Joint Secretary. A Hindi Section consisting of a Hindi Officer, three Junior translators, One Sr. Translator, One Hindi Stenographer and two typists assist him in this work. Necessary infrastructure of 15 Devnagri typewriters, help literature, Hindi reading material etc. is made available in the Department.

7.3 A number of measures are being taken for the promotion of progressive use of Hindi in the Department, its attached offices and the Public Sector Undertakings under the administrative control of the Department of Steel. These are :—

(i) Training of Staff

A programme has been drawn up for imparting training in Hindi/Hindi Typewriting/Hindi Stenography to the employees for whom in-service training is obligatory.

The position regarding training of Government servants in Hindi/Hindi typewriting/Hindi stenography in this Department is as under :

Hindi Training :

Total number of employees (Group A, B & C)	237
Total number of employees possessing requisite Hindi qualification	188
Total number of employees who have passed Prabodh/Praveen and Pragya/Intensive Course/Special Departmental Examinations etc.	23
Total number of employees under training	9
Total number of employees yet to be trained	26*

*Nine employees who are under training are also included.

Hindi Typewriting/Stenography :

	Trained	Under training	Yet to be trained
Hindi Typewriting	3	3	48*
Hindi Stenography	6	3	34*

*Employees under training are also included.

The officers and staff of attached offices 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 and the expenditure incurred on it is borne by the concerned offices. About 2100 employees of Steel Authority of India Ltd. alone have benefited from this scheme in the last two sessions.

(ii) Competitions

With a view to encourage learning of Hindi by non Hindi knowing employees, elocution contests dramas/essay competitions are held every year in Public Sector Undertakings. The number of employees participating in these competitions is increasing every year.

(iii) House Journals and help-literature

All the public sector undertakings under the Deptt. of Steel are publishing their house journals in Hindi also. In

addition, Hindi magazines and books are kept in the library. SAIL have purchased the film 'Learn Devnagri' which is screened regularly. Lingua cassettes have also been purchased by SAIL and are made available to the employees on demand.

(iv) Inspections are carried out to assess the implementation of policy about the progressive use of Hindi. The Hindi Officers of Public Sector Undertakings also carry out inspection of their various units. The Hindi Salahkar Samiti attached to the Ministry of Steel and Mines has also been taking active interest in carrying out inspections of various offices and Public Sector Undertakings attached to the Ministry of Steel and Mines. During the year under report the inspections of following Public Sector Undertakings were done by the Hindi Salahkar Samiti :

- (1) Central Marketing Organisation, Branch Sales Office, Bombay.
- (2) Regional Iron and Steel Controller, Bombay
- (3) Central Marketing Organisation, Branch Sales Office, Pune.
- (4) Central Marketing Organisation, Branch Sales Office, Baroda.

In accordance with the orders of Department of Official Languages, an Inspection Team has also been constituted to see the position of implementation of the provisions of the Official Languages Act/Rules in attached offices and the Public Sector Undertakings under the administrative control of the Department. The deficiencies found during the inspection are brought to the notice of the Administrative Heads of the concerned offices/undertakings and their co-operation is sought to improve the position. During the calendar year, the Inspection Team has inspected the following offices :—

1. Neelachal Ispat Nigam Ltd., Bhubaneswar.
2. Rashtriya Ispat Nigam Ltd., Vishakhapatnam.
3. Sponge Iron India Ltd., Hyderabad.
4. National Mineral Development Corporation, Hyderabad.

5. Regional Iron & Steel Controller, Hyderabad.
6. Central Marketing Organisation, Branch Sales Office—Dimapur, Gauhati, Patna, Allahabad, Lucknow, Kanpur.
7. Research & Development Centre, SAIL, Ranchi.
8. MECON, Ranchi.

(v) The goods manufactured in the Public Sector Undertakings are stamped/inscribed in both Hindi and English.

(vi) There is a Hindi Salahkar Samiti attached to the Ministry of Steel and Mines under the Chairmanship of Minister for Steel and Mines for monitoring and promoting the use of Hindi. The Samiti was constituted on 17-11-1976 and so far 13 meetings of this Samiti have been held.

(vii) There is also an Official Language Implementation Committee under the Chairmanship of Joint Secretary (Hindi) in the Department. This Committee reviews the progress made in the use of Hindi in the Department, its attached offices and Public Sector Undertakings under the administrative control of Department of Steel. Meetings of the Committee are held regularly. So far 44 meetings have been held.

((viii) In order to encourage the use of Hindi in the working of the Offices/Undertakings under the Deptt. of Steel, it was decided to award Rajbhasha Shield/Trophies to the Undertakings/Offices which are adjudged 1st, 2nd and 3rd. Accordingly, a function was organised on 18th September, 1984 under the Chairmanship of Secretary (Steel) in which Rajbhasha Shield (1st prize) was awarded to National Mineral Development Corporation. Rajbhasha Trophies (2nd and 3 prizes) were awarded to Bharat Refractories Ltd. and MECON resp. Rajbhasha Models were also given to five officials of the Deptt who had done the maximum quantum of work in Hindi.

Similarly, the attached offices and the Public Sector Undertakings have their own Official Language Implementation Committee to review and monitor the progress of Hindi

7.4 As a result of measures adopted for promotion of Hindi for official purposes, the following work has been done during the year 1984-85 :—

- (a) The work regarding the use of Hindi for the quarters ending 31-3-1984, 20-6-1984, 30-9-1984 and 31-12-1984 can be seen from the following :—

(i) Total number of Hindi Communications received from anywhere in the Deptt.	2185
(ii) Total number of communications replied to in Hindi	1057
(iii) Total number of communications replied to in English. (Remaining letters are only for information)	1

Position regarding originating correspondence

	Number issued	
	Total in Hindi	Total in English
(i) Letter issued by the Office to the Offices in Hindi speaking regions	65	496
(ii) Telegrams sent to offices	..	..

Documents issued both in Hindi and English

	Number Issued		
	Total	In Hindi & English	In English
(i) General Orders	395	365	30
(ii) Resolution & Notifications	165	165	..
(iii) Administrative & Other Reports	3	3	..
(iv) Papers laid before the House of Parliament	12	12	..
(v) Budget Performance of the Deptt. for the year 1984-85	1	1	..
(vi) Government reviews on the Annual Reports	12	12	..
(vii) Agenda Notes and Minutes of the meeting of the Staff Council and Consultative Committee.	All Agenda papers and Minutes of Staff Council & Consultative Committee Meetings were normally issued bilingually.		

(b) Notification of Offices in the Gazette of India

Consequent of 80 per cent of the staff having acquired a working knowledge of Hindi, the following offices were notified in the Gazette of India during the current year :—

1. Research & Development Centre, SAIL, Ranchi.
2. Central Marketing Organisation, Branch Sales Office, Patna.

The number of offices notified so far comes to 37.

(c) A glossary of technical terms used in the Steel Industry has been prepared and about 3000 entries have been finalised so far.

मन्त्रालय
पुस्तकालय
पंजीकरण सं०..... १९८५
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ANNUAL REPORT

DEPARTMENT OF STEEL

E R R A T A

Sl. No.	Page	Para	Line	For	Read
1.	8	1	10	Sector	Sectors
2.	18	6	4	Electric	Electric
3.	24	Table	Against 84-85 (Last Col.)	1,32,12	1,32,112
4.	28	2	20	tonnes	tonne
5.	36	3.1.12	14	2 crores	Rs.2 crores
6.	36	3.1.13	(A) Group C (Sweepers only)	3590	3599
7.	44	under heading 1982-83 against sub total SAIL (Saleable Steel)		7.88	78.8
8.	45	Table	Sl.No.6	3,000	3,800
9.	45	Table	Sl.No.7	46,300	46,500
10.	54	3.4.2	first	Production	Production
11.	57	3.5.1	15	Universal Beam	Universal Beam
12.	62	3.7	Heading	Ferro Scrap	Ferro Scrap
13.	62	3.7.2		Nigam Limited	Nigam Limited
14.	63	3.7.4	4	at BSPP	at BSP
15.	64	3.8.2	2	the sums	the sums
16.	71	3.10.8	2	Rs.9.13 crores	Rs.97.13 crores
17.	72		Table against D under others	4449	4499
18.	76	3.11.6	9	By coytng	By Converting
19.	77	3.12.4	2	bringing	birdging
20.	100	3.12.4(v1)	2	project	product
21.	100	5.1.4	4	projecs	projects
22.	103	5.1.4	4	poduct	p roduct
23.	45	Table	5	Plant	plan
			Sl.No.6	400	4,400

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