MINISTRY OF STEEL

ANNUAL REPORT
2005-06

CONTENTS

CHAPTER-I

HIGHLIGHTS

2005-06 (1.4.2005 TO 31.12.2005)

MACRO SCENE

- India is today the ninth largest crude steel producing country in the world.
- Production of Finished (Carbon) steel during the year (April-December, 2005) at 31.425 million tonnes (provisionally estimated) was up by 7.2% over the corresponding period of the previous year.
- During the same period (April- December 2005) the merchant production of Pig Iron at 2.987 million tonnes (provisionally estimated).) was up by 34% than the production in the corresponding period in 2004-05. The secondary producers accounted for bulk of the merchant Pig Iron production.
- The total volume of Finished (Carbon) steel exported during the year (April- December, 2005) at 3.225 million tonnes (provisionally estimated) was up by 2% exported during the corresponding period of the last year.
- Import of Finished (Carbon) steel during the current year (April- December, 2005) at 2.7 million tonnes (provisionally estimated) was up by 84.9% over the corresponding period last year.
- Apparent consumption of Finished (Carbon) steel during the current year (April- December, 2005) rose 9.4% from the level of the corresponding period last year to reach 27.6505 million tonnes (provisionally estimated).
- Based on the proposal of the public sector undertakings/organizations under Ministry of Steel, the discussions held with the Planning Commission and keeping in view the plan priorities reflected in the Approach Paper to the 10th Plan (2002-07), the outlay for the 10th Plan of Ministry of Steel was approved at Rs.11,044.00 crore, which included Gross Budgetary support of Rs. 65.00 crore. However, due to depressed condition prevailing in the steel industry upto 2002-03, after Mid-Term Appraisal the approved 10th Plan outlay in respect of PSUs under Ministry of Steel were scaled down from Rs. 11044.00 crore to Rs. 8476.68 crore (Internal and Extra Budgetary Resources of RS. 8411.68 crore and Budgetary support of Rs 65.00 crore)
- Ministry of Steel has been granting financial assistance from the interest proceeds of Steel Development Fund (SDF) to supplement the R&D initiatives and expenditure in the country. Towards this objective and to approve/ review specific R&D projects with financial assistance from the Steel Development Fund (SDF) as well as to give overall direction in R&D matters, Empowered Committee (EC) has been constituted under the Chairmanship of Secretary (Steel). The EC has so far approved 40 R&D projects costing Rs. 221.56 crore, of which SDF contribution is Rs. 101.8129 crore. So far Rs. 80.2763 crore has been disbursed and several projects have been completed, yielding benefits to the industry.

MAJOR PUBLIC SECTOR UNDERTAKINGS UNDER MINISTRY OF STEEL

STEEL AUTHORITY OF INDIA LIMITED

- SAIL recorded a sales turnover of Rs.21,330 crore during 2005-06 (upto December).
- It recorded a profit before tax (PBT) of Rs. 4473 crore during 2005-06 (upto December) against Rs 5739 crore in the previous fiscal.
- SAIL's profit after tax (PAT) stood at Rs 2935 crore during 2005-06 (upto December) against Rs 4139 crore in the previous fiscal.
- The company paid an interim dividend @ 12.5% of paid up equity capital.
- It achieved production of 9.46 million tones of crude steel and 8.27 million tones of saleable steel.

RASHTRIYA ISPAT NIGAM LIMITED

- RINL's Vizag Steel Plant (VSP) made net profit (after tax) of Rs.2008 crore in 2004-05. During the current financial year 2005-06, till December 2005, based on the provisional figures, the company has registered a net profit of Rs.863 crore (before tax).
- During 2004-05, VSP's sales have been Rs. 8181 crore, which represents a growth of 33% over the previous year. Sales during April to December 2005 reached Rs.5563 crore, registering a growth of 3% over the corresponding period of last year. During this period, sales in the domestic market stood at Rs.5249 crore and exports were at Rs. 314 crore.

MANGANESE ORE (INDIA) LTD.

- During 2004-05, MOIL earned profit before tax of Rs 202.27 crore compared to Rs 45.29 crore of the previous year.
- During 2005-06 (upto December) it earned profit before tax of Rs 100.78 crore compared to annual MoU target of Rs 76.59 crore.

NATIONAL MINERAL DEVELOPMENT CORPORATION LTD.

- National Mineral Development Corporation Ltd., (NMDC) produced 15.73 million tonnes of iron ore during 2005-06 (upto December) compared to the corresponding period of previous year's production of 14.10 million tonnes.
- It exported 4.03 million tonnes of iron ore to Japan, South Korea and China etc. valued at Rs. 774.34 crore during 2005-06 (upto December) compared to the corresponding period of previous year's export of 5.28 million tonnes valued at Rs 706.88 crore.
- Domestic sales of iron ore was 13.44 million tonnes during the year 2005-06 (upto December) which is 77% of total sales during the period compared to the corresponding period of previous year's domestic sales of 11.30 million tonnes which was 68% of total sales during period.
- NMDC produced 35,305 carats of Diamonds during 2005-06 (upto December) compared to the corresponding period of previous year's production of 53,401 carats.
- The company paid the highest dividend of 114.5% on paid-up capital amounting to Rs.151.32 crore during 2004-05. This is the 15th year in succession for payment of dividend.

KUDREMUKH IRON ORE COMPANY LIMITED

- KIOCL's shipment of 5,02,999 DMT of pellets during the month of July, 2005 is the highest quantity dispatched in any month so far surpassing the previous high of 4,96,085 DMT of pellets (including pellet fines) dispatched during July, 2004.
- Production and dispatch of pellets (including pellet fines) upto December, 2005 have exceeded the target at 109% and 107% respectively.
- Recorded highest ever profit before tax of Rs.1111.91 crore, for the first time crossing the Rs.1000 crore mark. Previous high was Rs.406.40 crore recorded in 2003-04.
- Highest ever profit after tax of Rs. 649.84 crore, for the first time crossing the Rs.600 crore mark. Previous high was Rs.300.70 crore posted in 2003-04.
- All time highest turnover of Rs.1853.77 crore, crossing the Rs.1500 crore mark. Previous high was Rs.1029.38 crore achieved during the previous year.

BHARAT REFRACTORIES LTD.

- Against a production target of 56,736 tonnes for the period April-December, 2005 BRL achieved production of 59,406 tonnes. This is an increase of 11.67% over the corresponding period of previous year.
- The company has also exceeded the target for sales and against a sales target of Rs. 8764.56 lakh, the company has achieved sales of Rs.11502.05 lakh during April-December 2005. This is an increase of 28.5% over the corresponding period of previous year.
- The production during 2004-05 was 65,435 tonnes representing an increase of 23.19% over 2003-04.

SPONGE IRON INDIA LTD.

- The company's production during 2005-06 (upto December) was 36,686 tonnes with a capacity utilization of 82%.
- The average sales realization of Rs 9,238 per tonne of sponge iron has been achieved during 2005-06 (upto December).
- The sales turnover achieved during 2005-06 (upto December) stood at Rs 29.28 crore.
- The operating profit for the period under review stood at Rs 3.48 crore.

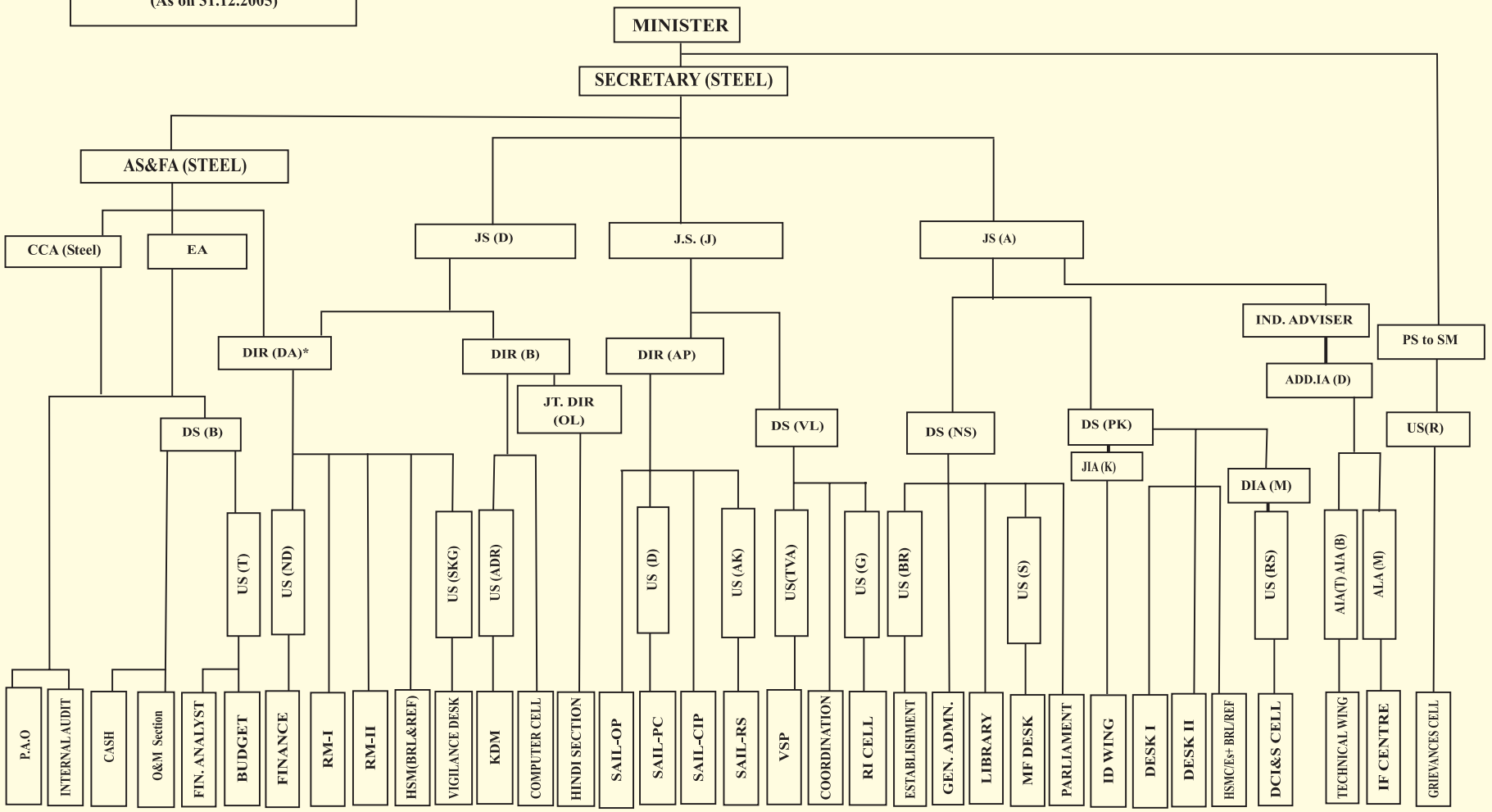
MECON LIMITED

- MECON executed the "Second Launch Pad Project" of Indian Space Research Organisation (ISRO) at Sriharikota.
- Indian Navy's prestigious project, "Project Seabird", where MECON was consultant for onshore infrastructure facilities designed sophisticated naval ship repair facilities along with the associated township and infrastructure facilities.
- MECON has designed and engineered indigenously the 262m3 blast furnace for M/s Neepaz Metalliks Ltd.
- R&D division of MECON, Ranchi has successfully designed, developed and demonstrated "Miniaturized Solid State Cooling Unit" for defence personnel working at high ambient temperature or at desert. The cooling unit was integrated in MBT ARJUN TANK.

MSTC LTD.

- During April-December 2005 MSTC's total volume of business stood at Rs 5740 crore against Rs 5796 crore in the previous fiscal.
- In the current financial year up to December 2005, MSTC's turnover was at Rs 3208.17 crore against Rs 4960.03 in the previous fiscal.
- The company's profit before tax till April-December 2005 stood at Rs 56.14 crore against Rs 64.77 crore in the previous fiscal.

ORGANISATION CHART OF MINISTRY OF STEEL (As on 31.12.2005)



*Additional Charge (Finance)

CHAPTER-II

ORGANIZATIONAL STRUCTURE

Ministry of Steel

The Ministry of Steel is under the charge of the Minister of Chemicals, Fertilizers and Steel.

The Ministry is responsible for the planning and development of iron and steel industry, development of essential inputs such as iron ore, limestone, dolomite, manganese ore, chromites, ferro-alloys, sponge iron, etc. and other related functions. There are 10 public sector undertakings and one directly managed Government company under the administrative control of the Ministry of Steel.

The organizational chart may be seen at page 5.

OTHER RELATED OFFICES OF MINISTRY OF STEEL

JOINT PLANT COMMITTEE : The Joint Plant Committee (JPC) was set up by the Government by Notification dated 29th February 1964, under the Iron & Steel (Control) Order, 1956 issued under the Essential Commodities Act, 1955. The then Iron and Steel Controller was the Chairman of the Joint Plant Committee, which was responsible for production, distribution and pricing of steel products. The Committee also functions as the Secretariat for the Steel Development Fund (SDF), which was set up for facilitating modernization, rehabilitation and development of the steel industry. Subsequently, in the wake of decontrol and liberalization, the initial functions have been discontinued and the Committee is now primarily entrusted with the task of collection of statistical data from various sectors in the steel industry, analysis and subsequent dissemination to the steel industry. The Joint Plant Committee has regional offices in Delhi, Chennai, Mumbai and Kolkata. In addition to collection and dissemination of data, it is also undertaking some promotional work for enhancing steel usage in the country. It is managed by an Apex Committee, which has representation from the main steel producers' viz. Steel Authority of India Ltd, Rashtriya Ispat Nigam Ltd, Tata Steel Ltd and also the Indian Railways.

DCI & S Cell

Consequent upon the acceptance of the recommendations of the Expenditure Reforms Commission (ERC), an administrative decision was taken to close down the Development Commissioner Iron and Steel (DCI&S) Office, Kolkata along with its four regional offices located at Chennai, Mumbai, Kolkata and New Delhi w.e.f. 23.5.2003. The residual work except the collection of data from secondary sector was transferred to the DCI&S Cell in the Ministry of Steel. The DCI&S Cell is handling the following tasks:

(A) Matters relating to allocation of iron & steel items to small scale industries (SSI) units through Small Scale Industries Corporation (SSICs)/National Small Industries Corporation (NSIC).

Iron & steel items are allocated to the State Small Scale Industries Corporations (SSICs) and National Small Industries Corporation (NSIC) in states where SSICs are defunct or non-existent for distribution to SSI units. In order to ensure that small-scale industries obtain raw materials at reasonable prices, the Government provides nominal handling charges approximately Rs. 500 per tonne to the Corporations so that the Corporations supply the steel materials at the doorstep of the SSI units. The allocation of iron & steel items, during the last three years, for distribution to SSI units is as follows:-

(Quantity in '000 MTs)

Corporations	2003-04	2004-05	2005-06
SSICs	540	861	562
NSIC	-	428	164
Total	**540**	**1289**	**726**

The distribution policy for the year 2005-06 is given in Ministry of Steel's **website www.steel.nic.in.**

(B) Matters relating to Administration/Establishment of DCI&S Office.

Closure of the DCI&S Office led to considerable agitation amongst the staff posted at its office in Kolkata. However, due process was followed in terms of detailed instructions issued by the Division for Retraining and Redeployment of the Department of Personnel & Training (DoPT) for declaring the staff as surplus and subsequent redeployment. As per the DoPT's guidelines all surplus employees continue to draw their salaries till such time they get redeployed to other posts or demit office as a result of their superannuation, resignation or special voluntary retirement. The total existing strength of the organization at the time of closure of DCI&S Organization was 226. Out of these:

- 215 staff of the DCI&S organization have been declared surplus and are on the Rolls of the DoPT for redeployment etc.
- 11 officials are yet to be declared surplus by the DoPT
- 109 surplus staff of the organization have so far been nominated/redeployed to various Central Government offices etc. by the DoPT.

- 12 surplus staff have taken voluntary retirement under Special Voluntary Retirement Scheme/existing VRS of the DoPT.
- 17 surplus employees demitted the office due to retirement, death etc.

Redeployment order in case of 20 surplus staff is under process and will be relieved after receipt of offer of appointment from the accepting Department/Offices. Thus 67 surplus staff are yet required to be redeployed by DoPT.

Ministry of Steel has taken up the matter of redeployment of the remaining surplus staff with DoPT at the highest administrative level.

LIST OF PUBLIC SECTOR UNDERTAKINGS UNDER THE ADMINISTRATIVE CONTROL OF MINISTRY OF STEEL

NAME OF THE COMPANY	SUBSIDIARIES
1. Steel Authority of India Ltd. Ispat Bhavan, Lodhi Road,New Delhi-110003.	Maharashtra Elektrosmelt Ltd., Chandamul Road, Chandrapur-442401, Maharashtra
2. Rashtriya Ispat Nigam Ltd., Administrative BuildingVisakhapatnam-530031, Andhra Pradesh	
3. MECON Ltd., MECON Building,Ranchi-834002, Jharkhand	
4. Kudremukh Iron Ore Company Ltd.,II Block, Koramangala,Bangalore-560034, Karnataka	
5. National Mineral Development Corporation Ltd., Khanij Bhavan, 10-3-311/A, Castle Hills, Hyderabad-500028, Andhra Pradesh	J&K Mineral Development Corporation,19/9,Trikuta Nagar, Jammu-180012 Jammu & Kashmir
6. Hindustan Steelworks Construction Ltd.,No.1, Shakespeare Sarani, 8th Floor,Kolkata-700071, West Bengal	
7. Bharat Refractories Ltd.,Sector IV, Central Avenue, Bokaro Steel City,Bokaro-827004, Jharkhand	
8. Sponge Iron India Ltd.,Khanij Bhavan, 10-3/311/A, Castle Hills,Hyderabad-500023, Andhra Pradesh	
9. MSTC Ltd.,225-F, Acharya Jagdish Bose Road, Kolkata-700020, West Bengal	Ferro Scrap Nigam Ltd.,FSNL Bhavan, Post Bag No. 37, Equipment Chowk, Central Avenue, Bhilai-490001, Chattishgarh
10 Manganese Ore India Ltd.,3 Mount Road Extension, Post Bag No. 34,Nagpur-440001, Maharashtra	

Govt. Managed Company
Bird Group of Companies
FD-350, Sector- III, Salt Lake City
Kolkata-700106

CHAPTER-III

PUBLIC SECTOR

The public sector undertakings under the Ministry of Steel have been largely performing well on all the fronts. This chapter enumerates their performance.

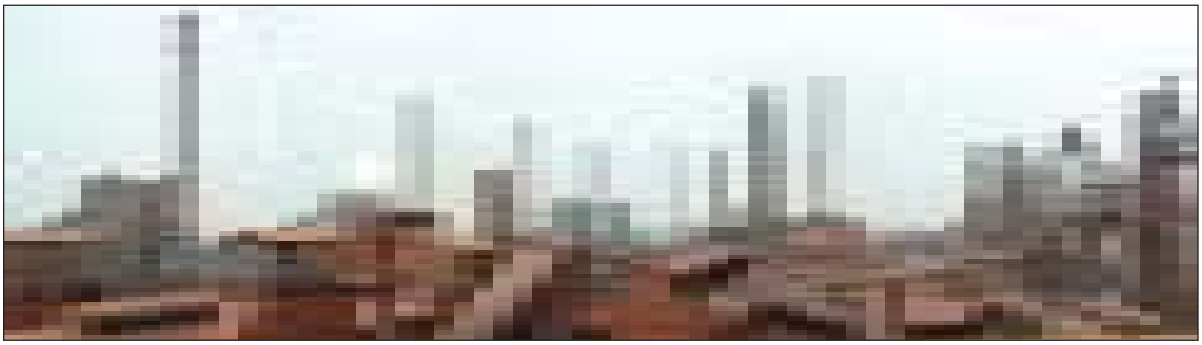
Steel Authority of India Limited (SAIL)

(Excluding Subsidiaries)

General

Steel Authority of India Ltd. (SAIL) is a company registered under the Indian Companies Act, 1956 and is a public sector enterprise of the Government of India. It operates and manages four integrated steel plants at Bhilai (Chhattisgarh), Bokaro (Jharkhand), Durgapur (West Bengal) and Rourkela (Orissa). Besides, another integrated Steel Plant at Burnpur is owned by Indian Iron and Steel Co. Ltd., which was earlier a wholly owned subsidiary of SAIL. IISCO has been merged with SAIL with effect from 16-1-2006.

SAIL has three Special and Alloy Steels units at Durgapur (West Bengal), Salem (Tamil Nadu) and Bhadravati (Karnataka). In addition to these, a Ferro Alloy producing plant at Chandrapur is owned by Maharashtra Elektrosmelt Limited, which is a subsidiary of SAIL. The IISCO-Ujjain Pipe and Foundry Company Ltd., a subsidiary of IISCO, which was manufacturing Cast Iron Spun Pipes at its works at Ujjain (Madhya Pradesh), is under liquidation. Besides, SAIL has seven central units viz. the Research and Development Centre for Iron and Steel (RDCIS), the Centre for Engineering and Technology (CET), the Management Training Institute (MTI), all located at Ranchi, Central Coal Supply Organisation located at Dhanbad, Raw Materials Division, Growth Division and Environment Management Division, all located at Kolkata. SAIL



A panoramic view of one of the SAIL Plants

Consultancy Division (SAILCON) functions from New Delhi. The marketing of products of SAIL plants is done through the Central Marketing Organisation (CMO), Kolkata, which has a countrywide distribution network.

Capital Structure

The authorised capital of SAIL is Rs. 5000.00 crore. The paid-up capital of the Company was Rs 4130.40 crore as on 31st March 2005, which was held to the extent of 85.82% by the Government of India and the balance 14.18% by the financial institutions/GDR-holders/banks/employees/individuals etc.

Financial Performance

The Company recorded the sales turnover of Rs. 31800 crore in 2004-05. The post-tax net profit for the year 2004-05 was Rs. 6817 crore. The company paid interim dividend @ 12.5% of paid up equity capital for the year 2005-06. The sales turnover and net profit after tax for nine months ended 31st December 2005 was Rs .21330 crore and Rs.4473 crore (profit before tax), respectively.

Payment of Interim Dividend by SAIL to the Govt. of India on 4th February, 2005, New Delhi

Production Performance

The details of production plan and achievement for four integrated steel plants are as given below:

Chairman, SAIL, Shri V.S. Jain handing over the final dividend cheque to Hon'ble Minister of Chemicals & Fertilizers and Steel, Shri Ram Vilas Paswan. Also seen in the picture Secretary (Steel), Dr. Mano Ranjan

(In Million Tonnes)

Item	2004-05			April – December 2005		
	Target	Actual	Fulfillment(%)	Target	Actual	Fulfillment(%)
Hot Metal	12.59	12.35	98	9.34	10.15	109
Crude Steel	11.77	11.83	101	8.78	9.46	108
Saleable Steel	10.60	10.65	100	7.90	8.27	105

Raw Materials

During 2004-05, the total iron ore production from captive mines of the company was 19.90 million tonnes. The flux production and dispatch during the year was 2.35 million tonnes and 2.31 million tonnes respectively. Iron ore requirement of the integrated steel plants was fully met from captive sources. The production of iron ore and fluxes during the period April-December 2005 was 14.9 million tonnes and 1.65 million tonnes, respectively.

Manpower

The manpower strength as on 31st March 2005 was 1,26,857 comprising 14,329 executives and 1,12,528 non-executives. The total reduction in manpower achieved during the year stood at 5,053, which included separation of 1440 employees through voluntary retirement. The labour productivity saw an improvement by around 5% over previous year to 144 Tonnes Crude Steel/Man/year.

The manpower strength as on 31.12.2005 was 1,23,982 approximately (comprising 14,188 executives and 1,09,794 non-executives).

Physical & Financial Performance of IISCO during April-December, 2005

During April-December 2005, hot metal production in IISCO was 581,000 tonnes and showed a growth of 22% over the corresponding period last year. Crude steel production during April-December 2005 was 313,000 tonnes and showed a growth of 17% over the corresponding period last year. Saleable steel production during April-December 2005 was 216,000 tonnes and showed a growth of 3% over the corresponding period last year. Pig iron production during April-December 2005 was 168,000 tonnes and showed a growth of 39% over the corresponding period last year.

During April-December 2005, IISCO made a net loss of Rs.25.42 crore. against a net profit of Rs.111.21 crore. during corresponding period last year.

SUBSIDIARIES

MAHARASHTRA ELEKTROSMELT LIMITED (MEL)

Maharashtra Elektrosmelt Limited (MEL) is situated in Chandrapur, Maharashtra and is a major producer of ferro manganese and silico manganese for captive use of SAIL plants.

Financial Performance

The authorised and paid-up share capital of the company as on 31.3.2005 was Rs 30 crore and Rs. 24 crore respectively. SAIL's holding is approximately 99.12% of the paid-up capital.

During the year 2004-05 the company recorded a turnover of Rs. 262.39 crore (including conversion income of Rs. 190.95 crore) and made a net profit of Rs. 52.23 crore. The turnover and net profit of the company during April-December, 2005 was Rs.171.28 crore (provisional) and Rs.13.47 crore (provisional) respectively (before tax).

Production Performance

The production of all grades of ferro alloys during 2005-06 (provisional) are as under:

(MT)

Material	2004-2005	April to December 2005 (Provisional)
High Carbon Ferro Manganese	5345	3902
Silico Manganese	1567	3186
Medium Carbon Ferro Manganese	217	167

RASHTRIYA ISPAT NIGAM LIMITED. (VISAKHAPATNAM STEEL PLANT)

INTRODUCTION

Visakhapatnam Steel Plant (VSP) is the first shore based integrated steel plant located at Visakhapatnam in Andhra Pradesh. The plant was commissioned in August 1992 with a capacity to produce 3 million tonnes per annum (mtpa) of liquid steel. The plant has been built to match international standards in design and engineering with the state–of-the-art technology, incorporating extensive energy saving and pollution control measures. VSP has an excellent layout, which allows expansion of the plant capacity to over 10 mtpa. Right from the year of its integrated operation, VSP established its presence both in the domestic and international markets with its superior quality of products. The company has been awarded all the three international standards certificates, namely, ISO 9001: 2000, ISO 14001 : 1996 and OHSAS 18001 : 1999. RINL, VSP has emerged as a good corporate citizen and has contributed its mite for the development of the region.

A panoramic view of a Coke Oven Battery

PRODUCTION PERFORMANCE

Items	2003-04	2004-05	2005-06 (upto Dec'05)		
Production (in million tonnes)			Target	Actual	% Ful
Hot Metal	4.055(119%)	3.920(115%)	2.985	3.068	103
Liquid Steel	3.508(117%)	3.560(119%)	2.584	2.642	102
Saleable Steel	3.169(119%)	3.173(119%)	2.293	2.358	103
* Figures within brackets indicate capacity utilisation					

FINANCIAL PERFORMANCE

Items	2003-04	2004-05	2005-06 (upto Dec'05) (provisional)
Financial (Rs. in crores)			
Sales	6169	8181	5563
Gross Margin	2073	3271	1670
Profit before Tax	1547	2253	1315
Profit after Tax	1547	2008	863

NATIONAL MINERAL DEVELOPMENT CORPORATION LIMITED (NMDC)

GENERAL

Incorporated on November 15, 1958, the National Mineral Development Corporation Limited (NMDC) a Government of India undertaking is engaged in the business of developing and exploiting mineral resources of the country (other than coal, oil, natural gas and atomic minerals). Presently its activities are concentrated on mining of iron ore, diamonds and silica sand.

NMDC operates the largest mechanised iron ore mines in the country at Bailadila (Chhattisgarh) and Donimalai (Karnataka). The silica sand project is at Lallapur, Allahabad and the diamond mine is situated at Panna (Madhya Pradesh).

All the iron ore production units have been accredited with ISO 9000 and ISO 14000 certifications and also R&D Centre of NMDC accredited with ISO 9000 certification.

IRON ORE

Production

NMDC produced 15.73 million tonnes of iron ore during the year 2005-2006 (upto December '05).

Exports

Exports of iron ore produced by NMDC are canalized through MMTC Ltd. Iron ore export is mainly to Japan, South Korea and China. In 2005-2006 (upto December 2005), NMDC exported 4.03 million tonnes of iron ore valued at Rs. 774.34 crore approximately.

Domestic sales

Domestic sales of iron ore were 13.44 million tonnes during the year 2005-2006 (upto December 2005).

DIAMONDS

35,305 carats of diamonds were produced during the year 2005-2006 (upto December 2005).

SILICA SAND

Production of finished silica sand was 44,899 tonnes and the sale was 44,365 tonnes during the year 2005-06 (upto December 2005).

FINANCE

Capital Structure

The authorised share capital of the company is Rs.150 crore. The paid-up equity share capital was Rs.132.16 crore. Outstanding loans from Government of India are nil.

Financial Performance

The financial performance of the company for the year 2004-05 and 2005-06 (Apr.-Dec.,05) is given below:-

(Rs. in crores)

Item	2004-2005	2005-2006 (Apr.- Dec.,05) (Provisional)
Sales/Turnover	2229.99	2572.18
Gross Margin	1291.29	2003.74
Profit/loss before tax	1223.65	1915.15

MSTC LIMITED

INTRODUCTION

MSTC Limited (formerly known as Metal Scrap Trade Corporation Limited) was incorporated under the Companies Act, 1956 on 9th September 1964. The status of the company underwent change in February 1974 to that of a subsidiary of Steel Authority of India Limited (SAIL). In the year 1982-83, the corporation was converted into a Government of India company transferring the shares of SAIL to the President of India. At present, the company undertakes disposal of ferrous and non-ferrous scrap arising, surplus stores etc. from other public sector undertakings and government departments and also import of ferrous and non-ferrous scrap, coke, finished steel and petroleum products in competition with any other private trader.

CAPITAL STRUCTURE

The Company has an authorised capital of Rs. 5 crore and paid-up capital is Rs. 2.20 crore as on 31.12.2005 of which, approximately 90% is held by President of India and balance 10% is held by members of Steel Furnace Association of India, Iron and Steel Scrap Association of India and others. Paid up capital of Rs. 2.20 crore include bonus shares issued in the year 1993-94 in the ratio 1:1.

LOCATION OF UNITS

The registered and corporate office of the company is located in Kolkata and it has four regional offices in Kolkata, Delhi, Chennai and Mumbai, three branch offices at Visakhapatnam,, Bangalore and Vadodara and four resident offices at Bhopal, Goa Hazira and Trichy.

PHYSICAL AND FINANCIAL PERFORMANCE

The physical and financial performance of the company for the last two years and for the year 2005-06 (upto Dec'05) is given below:

(Rs. in crores)

		2003-04	2004-05	2005-06 (Upto Dec 05)
A.	**Physical**			
(i)	Selling Agency/Domestic	738	1076	2195
ii)	Marketing	3427	4720	3545
iii)	Total Volume of Business	4165	5796	5740
B.	**Financial**			
(i)	Turnover	3344.02	4960.03	3208.17
(ii)	Operating profit (before interest depreciation and provision)	34.11	65.26	57.29
(iii)	Interest depreciation and provision	0.42	0.49	1.15
(iv)	Profit before Tax	33.69	64.77	56.14
(v)	Dividend	171%	349%	-

FERRO SCRAP NIGAM LIMITED

INTRODUCTION

Ferro Scrap Nigam Limited (FSNL) is a wholly owned subsidiary of MSTC Ltd. with a paid up capital of Rs.200 lakh.

ACTIVITIES AND OBJECTIVES

The company undertakes the recovery and processing of scrap from slag and refuse dumps in the nine steel plants at Rourkela, Burnpur, Bhilai, Bokaro, Visakhapatnam, Durgapur, Dolvi, Duburi and Raigarh.

The scrap recovered is returned to the steel plants for recycling/disposal and the company is paid processing charges on the quantity recovered at varying rates depending on the category of scrap. Scrap is generated during iron & steel making and also in the rolling mills.

In addition, the company is also providing steel mill services such as scarfing of slabs, handling of BOF slag. etc.

PHYSICAL AND FINANCIAL PERFORMANCE

The production performance of FSNL for the last two years and for the year 2005-2006 (upto 31/12/05) are given below:-

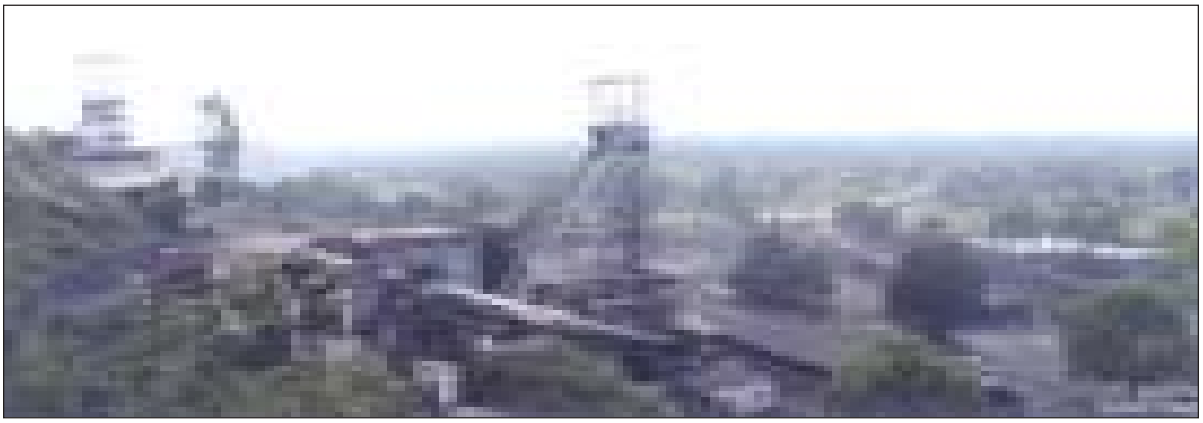
Item	2003-04	2004-05	2005-06 (Upto Dec 05)
PHYSICAL			
Recovery of scrap (Lakhs M.Ts)	19.36	21.74	16.27
Market Value of Prod.(Rs.in Crores)			
FIANANCIAL	851.84	956.56	715.88
Total Turnover i.e, Service charge realised including misc.Income,etc.	8816.34	9818.22	6758.10
Gross MarginBefore Int.& Dep.	1671.41	1678.79	1087.58
Int.& Dep.	840.40	830.14	795.20
P.B.T.	831.01	848.65	292.38

MANGANESE ORE (INDIA) LIMITED (MOIL)

INTRODUCTION

Manganese Ore (India) Limited (MOIL) was established in 1962. It is the largest producer of manganese ore in India. At the time of inception, 49% of its shares were held by the Central Province Manganese Ore Co. Ltd. (C.P.M.O.), and the remaining 51% in equal proportion by Government of India and the Government of Madhya Pradesh and Maharashtra. Subsequently, in 1977, the shares held by C.P.M.O. in MOIL were acquired by Government of India and MOIL became a wholly owned Government company with effect from October, 1977. As on 31st March 2005, Government of India held 81.57% shares in MOIL with State Governments of Maharashtra and Madhya Pradesh holding 9.62% and 8.81% shares respectively.

In addition, the company is also providing steel mill services such as scarfing of slabs, handling of BOF slag, etc.



A panoramic view : Balaghat Mine

PHYSICAL AND FINANCIAL PERFORMANCE

The production performance of FSNL for the last two years and for the year 2005-2006 (upto 31/12/05) are given below:-

MOIL produces and sells following grades of Manganese Ore :

- High grade ore for production of ferro manganese .
- Medium grade ore for production of silico manganese.
- Blast furnace grade ore required for production of hot metal; and
- Dioxide ore, which goes into production of dry battery cells and chemical industries.

Capital Structure
Authorised Capital of the company is Rs. 30 crore and paid –up capital was Rs. 15.33 crore as on 31st March 2005.

PRODUCTION AND FINANCIAL PERFORMANCE
The physical and financial performance of the company during 2003-04, 2004-05 and 2005-06 (April- Dec 2005) are given below: -

Item	2003-04	2004-05	2005-06 (Upto Dec 05)
1.Production:			
a) Manganese Ore (Thousand tonnes)	799.00	943.00	598.88
b) E.M.D. (tonnes)	975.00	1123.00	943.00
c) Ferro Manganese (tonnes)	10899.00	10325.00	3825.00
2.Turnover (Rupees crores)	228.74	378.78	230.73
3.Profit before Tax (Rupees crores)	45.29	202.27	100.78

KUDREMUKH IRON ORE COMPANY LIMITED (KIOCL)

GENERAL
The Kudremukh Iron Ore Company Limited (KIOCL), country's largest 100% EoU, an ISO 9001:2000 and ISO 14001 company was established in April 1976 to meet the long-term requirements of Iran. An iron ore concentrate plant of 7.5 million tonnes capacity was set up at Kudremukh. This project was to be financed in full by Iran. However, as Iran stopped further loan disbursements after paying US $ 255 million, the project was completed as per schedule with the funds provided by Government of India.


Aerial view of Pellet Plant, Mangalore

While the project was commissioned on schedule, consequent to political developments in Iran, they did not lift any quantity of concentrate. As a diversification measure, the Government approved the construction of a 3 million tonnes per year capacity pellet plant in Mangalore in May 1981. The capacity of the pellet plant was increased to 3.5 million tonnes with additions/modifications. The plant went into commercial production in 1987 and is now exporting blast furnace grade pellets to China and also to domestic units such as Ispat Industries Limited and Rastriya Ispat Nigam Limited. Iron ore concentrate is exported to Japan and China.

PRODUCTION
A target of 4 million tonnes and 3.5 million tonnes was set for production of iron ore concentrate and iron oxide pellets respectively during the year 2004-05. Actual production was 4.350 million tonnes of Iron Ore concentrate and 3.795 million tonnes of pellets.


Shri Ram Vilas Paswan, Hon'ble Minister of Chemicals & Fertilizers and Steel inspecting the plant at Kudremukh

The target set for production during the year 2005-06 is 3.1 million tonnes of concentrate and 3.05 million tonnes of pellets. As against a target of 3.1 million tonnes of iron ore concentrate fixed for the period April to December 2005, the actual production was 2.922 million tones, which represents 94% target fulfillment. Production of pellets during the period April to December, 2005 was targeted at 2.23 million tonnes and the actual production during this period was 2.434 million tonnes representing 109% target fulfillment. 7,000 tonnes of pellet fines were generated during the said period. There is shortfall in production of concentrate upto December, 2005 during 2005-06. The short fall in production of concentrate is on account of hard nature of the ore and poor recovery of ROM due to the restrictions imposed by the Hon'ble Supreme Court to mine only in already broken up area.

FINANCIAL PERFORMANCE

An overview of the performance of KIOCL during the year 2005-06 upto December, 2005 together with actuals for the previous three years, is indicated below:-

(Rs. in lakhs)

Particulars	2005-06 upto December,2005	2004-05	2003-04	2002-03
Total value of Sales	109103	185377	102938	72714
Gross Margin	60832	120863	45945	17303
Profit after Tax	30878	64984	30070	8753
Inventories (excluding finished stock)	10514	8720	7616	7721

BIRD GROUP OF COMPANIES

INTRODUCTION

Consequent upon nationalization of the Undertaking of Bird & Company Limited in 1980, the following seven companies came under the administrative control of the Ministry of Steel, Government of India :

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

The status of the companies is as under:—

(a) Burrakar and Borrea coal companies became non-operational after nationalisation of coalmines. The process of liquidation of these companies will be completed shortly.
(b) EIL being an investment company is having a major stake in the equity shares of operating companies under the Bird Group.
(c) OMDC, BSLC, KDCL & SSL are operating companies under the Group.

STATUS OF THE COMPANIES AT THE TIME OF NATIONALISATION

At the time when the Bird Group of Companies came under the administrative control of the Ministry of Steel, Government of India, all of them were financially sick and burdened with various problems. With the financial support from the Government, problems relating mainly to excessive manpower, erosion of working capital and outstanding liabilities could be settled to a considerable extent.

PERFORMANCE OF THE INDIVIDUAL OPERATING COMPANIES

THE ORISSA MINERALS DEVELOPMENT COMPANY LIMITED (OMDC)

Location of Mines, Activities and Capital Structure

The mines of the company are located around Barbil, Dist. Keonjhar, Orissa. The activities relate to mining and marketing of iron ore and manganese ore. The authorized as well as paid up capital is Rs. 60 lakh.

PERFORMANCE

In view of buoyancy in the steel market, the demand for iron ore increased substantially. Due to higher production and better realization, the company staged a turnaround in 2002-03.

The performance of the company is given below.

(Rs. in lakhs)

	2003-04	2004-05	2005-06 (prov) (April- Dec 05)
Production('000 MT)	3130	3232	1791
Sales	22382	28346	18092
Gross Margin before			
Interest on Government			
Loans & Depreciations	15849	23342	14200
Net Profit/Loss	10424	14555	9216

DIVERSIFICATION

The company has gone in for diversified projects. It has commissioned a 100 TPD sponge iron plant at Thakurani in view of rising demand of sponge iron. The plant has started commercial production since June 2004. The company is contemplating for further diversification programmes.

THE BISRA STONE LIME COMPANY LIMITED (BSLC)

Location of Mines, Activities and Capital Structure

The mines of the company are located around Birmitrapur in the district of Sundargarh, Orissa. The main activities of the company are mining and marketing of limestone and dolomite. The authorized as well as paid up capital is Rs. 50 lakh.

PERFORMANCE

With the change in steel making technology, the demand of BSLC's products declined sharply and consequently the company ran into heavy losses. With financial support from the Government of India in the form plan loan and non-plan loan, the company was in a position to keep its existence and take some steps for augmentation of production. Measures were taken to change the product mix and improve upon the quality. The modification work for placing one rake of 58 BOX N wagons into two parts is undertaken in order to avoid delay in loading of wagons. The company has entered with SAIL under MOU for supply of limestone and dolomite to SAIL plants. With such initiatives, the performance of company has improved a little and the company has started to register positive gross margin.

The performance of the company is given below:

(Rs. in lakhs)

	2003-04	2004-05	2005-06 (prov) (April- Dec 05)
Production ('000 MT)	916	796	735
Sales	1990	2254	2040
Gross Margin before			
Interest on Government			
Loans & Depreciations	(-) 303	(-) 215	37
Net Profit/Loss	(-) 4874	(-)5495	(-)4715

THE KARANPURA DEVELOPMENT COMPANY LIMITED (KDCL)

Location of Mines, Activities and Capital Structure

The mines of the company are located around Sirka, Jharkhand. The company produces limestone suitable for cement manufacture. The authorized and paid up capital is Rs. 40 lakh and Rs 20 lakh respectively.

PERFORMANCE

The company markets its products mainly in Jharkhand and Bihar. Demand of cement grade limestone in these states has been fluctuating, thereby affecting the performance of the company.

The performance of the company is given below:

(Rs. in lakhs)

	2003-04	2004-05	2005-06 (prov) (April- Dec 05)
Production of Limestone ('000 MT)	73	79	51
Sales	164	185	125
Gross Margin before			
Interest on Government			
Loans & Depreciation	2	4	(-)7
Net Profit/Loss	(-) 108	(-) 135	(-)133

FUTURE OUTLOOK

The cement plant owners in areas where the company's mines are located has set up clinker plants. It is expected that MoU will be signed between KDCL and clinker plant owner and then demand position would improve to certain extent.

SCOTT & SAXBY LIMITED (SSL)

Location of Mines, Activities and Capital Structure

The company's works are located in Kolkata. The company is mainly engaged in the activities of sinking of deep tube wells and mineral exploration. The authorized as well as paid up capital of the company is Rs. 5 lakh.

PERFORMANCE

The company's performance is not satisfactory because of impediments like dearth of orders, old and worn out machinery and excessive manpower. The performance of the company is given below:—

(Rs. in lakhs)

	2003-04	2004-05	2005-06 (prov) (April- Dec 05)
Sales	157	161	123
Gross Margin before			
Interest on Government			
Loans & Desperation	1	(-) 6	(-)4
Net Profit/Loss	(-) 585	(-) 721	(-)651

Scott & Saxby Limited (SSL) in the development of North Eastern Region.

SSL has taken some part in the development of the North Eastern Region. It has played a vital role in the development of tea gardens in Assam by helping utilization of underground water. The company had sunk about 600 deep tube wells for tea gardens in the state.

The company subsequently spread its activities in Tripura and has sunk about 131 deep tube wells in the state till 30th November 2005. The company has further orders in hand for execution in the state. The sinking of deep tube wells in Tripura constitutes a part of the rural development project of the Department of Public Health Engineering. The company has been continuing its activities in these states despite an adverse law and order situation.

SPONGE IRON INDIA LIMITED

INTRODUCTION

Sponge iron plant of the company was initially established as a demonstration unit with a capacity of 30,000 tpa with UNDP/UNIDO assistance to establish the techno-economic feasibility of producing sponge iron (a part substitute for ferrous scrap used by induction and electric arc furnaces) from lump iron ore and 100% non-coking coal. The unit, based on non-coking coal from Singareni Collieries Company Limited (SCCL) and iron ores available at various regions in Andhra Pradesh and neighbouring states went into regular operations in November 1980. Several improvements and modifications were effected to the sponge iron plant based on rotary kiln process to suit the local raw materials and operating conditions, as a result of which it has not only helped developing SIIL technology but also paved way for the development of sponge iron industry in the country.

Performance Highlights upto December, 2005

i) The production during 2005-06 so far was 36,686 tonnes with a capacity utilisation of 82%.

ii) The average sales realisation of Rs.9,238/- per tonne of sponge iron is achieved during 2005-06 so far up to 31.12.05.

iii) The sales turnover achieved during 2005-06 up to 31.12.05 was Rs. 29.28 crore.

iv) The operating profit is Rs.3.48 crore up to 31.12.05.

FINANCE

Consequent upon the approval accorded by the Government of India vide letter No.11(5)/2000-KDM, dated 28.03.2001 for conversion of outstanding loans (both plan and non-plan) from Government of India amounting to Rs. 32.51 crore into equity and for write off of the accumulated interest amounting to Rs.36.78 crore (including penal interest of Rs.13.23 crore w.e.f. 01.04.2000), the authorised share capital of the company stood at Rs.66.00 crore on 31.03.2005; paid up capital was Rs.65.10 crore. (Rs.64.27 crore held by Government of India and the balance of Rs.0.83 crore by the Government of Andhra Pradesh).

3.0 PRODUCTION

3.1 The production and financial performance of the company during the last two years, together with provisional figures for 2005-06 up to 31.12.05 is furnished in the table below:

	2003-04	2004-05	2005-06 (prov) (April- Dec 05)
Production			
- Sponge Iron (t)	69,509	57,501	36,686
Power Generation (lakh Kwh)	88	89	36
- Capacity Utilisation (%)	116	96	82
Sales			
- Sponge Iron (t)	68,072	58,174	31,696
- Sales Turnover (Net) (Rs. in lakhs)	5,886	6,197	2,928
- Generation of Internal Resources (Rs. in lakhs)	2,296	1,656	528
- Net Profit (Rs. in lakhs) (PBT)	2,053	1,424	348

MECON LIMITED

MECON Limited is the first consultancy and engineering organization in the country to be accredited with the ISO: 9001 certification. The company has its registered office at Ranchi, Jharkhand and engineering offices at Bangalore and Delhi. It also has liaison/marketing offices at Mumbai, Chennai and Kolkata as well as project offices at various localities besides an overseas office at Lagos, Nigeria.

In its long journey of more than 32 years as a separate company, under the Ministry of Steel, it has developed considerable expertise not only in the field of consultancy services like preparation of project reports, basic engineering, detailed engineering, designer's supervision etc. but also in design, supply of equipment and turnkey execution of projects for the ferrous, non- ferrous, oil and gas, petro-chemical, power, infrastructure sectors. Long association with integrated steel plants has enabled MECON to build a strong technological base. Keeping its core business in ferrous and non ferrous metallurgical plants, MECON today is involved in projects related to mines and mineral, power generation, transmission and distribution projects, Accelerated Power Development and Reform Programme (APDRP), industrial complexes, industrial growth centers, petroleum refineries, oil and gas pipelines and terminals, material handling projects, infrastructure projects, port and harbour, water supply and sanitation projects, roads, bridges, flyovers, and highways projects, IT, defence, space engineering related projects and environmental engineering projects.

CAPITAL STRUCTURE

The authorized share capital of company is Rs 400 lakh against which the paid up capital is Rs 242 lakh. Out of the paid up capital of Rs 242 lakh, bonus shares of Rs 40.31lakhs were issued during the year 1996-97.

BUSINESS DIVERSIFICATION

Maintaining steel as the core sector of functioning, our company has made forays into a number of diversified sectors of the economy especially oil and gas, power and infrastructure. This would help the company in adjusting to the sectoral market fluctuations by aligning itself towards the sectors having higher opportunities in future. The company has gained a substantial experience and recognition in some of these sectors and would like to build a strong portfolio of services to meet the growing demand of clients.

The company is proud to be involved in a number of prestigious projects in the diversified sectors of oil and gas, power and infrastructure. In the oil and gas sector, after successful commissioning of world's largest CNG network in Delhi City for Indraprastha Gas Limited, the company has spread its wings to provide the engineering and PMC services for CNG and CITY gas distribution to many other cities like Vijaywada, Lucknow,Agra, Bariely,Vadodra and Ahmedabad.The company is also executing number of prestigious pipeline projects of GAIL for supply of natural gas to power plants, industrial consumer in cauvery basin, krishna godawari basin area (93.6 Km pipeline), Gwalior region (96.3 Km of Keralas- Malanpur pipeline) and NCR of Delhi.

During the period of April- December 2005, business procured from the diversified sectors (other than steel) has been very good, which clearly shows the recognition, the company has achieved in the diversified areas.

The company has also opened new frontier in oil and gas sector by receiving an order from ONGC for providing engineering and consultancy services for installation of model store at Nazira, Assam with introduction of Automated Storage and Retrieval System (AS&RS).

The Company is providing its specialized inspection services to host of clients- Delhi Jal Board, Dakshini Haryana Vidyot Utpadan Nigam, Uttari Haryana Vidyut Utpadan Nigam Limited and Haryana Vidyut Nigam Limited.

Apart from conventional areas of technical consultancy, the company has been able to break new grounds in the business areas of management consultancy and socio economic sectors. It has made its presence felt in areas like market surveys, financial restructuring, turn around studies, Industrial Asset Valuations, Due Deligence studies,Socio Economic Impact Assessment (SEIA) studies, Rehabilitation and Resettlement (R&R) studies to name a few.

HINDUSTAN STEELWORKS CONSTRUCTION LIMITED (HSCL)

Hindustan Steelworks Construction Limited (HSCL) was incorporated in June 1964 with the primary objective of creating in the public sector an organisation capable of undertaking complete construction of modern integrated Steel Plants. HSCL had done the construction work of Bokaro Steel Plant, Vizag Steel Plant and Salem Steel Plant from the inception till commissioning and was associated with the expansion and modernisation of Bhilai Steel Plant, Durgapur Steel Plant, IISCO (Burnpur) and also Bhadravati Steel Plant. With the tapering of construction activities in steel plants, the company intensified its activities in other sectors like power, coal, oil and gas. Besides this, HSCL diversified in infrastructure sectors like roads/highways, bridges, dams, underground communication and transport system and industrial and township complexes involving high degree of planning, co-ordination and modern sophisticated techniques.

The company has developed its expertise in the areas of piling, soil investigation, massive foundation work, high rise structures, structural fabrication and erection, refractory, technological structures and pipelines, equipment erection, instrumentation including testing and commissioning.

Capital Structure

The authorised and paid-up share capital as on date is Rs.150 crore and Rs.117.10 crore respectively. The total amount of Government of India loan outstanding as on date is Rs.518.20 crore (plan loan Rs.26.50 crore and non-plan loan Rs.491.70 crore). The company has received Rs.222.44 crore from Government as non-plan assistance to pay salaries and wages and statutory dues to the employees after implementation of restructuring package in 1999.

Performance Highlights

The financial performance of the company during the period 2003-04, 2004-2005 and 2005-2006 are as under:

(Rs.in crore)

	2003-04	2004-05	2005-06 (April - Dec 05)
Turnover	306.95	322.31	223.76
Operational Profit (+) / Loss (-)	18.40	28.68	4.49
Net Profit(+) / Loss (-)	(-)88.50	(-)94.21	(-)38.56

Interest on Loan received from Bank is subsidised by Govt. of India.

*The loss includes Rs.69.50 Cr., 1/5th of the expenditure incurred for VR.

BHARAT REFRACTORIES LIMITED

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

i) Bhandaridah Refractories Plant at Bhandaridah;
ii) Ranchi Road Refractories Plant at Ramgarh;
iii) Bhilai Refractories Plant at Bhilai and
iv) IFICO Refractories Plant at Ramgarh.

The company is engaged in the manufacture and supply of various kinds of refractories not only to the integrat-ed steel plants but also to the mini steel and midi steel plants.

Capital Structure

The authorised share capital of the company as on 31st March 2005 was Rs. 24600.00 lakh against which the paid-up capital was Rs. 21579.42 lakh.

Financial Performance

During the year 2004-05 the profit before interest and depreciation of the company amounted to Rs.1488.21 lakh, but after providing for interest, depreciation and prior period adjustment/VR to the tune of Rs.1484.09 lakh, Rs.302.11 lakh, Rs.219.95 lakh and Rs.2.47 lakh respectively, it incurred a net loss of Rs.521.30 lakh. During the year 2005-06, the company earned a net profit of Rs.158.`48 lakh without considering interest of 17.5% on non-plan loan of Rs.55.00 crore sanctioned under the Revival Scheme for liquidation of statutory dues.

CHAPTER-IV

PRIVATE SECTOR

The private sector has been performing a dominant and important role in the Indian Steel Industry. This chapter defines their contribution, role and performance.

TATA STEEL LIMITED

Tata Steel, after completion of their four phases of modernization has achieved a production of 3.51 million tonnes of finished steel and 4.10 million tonnes of crude steel in 2004-05, which was marginally lower than the previous year's production. The lower production of Tata Steel was mainly due to the shut down of their blast furnace G for modernisation.

PRODUCTION 2004-2005

The production plan and actual production for 2004-05 in respect of Tata Steel is indicated below: -

(UNIT '000 T)

Item/Plant	Target Production	Actual Production #
HOT METAL	4400	4347
CRUDE STEEL	4000	4103
SALEABLE STEEL	3784	4110

#Actual production figures are rounded off.

Production Plan 2005-2006

A provisional indicative production plan for 2005-2006 in respect of Tata Steel is indicated below. The production plan may undergo changes in line with market conditions.

Item/Plant	Target Production '000
HOT METAL	5200
CRUDE STEEL	5000
SALEABLE STEEL	4835

Essar Steel

Essar is an integrated steel producer, with operations all along the value chain. Essar Steel produces some of the world's best steel at its state-of-the-art steel complex in Hazira, Gujarat. It is also India's largest exporter of flat products, sending half of its production abroad, mainly to the highly demanding markets of the West, and the growth markets of South East Asia and the Middle East. Essar ensures excellent customer service through a modern distribution network.

Essar Steel's core manufacturing facilities are located at its steel complex in Hazira, Gujarat. The Hazira complex includes a 2 mtpa hot briquetted iron (HBI) plant, a 2.4 mtpa hot rolled coils (HRC) plant and a downstream complex. These facilities are complemented by its joint ventures: a 3.3 mtpa pellet plant in Vishakapatnam and a 200,000 tpa cold-rolled coils plant in Indonesia.

Products

All Essar Steel's products are world class, meeting the highest international standards, supported by excellent marketing and service:

- Iron Ore pellets
- Hot briquetted (sponge) iron (HBI)
- Hot rolled coils (HRC)
- Cold rolled coils (CRC)
- Plates
- Sheet

ISPAT INDUSTRIES

The company was incorporated on 31st May 1984 in Orissa. The company forms the part of Ispat Group headed by Mr M L Mittal. The company entered into a joint venture agreement with the National Mineral Development Corporation Ltd for iron ore mining at Bailadilla in Madhya Pradesh.

Ispat Industries Ltd is the flagship of the Ispat Group. Its core competence is the production of steel at its integrated steel plant, 'Geetapuram', at Dolvi in Raigad district and at Kalmeshwar in Nagpur district, both in the state of Maharashtra in India. The Dolvi complex, as it is popularly referred to, produces sponge iron and HR coils, while the Kalmeshwar complex produces galvanised sheets and products, apart from cold rolled coils - using high-end steel manufacturing technology available in the country. Ispat Industries Ltd is a market leader in the national speciality steel market, a position which it hopes to consolidate by capitalizing on the proximity of its manufacturing facilities to major consumers of flat steel products in Maharashtra and increase its presence in international markets by using its convenient port location. It has a production capacity of 1.2 mtpa of direct reduced iron it has cold rolling and coating facilities with a processing capacity of 0.3 mtpa of cold rolled products and 0.22mtpa of galvanised coils/sheets. The company has also commissioned the first phase of its 3 mtpa hot mill strip, which is scheduled to be fully operational by year 2000.The Dolvi complex comprises a 1.2 million tonnes per annum sponge iron (DRI) plant and a 3 million tonnes per annum HR coils plant. It also has a 2 million tonnes per annum pig iron/hot metal plant (under Ispat Metallics Ltd) and a proposed 367 mw captive power plant (under Ispat Energy Ltd)

The Kalmeshwar complex under Ispat Industries comprises a 2.25 lakh tonnes galvanised plain/galvanised corrugated, a 3.0 lakh tonnes cold rolled coils plant, a 0.50 lakh tonne colour coated sheets plant.

The Dolvi complex also houses Ispat Energy Ltd's proposed 367-megawatt power plant for captive consumption.

JSW Steel LTD

JSW Steel Ltd is today a fully integrated steel plant having units across Karnataka and Maharashtra producing from pellets to colour coated steel. JSW's history can be traced back to 1982, when the Jindal Group acquired Piramal Steel Ltd, which operated a mini steel mill at Tarapur in Maharashtra. The Jindals, who had wide experience in the steel industry, renamed it as Jindal Iron and Steel Co Ltd (JISCO) now known as JSW Steel Limited (Downstream). In 1994, to achieve the vision of moving up the value chain and building a strong, resilient company, JISCO promoted Jindal Vijayanagar Steel Ltd (JVSL) now known as JSW Steel Limited (Upstream). Its plant is located at Toranagallu in the Bellary-Hospet area of Karnataka, the heart of the high-grade iron ore belt, and spread over 3,700 acres of land. It is just 340 kms from Bangalore, and well connected to Goa and Chennai ports.

The steel industry then was on the threshold of adopting new technology, and the Jindal Group took a lead in adopting the latest technology of steel making, known as 'COREX,' developed by Voest Alpine of Austria. The then JVSL was the first greenfield project to have 'COREX' as a mainstream facility. (Others elsewhere in the world, who had it as part of brownfield expansion, included ISCOR of South Africa, and POSCO of South Korea.

ELECTRIC ARC FURNACE INDUSTRY

At present, there are 38 Electric Arc Furnace based steel plants working in the country with an aggregate capacity of 8.15 million tonnes per annum. Apart from the working units there are around 13 units, which are closed. Production of ingots/concast billets by EAF units, which have been reporting their production to Joint Plant Committee, during 2004 - 05 was 7.77 million tonnes compared to 6.13 million tonnes during 2003–2004 – registering a growth of 21%. This sector continued to be under constraint of rising cost of inputs, increasing power tariffs, shortage of power and resource crunch.

INDUCTION FURNACE INDUSTRY

During 2004–2005, it is estimated that 719 units with a capacity of 12.35 million tonnes were in operation. The total production of induction furnace units registered a growth of 27% during 2004-05, producing 8.24 million tonnes against a production of 6.00 million tonnes in 2003–2004, as reported to Joint Plant Committee.

SPONGE IRON INDUSTRY

India is the world's largest producer of sponge iron. The growth of sponge iron especially during last 5-6 years in terms of capacity and production has been substantial. The installed capacity of sponge iron increased from 1.52 million tonnes per annum in 1990 – 1991 to 12.37 million tonnes 2004 – 2005. The production has increased from 0.9 million tonnes in 1990-1991 to 10.30 million tonnes in 2004-2005. Presently there are 227 sponge iron units installed in the country having a capacity of 18.65 million tonnes per annum. Out of this, there are 204 coal-based units in operation with a capacity of 12.55 million tonnes per annum. There are three gas-based units covering a capacity of 6.10 million tonnes per annum.

The production of sponge iron units, which are reporting their production during the last four years and the current year is given as under: -

(In '000 tonnes)

	2001- 02	2002 - 03	2003 - 04	2004- 05	Apr- Dec'05 (Prov)
Total Reported	5444.0	6908.4	8085.0	10296.0	9900.0
Total Estimated	—-	—-	—-	—-	—-
Grand Total	**5444.0**	**6908.4**	**8085.0**	**10296.0**	**9900.0**

PIG IRON INDUSTRY

Pig iron is one of the basic raw materials required by the foundry and casting industry for manufacture of various types of castings for the engineering sector. M/s. Usha Martin Industries Limited, M/s. Jindal Steel & Power Ltd. and M/s. Ispat Industries Ltd. have integrated the mini blast furnace (MBF) and are using the hot metal in the charge – mix directly for manufacture of steel through electric arc furnace. M/s. Hospet Steel, a joint venture of Kalyani and Mukand and M/s Southern Iron and Steel Company Limited have integrated their MBF with energy optimizing furnace for manufacture of steel. The excess hot metal produced by them supplements the pig iron production. Besides MBF, a COREX Plant (alternative to conventional MBF/BF) along with down stream steel making through basic oxygen furnace (BOF), which has been commissioned in Karnataka by M/s. JSW Steel Limited, also supplements the production of pig iron.

The production of pig iron during the last 4 years are given in the table below :-

(In million tonnes)

Type of unit	2002-03	2003-04	2004-05	Apr-Dec'05 (Prov.)
Private/ Secondary	4.178*	2.798	2.603	2.200
Producers	(79%)	(74%)	(81%)	(74%)
Total	**4.178**	**2.798**	**2.603**	**2.200**

* includes hot metal production of secondary producers namely Ispat Industries, Usha Martin, JSPL, Kalyani-Hospet, SISCOL, etc.

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

Performance of EAF based steel plants

(i) Status (updated on the basis of the Survey on Electric Arc Furnace Units in 2004 undertaken by JPC)

	Number	Capacity (in tonnes)
Commissioned Units	51	8486000
Closed Units	13	334790
Working Units	38	8151210

(i) Production

Production of Electric Arc Furnace units as reported to Joint Plant Committee is as under:

(in '000 tonnes)

Category	2002 - 03	2003- 04	2004- 05	Apr-Dec'05 (Prov)
Mild Steel	1652.2	3473.1	4368.7	3342.0
Medium/High Carbon Steel	874.6	909.5	1345.9	1030.0
Alloy Steel	793.6	622.2	953.0	729.0
Stainless Steel	594.0	666.8	843.5	645.0
Others	313.4	342.8	48.7	37.0
Total Reported	4227.8	6014.4	7559.8	5783.0
Total Estimated	960.1	170.7	283.8	217.0
Grand Total	**5187.9**	**6185.1**	**7843.6**	**6000.0**

HOT ROLLED STEEL SHEETS/STRIPS/PLATES UNITS

(i) **Status**

	Number	Capacity (in tonnes)
Commissioned Units	1920	24895000
Closed Units	670	6085893
Working Units	1250	18809107

(ii) Production

Production of Cold Rolled Steel Sheets/Strips Units, as reported to Joint Plant Committee are as follows:-
(In '000 tonnes)

Category	2002 - 03	2003 - 04	2004 - 05	Apr- Dec 05 (Prov)
Mild steel	2862.4	3084.7	4181.8	3405.5
Medium Carbon Steel	70.2	67.5	105.0	85.4
High Carbon Steel	---	---	---	-
Alloy Steels	0.5	0.5	0.4	0.3
Stainless Steel	169.6	198.0	161.0	131.0
Others	129.8	535.1	70.8	57.8
Total Reported	3232.5	3885.8	4519.0	3680.0
Total Estimated	141.7	124.4	33.5	26.0
Grand Total	**3374.2**	**4010.2**	**4552.5**	**3706.0**

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

(i) Status

	Number	Capacity (in tonnes)
Commissioned Units	18	423550
Closed Units	1	43750
Working Units	17	379800

(ii) Production

Production of GP/GC Sheets/Strips Units, as reported to Joint Plant Committee :-
(In '000 tonnes)

Category	2002 - 03	2003 - 04	2004 - 05	Apr - Dec'05 (Prov)
GP/GC Sheets/Strips (including colour Coated)	2124.0	2561.0	2868.2	2231.0
Total Reported	2124.0	2561.0	2868.2	2231.0

TIN PLATE UNITS

(i) Status

	Number	Capacity (in tonnes)
Commissioned Units	3	171638
Closed Units	2	31638
Working Units	1	140000

(ii) Production

Production of Tin Plate Units, during the last three years and current year is as under: -

(in '000 tonnes)

Category	2002 - 03	2003 - 04	2004-2005	Apr-Dec'05 (Prov)
Oil Can Size	108.0	123.5	140.7	120.0
Non Oil Can Size	---	---	---	-
Total Reported	108.0	123.5	140.7	120.0

CHAPTER-V

RESEARCH & DEVELOPMENT

Empowered Committee on Research & Development

Research and Development in Iron and Steel sector is carried out mainly by the steel plants, research laboratories and academic institutions. Annually, about Rs.80 crore is invested in R&D activities by the iron and steel and allied companies which is hardly 0.2% of the turnover of the steel companies as against 2-3% of the international steel companies.

Government of India reviewed the situation in 1997 and decided to invest up to Rs.150 crore per annum from the interest accrual from Steel Development Fund (SDF) to supplement R&D activities in iron and steel sector.

In pursuance of the decision of Government of India, an Empowered Committee under the Chairmanship of Secretary to the Government of India, Ministry of Steel with members from Department of Science & Technology, Department of Scientific & Industrial Research, steel producers in both private and public sectors, Indian Institute of Technology (IIT), Kharagpur, National Metallurgical Laboratory (NML), Jamshedpur, MECON Ltd, Secretary, SDF Managing Committee and others has been set up on 24.2.1998 with following terms of reference:

(a) Examine all aspects of science and technology in the iron and steel sector

(b) Co-ordination of the on-going research programmes in the iron and steel sector (both in public and private sectors) and monitor their progress.

(c) Evaluate and decide upon the research proposals placed before it for fully or partly funding from the interest accruals from the Steel Development Fund.

(d) Review, periodically, the progress of science and technology programmes of national importance in the iron and steel industry.

(e) Advise Ministry of Steel on the policies and programmes which need to be pursued in developing domestic capabilities in scientific and technological research, development of design, engineering and research in the iron and steel processes and products.

Since inception the Empowered Committee has so far met 14 times and approved 40 projects costing Rs.221.56 crore. Out of this Rs. 101.8129 crore is to be met from SDF. The year-wise release of money from SDF is as follows:-

(Rs. in crore)

S.No.	Year	R&D expenditure			
A	9th Plan(1997-2002)	58.06707			
	Sub Total (A)	58.06707			
B	10th Plan	(2002-2007)i)	2002-2003ii)	2003-2004iii)	2004-2005iv)
	2005-06 (As on 30.11.2005)	0.40603	13.92800	07.36500	0.2402
	Sub Total (B)	**21.93923**			
	Total (A+B)	**80.0063**			

Achievements/ Benefits from the completed R&D projects.

Out of 40 research projects approved so far by the EC, 20 research projects have been completed. Research results of some of the projects have already been implemented and they are yielding benefits in areas of iron and steel making processes, up-gradation of raw material, product development, increase in productivity, reduction in refractory consumption during steel making, reduction in energy consumption in electric arc furnace/induction furnace route, development of new process for weld components and utilization of waste materials etc.

Secretariat of the Empowered Committee (EC)

The responsibility for providing secretarial assistance to the EC has been entrusted to the technical wing in the Ministry of Steel. The technical wing processes the applications in consultation with an evaluation group (EG) comprising of Industrial Advisor, Ministry of Steel and representative from Department of Scientific and Industrial Research as well as Department of Science and Technology. Assistance of other experts in the field is also taken, if required. Their recommendation of the EG are placed before the EC for final decision in the matter.

The Technical Wing, the EG and some specifically constituted Empowered Boards (EB) of experts for some high values R&D projects monitor progress of research work and report to the EC. On the recommendation of the Empowered Committee, Joint Plant Committee releases the money. They also keep check on proper utilisation of fund by the project authorities. In case any deviation is noticed the same is brought to the notice of the Empowered Committee.

To obtain the financial assistance, an application in the prescribed format in five copies available at the website (http://steel.nic.in), Ministry of Steel are to be submitted to Industrial Adviser, Ministry of Steel, Govt. of India, Udyog Bhawan, New Delhi -110011.

Task Force for setting up of an Advanced Research Centre for Iron and Steel

Though the Government has approved an outlay of Rs. 150 crore per annum, the actual expenditure is much lower because of non receipt of sound R&D proposals from the industries, research laboratories and academic institutions. To find the ways and means to encourage R&D and to increase expenditure on R&D, Ministry of Steel organized a brain storming session under the chairmanship of Secretary (Steel) on 23rd December 2004. After detail deliberation on this issue, Ministry of Steel constituted a Task Force to review the existing institutional infrastructure available for Research and Development work in the iron and steel sector, to identify the gaps and the present/future needs of the industry in respect of R&D activities and to suggest a blue print for setting up an advanced R&D centre for iron and steel for innovative/ path breaking technology to utilise domestically available resources including degraded resources for iron and steel making.

The Task Force upon detailed deliberation has recommended that:

- To give a boost to R&D initiative in iron and steel sector, a virtual centre may be created by revitalizing the existing R&D centers, augmenting human and R&D infrastructure through focused projects and programmes and thereby encourage R&D in iron and steel sector solving various problems confronting the Indian iron and steel industry. The proposed virtual centre will be a registered society to be governed by a governing council (GC) and a director will manage the day today affairs of the Centre. Besides the Director, there will be leading engineers/scientists/technologists for taking up specific R&D projects & marketing the results thereof.
- A sum of Rs.50 crore may be provided as one time grant from SDF to meet the expenditure on R&D as per approved programme during the first three years. In addition, full establishment cost of the virtual centre over a period of three years may be funded by SDF and may be tapered off at the end of three years.
- MECON Ltd. may be appointed to prepare Memorandum of Association, rules and regulation and bye-laws of the proposed virtual centre, organization structure and requirements of manpower, requirements of accommodation/ infrastructures, full establishment cost etc.

Ministry of Steel is in the process of taking follow-up action for setting up of the said virtual centre.

RESEARCH & DEVELOPMENT BY INDIVIDUAL IRON & STEEL PLANTS

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

Total amount of money spent in research and development by iron and steel plants and other related industries during last three years were as follows:-

			(Rs. in crore)
	2003-04	**2004-05**	**2005-06(Upto Sept.'05)**
(a) Public Sector			
Steel Authority of India Ltd.	71.91	60.50	30.30
Rashtriya Ispat Nigam Ltd.	2.50	6.25	0.10
National Mineral Dev. Corp.	6.51	6.03	5.12
Kudremukh Iron Ore Co. Ltd.	3.50	0.20	0.58
Manganese (Ore) India Ltd.	1.08	1.71	0.89
Sponge Iron India Ltd.	7.70		
Bharat Refractories Ltd.	0.18	0.19	0.10
MECON Ltd.	0.25	0.24	0.09
SubTotal (a)	93.64		
(b) Private Sector			
Tata Steel Ltd.	24.26		
Mukand Ltd.	0.26	0.27	0.30
Jindal Steel Works Ltd.	2.40	3.55	3.60
Jindal Steel & Power Ltd.	0.80	0.91	0.80
Essar Steel Ltd.	0.26	0.26	
Sub Total (b)	27.36		
Grand Total (a+b)	121.00		

SAIL

Research & Development Centre for Iron & steel (RDCIS) of SAIL has undertaken 126 R&D projects in the current year 2005-2006, out of which 73 projects are to be completed during the year. These projects provided technological inputs to SAIL plants / units with thrust on cost reduction, value addition, quality improvement and development of new products. Fifteen projects have already been completed during the period from April to September 2005.

The Centre has filed four patents and seven copyrights up to September 2005. During the period 21 patents and 15 copyrights, which were filed earlier, has also been sealed / granted by the Patent Office. As many as 19 technical papers were published and 24 papers were presented. In addition, RDCIS undertook contract research work and provided significant consultancy services and know-how to organisations outside SAIL, yielding external earning of Rs. 46.10 lakh upto September 2005.

In recognition of the significant and important contributions made in the area of product development, R&D centre has been awarded the prestigious "DSIR National Award 2005 for R&D achievements in new materials" by the Ministry of Science and Technology, Government of India. In addition the Centre has bagged seven prestigious awards including five awards pertaining to National Metallurgists' Day Celebration, 2005.

RINL

Highlights of the R&D Projects held in 2005-2006 are given below:

YEAR	S. No	PROJECT	RESULTS
2005-06	01	Study of moisture and granulometry on bulk density of charge coal	Survey done. Experiments under progress. The analysis of the data collected so far is being done.
	02	Strengthening of charge pad with stainless steel fibre reinforced refractories to increase the converter lining life.	Survey done. Approval given for ordering. Order is being placed.
	03	Improvements in blowing process parameters by varying geometrical dimensions of lance tip. tip expected delivery date 31st March 2006.	Survey done. A.T. issued for modified lance
	04	Upgradation of NDT method of rolling mill rolls for efficient roll utilization.	Survey done. Team visited similar plants to study. Enquires received and procurement action initiated, indents raised in TR stage.

Expenditure on R&D during last three years

(Rs. in crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of Turnover
2003-04	5000	2.5	0.05
2004-05	8181	6.25	0.08
2005-06 (upto Sep'05)	3737	0.1	0.005

Evaluation of reducibility properties of Iron Ore Lumps and Agglomerates at NDMC R&D Centre, Hyderabad

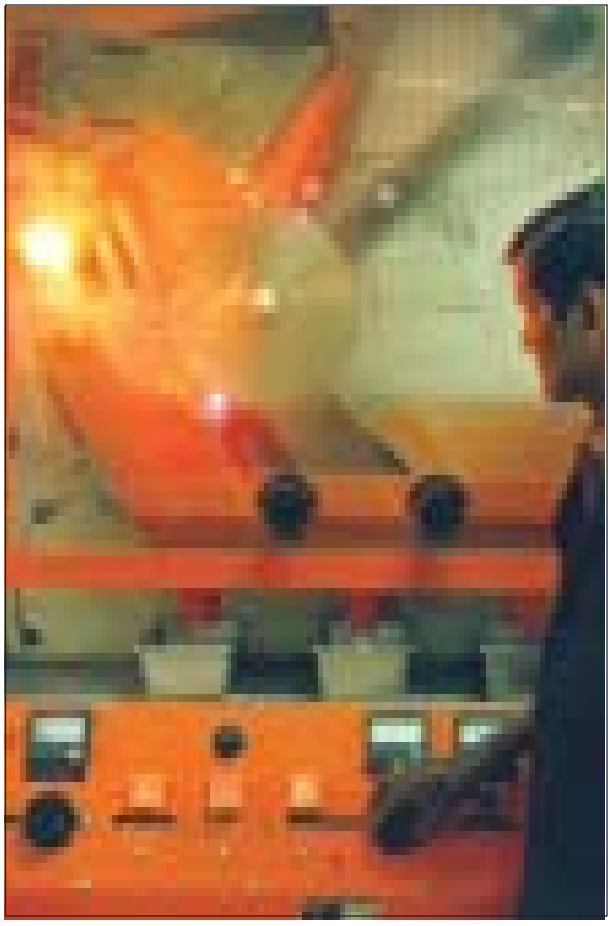
NMDC

Some of the major assignments taken up by NMDC/in progress/completed during the year 2005-06 (upto Dec.'06) are listed below:-

- Production of carbon free sponge iron powder and value added products thereof for setting up of pilot plant of 300 tpa capacity.
- Production of various grades of ferrite powder and power ferrite from blue dust concentrate.
- Studies for utilization of kimberlite tailings in cement industries.
- Production of sodium silicate, zeolite-A and precipitated silica from kimberlite tailings.
- Development of indigenous technology for production of synthetic rutile, pig iron and high pure iron oxide using thermal plasma technology
- Various projects sponsored by several public sector and private sector companies have been taken up

Patents

(i) Dissolution of blue dust under pressure and temperature - Awarded.
(ii) Development of pigment grade ferric oxide from blue dust - Accepted.
(iii) Development of caustic magnesia from panna tailings - Registered.
(iv) Development of filter candles from kimberlite tailings as an adsorbent for removal of fluoride - Registered.
(v) Novel process for utilization of effluent from chemical process at Vizag -Registered.
(vi) Application of kimberlite tailings in cold bonded tiles - Registered.
(vii) A process for the utilization of kimberlite solid waste as source of silica for the preparation of Zeolite-A - Filed.
(viii) A process for the utilization of kimberlite solid waste as source of Silica for the preparation of precipitated



High Tension Electrostatic Separator at NMDC R&D Centre, Hyderabad

R&D Expenditure during the last 3 years

(Rs. Lakhs)

Year	Turnover(Rs.Crores)	R&D	R&D Expenditure as % of turnover.
2003-2004	1453.69	651.00	0.45
2004-2005	2229.99	603.43	0.27
2005-2006 (upto Dec'05)	2572.18	512.59	0.20

KIOCL

Objective of R&D activities at KIOCL are directed towards quality improvement through process development/modifications to suit multi product needs and to modify process flow chart to cater to the present run of mine ore characteristics, which keeps changing from location to location.

Expenditure on R&D during last three years

Rs. in crore)

Year	Turnover(Rs.Crores)	R&D	R&D Expenditure as % of turnover.
2003-04	1029.38	3.50	0.34
2004-05	1853.77	0.20	0.01
2005-06 (upto November,2005)	909.41	0.58	0.06

MOIL

MOIL is engaged in exploration, exploitation, processing and marketing of manganese ore. It operates both underground as well as opencast mines. The major portion of total production of manganese ore comes from underground working. The manganese deposits are mostly hosted by poor rock in various geo conditions. The company is also working the old dumps for secondary recovery of manganese ore employing advance beneficiation techniques It also produces electrolytic manganese dioxide (EMD) and ferro manganese by processing the manganese ore produced from the mines.

Expenditure on R&D during last three years

(Rs. in crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of Turnover
2003-04	228.74	1.08	0.47
2004-05	378.78	1.71	0.45
2005-06 (upto September,2005)	230.73	0.89	0.39

Bharat Refractories Limited (BRL)

Expenditure on R&D during last three years

(Rs. in crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of Turnover
2003-04	110.97	0.18	0.16
2004-05	137.03	0.19	0.14
2005-06 (upto September,2005)	87.89	0.10	0.11

MECON Limited

- Development of coke dry cooling technology (CDCT) for non-recovery coke ovens
- High efficiency high temperature top fired stoves
- Indigenous development of mini pellet plant of 0.5 mt/year for utilization of iron ore ultra fines.
- High efficiency copper stave coolers for blast furnace

The above projects have just started and are sponsored by Steel Development Fund, Ministry of Steel, Government of India.

Expenditure on R&D during last three years

(Rs. in crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of Turnover
2003-04	271.14	0.25	0.095
2004-05	173.86	0.24	0.142
2005-06 (upto Septmember,2005)	123.06	0.09	0.08

JSW Steel Limited

Specific areas in which R & D carried out by the company are:

- Eight new products have been developed contributing to 5.5% of total production
- Coal blend for vibro-compacted non-recovery ovens has been optimised to produce excellent quality of coke; CSR > 65%, CRI < 25% and M10 < 6%
- With the application of artificial neural network (ANN), models have been developed to predict RDI of pellet, 'Si' in Blast Furnace hot metal and hot metal temperature
- Corex slag regime has been optimised with alumina 17.5 to 18.5 % and MgO > 13 %. This practice has significantly reduced fuel rate in Corex
- Improved slag splashing practice and optimised slag regime along with ferrotron laser refractory lining thickness measuring system have been employed in BOF resulting in BOF Converter lining life exceeding 9000 heats (and still continuing) which is a national benchmark

(Rs. in crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of Turnover
2003-04	3596.28	2.40	0.07
2004-05	5726.51	3.55	0.06
2005-06 (upto September,2005)	3028.60	3.60	0.12

Jindal Steel & Power Ltd.

Specific areas in which R & D carried out by the company are:

- Process of beneficiation of new coal washery at mines has been standardized with high ash coal.
- Standardization of steel making rolling parameters for wide parallel flange beams upto 700 X 300 mm in high tensile grades with transverse impact properties.
- Improved design of transfer chute between kiln segment and cooling segment of rotary kiln to eliminate the problem of transfer chute jamming.
- Standardisation of operating parameters of new DRI Kilns (of 500 T/day capacity).
- Standardisation of total system of generation of producer gas and mixing and boosting with BF gas and its utilisation in reheating furnace resulted in energy saving.
- Installation of CSR, CRI determination equipment and standardisation of properties of coke for improving the productivity of the MBF furnaces.
- New Grades Developed:
- N- 80 (1% Cr) , P110 , SAE5120 H , API 5L X – 60 developed for seamless steel tubes application .
- High tensile grades developed for structural with better impact property at sub zero temperature. Grades involved HT & SAILMA 350 HI, micro alloying with vanadium and niobium.
- Significant improvement w.r.t reduction in residual stress in rails has been achieved.
- Standardisation of casting powder and modification in tundish design has led to elimination of surface imperfection in beam blanks.

Expenditure on R&D during last three years

(Rs. in crore)

Year	Turnover	R&D Expenditure	R&D Expenditure as % of Turnover
2003-04	1261.61	0.80	0.06
2004-05	2253.60	0.91	0.04
2005-06 (upto September,2005)	1250.87	0.80	0.06

Essar Steel Ltd.

Specific areas in which R & D carried out by the company are:

- Capability studies of heat treatment cycles for precipitation hardening stainless steel to show that the mechanical properties in solution treated and precipitation hardened conditions can be met.
- Optimising heat treatment cycles for various grades of stainless steel.
- Obtaining necessary certification for stainless steel bars as a step towards meeting pressure equipment specifications.

CHAPTER-VI

ENVIRONMENT, POLLUTION CONTROL, SOLID WASTE MANAGEMENT & ENERGY CONSERVATION

Environment management and energy conservation constitute an important benchmark in assessing any sector or company both globally and domestically. The Ministry of Steel and its PSUs have been performing a commendable role in this regard.

SAIL

ENVIRONMENT MANAGEMENT

Corporate environmental policy of SAIL emphasizes on "conducting our operations in an environmentally responsible manner to comply with applicable regulations and striving to go beyond". SAIL recognizes its responsibility to continuously improve its energy efficiency and optimize resource consumption through various measures viz. improvement in process technology in the areas of raw materials, coke, iron and steel making, reuse/ re-cycle of the by-products generated and conservation of energy and water.

A view of one of the SAIL Townships

- SAIL has put in best efforts to meet standards set by legislation and to go beyond mere compliance where appropriate, through voluntary commitments such as those comprising the Charter on Corporate Responsibility for Environment Protection (CREP). This is a partnership concept devised by the MoEF, applicable to all the integrated steel plants.
- Continued efforts by the plants have led to further improvement in their environmental performance, which can be evidenced by the following indicators:

Indicators	2004-05	2003-04
Specific raw material consumption (Tonnes/tcs)	3.06	3.27
Specific energy consumption (Gcal/tcs)	7.29	7.46
Particulate Matter (PM) emission (Kg/tcs)	2.70	3.12
Specific water consumption (m^3/tcs)	5.75	6.26
Specific effluent discharge (m^3/tfs)	3.45	5.11

- All the SAIL plants are meeting the environmental quality norms with respect to effluent discharge and ambient air quality. With regard to particulate matter (PM) emission from the major stacks of the steel plants, ~ 85% are complying with the norms laid down by the statutory bodies. For the non-complying stacks, respective plants have initiated actions.
- Through sustained efforts, SAIL plants have achieved 60% utilization of all solid wastes generated, which are either being recycled inside the works or being commercially disposed. Earlier these were dumped within the plants.
- All the plants and mines under SAIL are in different stages of adopting environmental management system (EMS) linked to ISO 14001. Hot dip galvanising complex, Bokaro Steel Plant, hot strip mill and plat mill of Rourkela Steel Plant and blooming mill, billet mill, merchant and rod mill, heavy structural mill and light structural mill of Indian Iron and Steel Co., Burnpur were certified to ISO 14001 during 2004-05. The already certified plants and units have been re-certified to ISO 14001 : 2000 version. It is noteworthy to state here that, even the township of Bhilai Steel Plant is implementing EMS.
- To instill environmental awareness across SAIL as a whole, various awareness programmes like celebration of World Environment Day, Earth Day, Ozone Day, Environment Month, Mines and Mineral Conservation week are organized religiously. Besides, other activities like mass tree plantation, eco-quiz, painting, essay competitions on environmental topics are conducted involving employees, students and general public on these occasions for bringing awareness amongst SAIL family.
- SAIL recognizes the significance of training at all levels for successful implementation of its environmental policy. Various training programmes are organized on regular basis on environmental aspects in the HRD centers of the individual SAIL unit. Specialised training programmes are organized at the Management Training Institute (MTI), Ranchi, Central Power Training Institute (CPTI), Rourkela, where faculty are drawn from industry, regulatory bodies, SAIL units and educational and research institutes.

SIGNIFICANT INITIATIVES

- India is among the 165 countries that have ratified the Montreal Protocol, which sets out a time schedule to freeze and reduce the ozone depleting substances (ODS). The phase out plan for the solvent sector, which mainly uses CTC is December 2005. The steel sector has been identified as a major consumer of CTC and MoEF Ozone cell has identified SAIL plants for CTC phase out in the steel sector. Accordingly, a project with total cost of US $ 3.45 million from the Montreal Protocol Multilateral Fund (MPMF) with no financial burden on SAIL has been formulated by UNDP. UNDP team has already visited the beneficiary SAIL plants and technical specifications have been frozen for implementation of the same.
- Similarly Clean Development Mechanism (CDM) is an outcome of Kyoto Protocol by UNFCCC to address global warming and its effect on climate change. The main objective is reduction of CO_2 emissions, which constitute a large portion of green house gases (GHGs). Iron and steel industry is the largest energy consuming manufacturing sector in the world. To address to this, units across SAIL are in the process of identifying CDM projects. SAIL's participation is an international effort to reduce CO2 emissions reflecting the company's belief in adopting new technologies and innovative approaches to bring in sustainable improvement in the total environment.

ENVIRONMENTAL PLANTATION

Trees have a significant role in protection of environment and ecological balance. Extensive afforestation programme has been religiously followed in all the plants and mines over the last decade. The basis of choosing the species of plants mainly depends on local soil characteristics and prevailing meteorological conditions. Over 18 million trees have been planted in SAIL plants and mines. The green belt developed by afforestation adds to the aesthetic environment, which becomes dust and noise barriers.

A total number of **2,57,242** saplings have been planted covering an area of **58.03** ha. in 2004-05 as against **80,220** of saplings which hade been plants in an area of **36.63** ha. in 2003-04.

Environment friendly SAIL Mine

Plant	Sapling planted during 2004-05(nos.)	Sapling planted during 2003-04(nos.)
BSP	5012	20000
DSP	2000	1010
RSP	45700	40000
BSL	20,000*	15,000*
IISCO	2500	2000
SSP	20	200
VISP	10	10
MEL	2000	2000
SAIL	**2,57,242**	**80,220**

* Replacement plantation

MINES

Mines	Total land holding (Ha)	Plantation during 04-05	
		Area covered (Ha.)	Trees planted (nos.)
Barsua	2486.4	3.3	19640
Kalta	516.7	9.0	10000
Kiriburu	3949.3	—	—
Meghahatuburu	2560.5	0.4	500
Dalli (Manual)	155.0	2.1	4000
Rajhara	220.4	10.0	25000
Mahamaya	1522.7	0.15	265
Jharandalli	813.2	—	—
Manoharpur	2026	—	10000
Kemmangundi	42.7	1.5	3500
Kuteswar	1036	0.38	50
Bhawanathpur	1076.9	—	—
Tulsidamar	202.8	—	—
Nandini	620.5	20.95	20000
Hirri	318.2	10	25000
Bhadigund	40.12	1.5	2000
Kenchapura	4.45	1	150
Chasnalla	3602	—	1000
Jitpur	162.42	2.5	7000

ENVIRONMENTAL RECOGNITIONS

SAIL plants have been awarded with coveted prizes for their environmental performances in their respective plants viz. Prime Minister's Trophy, bagged by Bhilai Steel Plant and Greentech Environment Excellence Gold Award has been bestowed upon Rourkela Steel Plant.

Energy Conservation:

Pollution Control

In order to provide cost-effective and innovative solution to typical pollution related problems faced by SAIL steel plants, RDCIS Environment Laboratory Group takes up time bound projects in these units. Few important studies/ assignments being carried out during the year include:

- Improvement in quality of water used in BOF at DSP
- Development of fine particulate monitoring system for BOF gas lines at DSP
- Investigation into non-invasive technique for water pollution control
- Development of integrated enrichment process for recycling of mill sludges
- Improvement in working atmosphere of sinter plant at BSP
- Statutory monitoring of particulate PAH in Coke Oven working zone in major steel plants

Besides RDCIS has also provided testing and consultancy services to external organizations.

A. Consumption of energy per ton of crude steel (Gcal/tcs):

Plant	2003-04	2004-05	2005-06 (Apr – Sept)
BSP	6.86	6.84	6.82
DSP	7.35	7.29	7.65
RSP	8.72	8.69	8.69
BSL	7.75	7.23	7.09
SAIL	**7.46**	**7.29**	**7.24**

B. Energy conservation measures taken:

Few important energy conservation schemes implemented during the year 2004-05 are listed below:

- Installation of BF gas burners in Boiler – 6 of PBS to replace coal at BSP, Bhilai
- Modification of RHF's in Merchant Mill & RSM at BSP, Bhilai
- Monitoring, automation and implementation of process heating model for Reheating Furnace of Section mill at DSP, Durgapur
- Implementation of on-line Delay Strategy Model in 'A' – Furnace of Wheel and Axle Plant at DSP, Durgapur
- Replacement of recuperators of RH Furnace # 6 at RSP, Rourkela
- Installation of multi-slit burner in SP-II at RSP, Rourkela
- Commissioning of multi-slit burners in Band #2 and #3 in sinter plant in April 2004 and September 2004 at BSL, Bokaro
- Injection of coal tar in blast furnace no.1 at BSL, Bokaro
- Oxygen enrichment in BF 1 & 4 at BSL, Bokaro
- Modification of 3 nos. batch annealing furnace with Flat roof top and ceramic fiber lining at BSL, Bokaro

C. Energy conservation schemes under implementation in 2005-06 :

Few Important energy conservation schemes under implementation in the year 2005-06 are listed below:

- Stabilisation of coal dust injection in BF # 6 at BSP, Bhilai
- Injection of tar in BF# 4 as an additional fuel at BSP, Bhilai
- Introduction of CO gas firing in vertical shaft kiln, RMP-2 at BSP, Bhilai
- Achievement of productivity of 1.8 t/m3/day in BF#3 at DSP, Durgapur
- Achievement of higher hot blast temperature in BF # 3 by introducing supervisory computer control system at DSP, Durgapur
- Stabilisation of tar injection in BF#2 at DSP, Durgapur
- Study on reduction of specific energy to 6.5 Gcal/tcs at DSP, Durgapur
- Introduction of multi-slit burner in SP-2 at RSP, Rourkela

- Reduction of specific hot metal consumption in BOF, SMS-II at RSP, Rourkela
- Improvement in flame heating furnace of HDGL in CRM at RSP, Rourkela
- Introduction of tar injection in one of Blast furnace at BSL, Bokaro
- Commissioning of coal dust injection (CDI) system in BF # 5 at BSL, Bokaro
- Use of Hoogoven type design in one stove checker works in Blast Furnace at BSL, Bokaro
- Modification of discharge doors of reheating furnaces with water cooled refractory lined doors to reduce downtime at BSL, Bokaro
- Changing roofs of annealing furnaces with ceramic fiber lining instead of brick lining at BSL, Bokaro

RINL

At RINL VSP, utmost priority is given to environment management. Several initiatives are taken to ensure a clean and green environment. Some of the salient features and activities related to environment management are brought out below:

All parameters of ambient air, stack emissions, noise, fugitive emissions from batteries and effluents are within norms except ammonical nitrogen. A nitrification – denitrification project at a cost of Rs 5 crore to bring down the ammonical nitrogen below 50 mg/l is under finalization. Target date of commissioning is 30 June 2007.

A view of park in Vizag Steel Plant's Township

- 3 nos. continuous ambient air monitoring stations are being installed at a cost of Rs. 1.1 crore. Target date for commissioning is 31 March 2006.
- Continuous on-line stack monitoring systems (10 nos.) are being installed at an estimated cost of Rs. 2 crore. Target date is 31 March 2006. Another 10 nos. shall be installed by 31 December 2006.
- The project of dry fly ash handling, storage and delivery system is under implementation at a cost of Rs. 2.94 crore. Target date for commissioning is 31 March'06. Dry fly ash shall be given free to entrepreneurs for manufacturing fly ash bricks and other fly ash-based products. EoI has been invited. Twenty five parties have responded.
- A scheme to control fugitive emissions in SMS is being provided at a cost of Rs. 50 crore. Target year for commissioning is 2007.
- An ultra-filteration project to treat sewage water from the township STP (300 cum/hr) to make-up water quality for cooling applications in SMS and mills was commissioned on 12.12.2005.

ENVIRONMENTAL AWARDS RECEIVED

- Leadership and Excellence Award in safety, health and environment (SHE) management was given by CII, southern region on 24th February 2005.
- Business Achievement Award for Excellence in Environmental Conservation and Pollution Control was presented by Confederation of Asia Pacific Chamber of Commerce and Industry at New Delhi in February 2005.

KIOCL

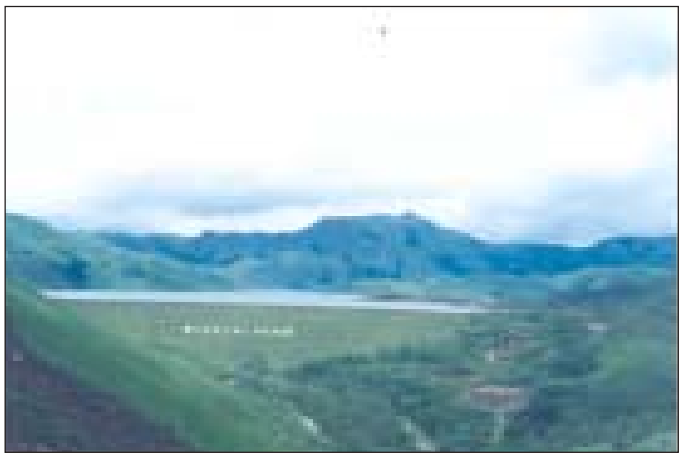
POLLUTION CONTROL & SOLID WASTE MANAGEMENT

The standard norms prescribed by M/s Karnataka State Pollution Control Board in respect of air and water quality monitoring are being adhered to.

The various pollution control measures undertaken during the year are as under:-

DESILTING

- The desilting activity commenced in the month of February 2005. About 2,53,648 tonnes of material was desilted from Pollution Control Dam I.
- Desilting of 4 check bunds downstream of Dam I & II has been completed and a volume of 15,000 Cu.m and 12,000 Cu.m has been created at the downstream of Dam I & II to arrest any possible leakage of silt in the seepage water during monsoon.
- A catch pit of capacity 2 lakh Cu.m has been excavated in the main ridge of the mine and a catch pit of capacity 1 lakh Cu.m has been excavated in the K1 extension area of the mine for arresting the mine run off from the mining area beyond the catchment of PC Dam I & II.



Lakya Dam at Kudremukh

Afforestation Activity

- Grass planting in an area of 40 hectares has been carried out in the mine abandoned area.
- 4100 saplings (myristica swamp) was planted in the year 2005.

The total expenditure incurred for pollution control measures implemented during the years 2004-05 around Rs. 6.35 crore.

Town Park-Kudremukh

MONITORING AND MEASUREMENT

Water and air quality monitoring is done as recommended by the monitoring committee constituted by the MoEF. Water quality is being monitored at six stations on daily basis during monsoon and once in a week during non-monsoon season starting from July 2005. The water quality strictly adheres to the water quality standards stipulated by the regulatory agencies.

The ambient air quality monitoring is done on a continuous basis as per the requirements specified in the EP Act. The monitoring was carried out in four stations within mining area, three stations outside mining area and at two stations fugitive monitoring was done and the results are within the limits specified in the NAAQ standards

SOLID WASTE MANAGEMENT

The major solid waste contributions from the mining and beneficiation processes are: overburden, waste rocks, soil wash off from the mines during the monsoon and tailings from beneficiation. The nature of solid waste is lumps, granules, dust, slurry and sludge. The other sources are residential waste, hospital waste, horticulture waste, water treatment plant and the sewage treatment plant.

The solid waste generated in the mines (over burden/ waste rocks) is negligible and is used mainly in developmental works and maintenance of hauling roads within the mines and the balance is disposed in various identified dumps. The solid waste generated by way of erosion due to soil wash but having potential for use is collected in pollution control dams constructed at the foot of the mines at suitable location with proper drainage facility and is desilted during the non-monsoon period.

Hon'ble Minister of Chemicals & Fertilizers and Steel Shri Ram Vilas Paswan planting a sapling at Kudremukh

Over 1 mtpa material is reclaimed from desilting and is treated in the beneficiation plant to produce concentrate. The tailings in the form of slurry generated by ore-processing is stored in the tailings dam of 100m high constructed across the Lakya Holey about 4 km away from the mines for settling, thus avoiding the solids polluting the water source. The supernatant water is reclaimed for process use. Tailing is pumped through three pipelines regularly and discharge in to Lakya dam for storage.

MOIL

ENERGY CONSERVATION:

Consistent with the national policy of conserving energy and also with the objective of containing the cost of production the company has embarked upon an economy drive in this sphere. Various steps including energy audit have been undertaken to conserve energy and to minimize power consumption.

For the first time in the history of MOIL, the company has been awarded 1st prize in National Awards on Energy Conservation - 2005 in the chemicals sector for its electrolytic manganese plant located in Dongri Buzurg Mine in the

Water Reservoir : Dongri Buzurg Mine of MOIL

Bhandara District of Maharashtra. The Prize has been awarded for the conservation of specific consumption of electrical energy as well as thermal energy per tonne of EMD produced during the year 2004-05 compared to the previous year. The award consisting of a glittering gold trophy and citation presented by the Hon'ble President of India.

In line with the Government's policy, MOIL has been striving to conserve energy wherever possible and identified various areas in this regard. EMD plant has been doing well for the last few years in energy conservation. As compared to 3623 Kwh/tonne energy consumption in 2002-03, the same has come down to 2755 Kwh/ tonne during 2004-05. At the same time the production has increased from 975 tonnes during 2003-04 to 1123 tonnes during 2004-05. Similarly, the plant has achieved savings in thermal energy by reducing consumption of coal by 297 tonnes/year.

POLLUTION CONTROL & SOLID WASTE MANAGEMENT

Eco-Development and Environmental Preservation:

Exploitation of natural resources, regardless of its supportive capacity, presents an apocalyptic nightmare of environmental degradation and ecosystem instability. Mining of minerals, particularly by open cast method, adversely affects the environment, resulting in degradation of land on large scale. Water and air pollution and noise pollution are also of concern, besides health of people at large. Considering the nature and extent of problem and concern of conserving the environment, MOIL, took a lead in massive afforestation in the company's mines, with special emphasis on reclamation of mines areas and rehabilitation of spoil dumps, supported by exhaustive research and development. This has helped to improve the mine environment. An integrated biotechnological approach has been adopted to achieve the goal of sustainable and eco-friendly mining.

Solid Waste Management:

MOIL, believes in the philosophy that "Today's Waste is Tomorrow's Wealth", and in fact have recovered ore worth crores of rupees by secondary recoveries. The process of mining generates huge solid waste to be dumped on surface and incident of solid waste is high in open caste mines. MOIL is now systematically dumping solid waste separately for mangani-ferrous rock and non-manganiferous rock so that in future when technology for utilizing the low-grade manganese ore is developed, these manganiferous dumps can be worked at much lesser cost to win low-grade manganese ore.

Waste dumps are now planned in such a way that future handling and re-handling of these dumps are avoided. Dump height is now planned for 30 MT, so as to occupy less space. The dump spoil already matured are now being systematically covered with either plantation or with shrubs/grass to prevent due to rain and give better aesthetic view.

To generate environmental awareness amongst mine employees training programmes are organized and MOIL takes active part in observing annual Mine Environment and Mineral Conservation Week being observed every year under the auspices of Indian Bureau of Mines.

JSW Steel Ltd.

The expenditure on pollution control equipment over the years is 7-8% of the capital investment, which is comparable to the best in the world.

Various air pollution control systems such as cyclone separator, dust suppression systems, scrubbers, degusting systems, ESP's and chimneys of required height have been installed at all the plant units to remove the particulate matter from the gas stream and control the emissions well within the statutory norms. The systems installed for pollution control in various plant units have provided acceptable and favorable environmental conditions in the working area and abate air pollution in the surrounding area of the steel plant. As measure of checking the efficiency of pollution control facilities, JSW Steel has installed ambient air quality stations at six locations outside the plant boundary. Six numbers of continuous online stack monitors have been installed in the process stacks of the plant units. The stack emissions from all the stacks are monitored every month. There is no case wherein the stack emissions are more than the norm of 150 mg/mm3.

Water Management

JSW Steel has adopted a unique water management system wherein no water is discharged from the plant. By adopting cascading use of water, the blow down water from different units is put to use in pellet plant, beneficiation plant, dust suppression system and for greenbelt development. By adopting such unique technique, JSW has been able to achieve zero liquid effluent discharge.

Solid Waste Management

Waste is never regarded as waste in JSW Steel. The wastes are finding utility in many places and have replaced many a raw materials in the plant. More than 85% of the solid waste generated is either reused, recycled or sold. Remaining solid wastes is used as the bund construction material for JSW Steel's waste dumpsite at Sultanpura village. The utilisation of solid waste for the current year is 87% till date.

NMDC

Environmental monitoring studies for the year 2005-06 (upto December 2005) have shown that all the environmental parameters are found to be within stipulated norms for all production projects of NMDC.

Details of action taken in the current year 2005-06 (upto December 2005) are as follows:-

Bailadila.14/11C Project, Kirandul, Dantewada Dt, Chhattisgarh.

- 169700 cu.m. of slime desilted from check dam No.7,8&9 constructed across Kirandul nallah and Kadampal tailing dam.
- Operation of effluent treatment plants at service centre complex for removal of oil and grease in the effluent discharge.
- Regular use of completely atomized dust suppression system installed right from the deposit-11C crushing plant to the loading yard for dust suppression.

Bailadila. 5&10/11A Project, Bacheli, Dantewada District, Chhattisgarh.

- Desilting of all check dams and tailing dam (1,53,000 cu.m silt/fines).

Hon'ble Minister of Chemicals & Fertilizers and Steel, Shri Ram Vilas Pasan Planting a Sapling

- Loose boulders wrapped in chain link mesh have also been constructed near check dam of deposit-10/11A for controlling the velocity of flow of water.
- Completed the plantation of 50,000 saplings at hill-top and 3330 saplings on slopes of deposit-10/11A and 50000 saplings at Bade Bacheli village through CVVN, Bilaspur.
- Eco-restoration works have been initiated at old fine ore dump on sample plot of five acres through Centre for Environmental Management and Degraded Ecosystem, University of Delhi.
- Construction of drain on the downstream of main mine road culverts.

Donimalai iron ore project, Donimalai Township, Bellary Dt, Karnataka

- Regular de-silting of Check dams Nos. 4,8 & 9.
- Construction of girdle wall at south block below MSL-945 waste dump and beyond MM cross section waste dump.
- Plantation of 15,000 saplings as regular afforestation and 50,000 Agave bulbs as waste dump stabilization.

Diamond Mining Project, Majhgawan, Panna

- Installed an effective mist water spray arrangement ("AQUADYNE" Dust suppression system) at ROM hopper and a "DRY FOG" Dust control system for primary and secondary crushing systems.
- Under the green belt development and stabilization of waste dumps about 3000 saplings have been planted.
- Constructed sewage treatment plant with RBC for the treatment of domestic sewage.

ENERGY CONSERVATION

Consumption of energy per tonne of iron ore excavated

A) Electrical Energy - KW / Tonne of excavation

Year	Target	Actual
2003-2004	2.20	2.19
2004-2005	2.05	1.96
2005-2006 (Apr.-Dec'05)	1.98	1.84

BIRD GROUP OF COMPANIES

Afforestation and Pollution Control

OMDC has covered 127.205 hectare under afforestation programme which covers avenue plantation, plantation under Government wasteland along with stream course around workers' colony etc. OMDC and BSLC have made arrangement for dust suppression through sprinkling of water over haul roads through pressurized nozzles. Environmental monitoring is being carried out on a continuous basis as per guidelines of the Pollution Control Boards. The companies organize environment awareness programme in order to create awareness amongst its employees and the neighboring villagers.

SIIL

All the provisions in the gazette notification dated 16.01.1991 and amendments thereof are complied with strictly. All the norms specified by AP Pollution Control Board/Central Pollution Control Board are strictly adhered and all the parameters are being well maintained within the limiting standards stipulated. The local Pollution Control Board Officials carry out periodical inspection and as recommended by them from time to time necessary steps are taken to ensure that prescribed standards are maintained.

Waste Land Development

The wasteland that is available is proposed to be levelled to develop greenery as a part of clean and green programme by planting saplings.

CHAPTER-VII

DEVELOPMENT OF INFORMATION TECHNOLOGY MINISTRY OF STEEL

This is an age of information technology. The Ministry of Steel and the PSUs under it constantly endeavour to be update on matters relating to IT infrastructure, development and applications.

A. IT INFRASTRUCTURE

The Computer Centre in the Ministry is equipped with Windows 2003 and Windows-NT servers, Pentium based client systems, a scanner for document imaging operations. In addition to these, the center is also equipped with Local Area Network (LAN) equipments such as switches and hubs, which serve as a backbone for accessing information on Ministry-wide Local Area Network (LAN), Internet as well as operating Intranet based applications in the Ministry

Apart from NIC central facility, about 100 Pentium-based client systems capable of handling present day Windows based software and office automation suits are operational with officials and desks/sections in the Ministry.

A LAN of about 100 nodes is operational in the Ministry and is being extensively used for i) sharing of files/ documents ii) collecting information/material on annual reports, Parliament questions, VIP references and Parliament assurances, position of vacant posts, ACC approvals, pending review/appeal cases from sections/desks and iii) compilation and collection of replies of Parliament questions from desks/sections in the Ministry and their onward transmission through E-mail to Rajya Sabha and Lok Sabha.

Facilities for sending on Internet and facility for surfing the sectoral information on Internet have been provided to all officials/desks/sections in the Ministry.

B. E-GOVERNANCE APPLICATIONS AND PROMOTING THE CONCEPT OF PAPERLESS OFFICE IN THE MINISTRY

As part of the e-governance programme, a Ministry-wide Internet portal (http://nt-steel/) is operational for e-submission of indents for monthly stationery items, application for earned leaves as well as to share and disseminate information through a bulletin board services for notices/circulars/office orders among the users of the Ministry.

The portal facilitates E-filing and approval of note sheets and documents as a workflow and work routing application. This system is operational for some of the identified subjects in establishment section, SAIL-OP and SAIL-PC sections. Efforts are being made to make the system operational in all divisions of the Ministry. The concept of digital signature has been introduced in the system for signing note sheets, files and documents.

The facility for downloading of forms for sanction of leave and advances, medical re-imbursement; Annual confidential reports; identity card, staff car booking; income tax, telephone list/(English and Hindi), e-mail addresses directory of officials/sections/desks in the Ministry, organization chart, activity list and training material in downloadable format on Windows-98, MS-Word, MS-Access, MS-Excel and power point is also provided on the Ministry-wide Intranet portal for the Officials/staff of the Ministry.

Personal corner for employee's profile, salary statement, GPF statement, bulletin board services for office memoranda, office orders and office circulars and flash of deputation vacancies/posts in Government of India are available on the Intranet portal.

The Internet portal also provides interface for accessing computer-based systems in the area of tracking of important references, Parliament assurances, position of vacant posts. ACC approvals, pending review/appeal cases, court cases, audit paras etc.

C. MINISTRY'S OFFICIAL WEBSITE

The Ministry's website (http://steel.gov.in) in bilingual format on Internet is also available to provide information on administrative setup, major activities of the Ministry, National Steel Policy-2005, Right to Information Act-2005, the policy framework, annual reports, overview of steel sector, analysis of steel imports and import statistics, development since 1991, research and technology development, links to Ministry's PSUs and attached offices, research and development technology mission and officials handling grievances in the Ministry, office of Minister of Steel and Ministry's PSUs has also been provided to give a wide coverage of information on the steel sector.

SAIL

Rourkela Steel Plant (RSP) has developed production planning and control (PPC) system with in-house efforts. The system is operational since 1st ApriL, 2005. Bhilai Steel Plant (BSP) is in process of staring e-procurement. Central Marketing Organization (CMO) has upgraded its wide area network (WAN) to lease line with backup of ISDN and VSAT. CMOITES (CMO IT-enabled system) software developed with central database is connecting 54

remote office of CMO across country. Disaster Recovery System is established at southern regional office, Chennai. SAIL has decided to implement enterprise resource planning (ERP) software across its plants and units in a phased manner, with Bhilai Steel Plant taking the lead role, to integrate its computerized applications in the areas

An inside view of Control Room in a SAIL Plant

of sales, materials management, finance and accounting, production planning and quality. ERP is one of the latest high-end solutions that information technology has lent to business applications. Benefits envisaged from an ERP system are reduction in business process lead times, improved inventory, working capital management, improved financial reconciliation and improved coordination among sales, production, stores, purchase and accounts.
Video conferencing is being implemented by SAIL. Ministry of Steel, all the integrated steel plants, CMO, Ranchi and corporate office would be covered under the scheme.

SAFETY

Safety is an important aspect in the functioning of any industry. It is important not only for its employees and workers but also for the environment and nation. This chapter highlights the emphasis on safety by the PSUs under the Ministry.

SAIL

SAIL has put in consistent efforts to improve its safety performance by taking measures like intensive safety drives in works area; introduction of risk control grading system in its integrated steel plants; conducting safety audit, workshop and training etc. Safety audits were conducted in hazardous departments of different plants and mines. Specific workshops on safety aspects were organized in the areas like coke ovens, blast furnace, sintering plant, steel melting shop etc. at various SAIL steel plants wherein learning through experience sharing took place.

A view of the Annual prize distribution ceremony of Joint Committee on Safety - Health & Environment in Steel Industry and SAIL Safety Awards at RDCIS, Ranchi

RINL (VSP)

Continuous efforts on implementation of safety standards, monitoring of risk control measures and other proactive measures have resulted in reduction/elimination of potential hazards and during the year 2004-05, the following have been achieved:

- Zero fatal accidents
- 13% reduction in reportable accidents

The highlights of safety are brought out below.

- Reduction of work accidents during 2005-06 has been 17.6%
- "Zero Accident" was achieved in 19 departments viz., CRMP, DNW, CSD, ETL, ERS, Hydraulics & Lubrication, CED, CRG, RMD, EnMD, TS, PD, St.ED, Telecom, PPM, Systems, Canteen, OHSRC, T&DC.
- QATD and telecom departments achieved 2 million lost time injury free man hours
- RMHP, SP, CRMP, CRG, Traffic and WRM departments achieved 1 million lost time injury free man hours.
- VSP achieved 3 million lost time injury free man hours one time

- Million lost time injury free man hours - 8 times
- As a part of safety promotional activity to involve all employees, safety week celebrations were conducted in all major departments viz., CCCD, RMHP, SP, TPP, BF, SMS, Rolling Mills, Traffic and WMD. Various competitions like safety slogans, poster, essay, skits are also conducted during each departmental safety week.
- VSP organized a Gas Safety Workshop in association with SAIL Safety Organization, where experts from all the steel plants participated to share their experiences.
- External Safety Audit was conducted by an expert competent independent agency M/s Srinivasa Consultants, Hyderabad for the year 2004.
- 3 Nos. of Electro Chlorinators in water pump houses are installed in place of hazardous chlorine tonners.
- The roof of crude benzol tank No.3 was changed in situ safely, which is surrounded by other crude benzol and benzene tanks.
- Round the clock monitoring of activities was carried out by safety personnel during capital repair works at various units of the plant.
- Safety Exhibition stall was put up during Turnaround celebration to bring awareness among the family members. Safety Quiz was also organized for the Housewives.

NMDC

NMDC has its training centers in all its project and these are equipped with required infrastructure as required under Mines Vocational Training Rules. These centers cater to the needs of basic training, refresher training, and training for skilled trades and also for those injured on duty.

A two day conference on "New challenges of Occupational Health in Non Coal Mines" was organized by National Mineral Development Corporation Ltd under the aegis of Directorate General of Mines Safety Southern Zone on 28th and 29th June 2005 at NMDC, Hyderabad. During the conference 23 papers were presented in five technical sessions. There were 141 participants from Director General of Mine Safety, National Mineral Development Corporation and other participating mines.

In each mining project of NMDC sufficient number of workmen inspectors are nominated/appointed for mining operations, mechanical and electrical installations as per statute requirements. Tripartite safety committee meetings are being held regularly once in a year at head office.

Mine level tripartite safety committee meeting have been conducted in each of the operating mines. This meeting is conducted once in a year at project level with senior officials, union representatives and DGMS officials in which safety performance and its appraisal is made and the recommendations are implemented.

Pit safety committees have been constituted in every operating mine and pit safety meetings are held every month discussing the safety matters and corrective actions related to work atmosphere.
Dozimetry and vibration studies are being conducted in all the projects by M/s National Institute of Miners Health, Nagpur.
Periodical medical examination and other additional tests required under the statute are carried out as per schedule in respect of employees. This covers all the new recruits, old employees on roll and all those who superannuate within next one year.
All the projects have occupational health centers equipped with full infrastructure and are manned by qualified doctors trained in occupational health and safety at Central Labour institute, Mumbai.
There were no fatal accident during the year 2005–06 (April to December'05) and serious injuries are six.

MOIL

With the continuous depletion of near surface ore deposits, mining is progressively being extended to deeper horizons and extraction is increasingly done through under-ground working. This requires attention to be paid to various aspects viz. support system, ventilation and efficient filling of voids arising out of extraction of ore. Continuous emphasis is laid on training of employees. Mine working is regularly inspected by members of pit committees, workmen inspectors, safety officers and senior deputy general manager (safety).
Safety weeks are observed and exhibitions are held to inculcate safety habits to ensure safe working. Safety committee meetings are regularly held during which any unsafe act committed/observed by any mine worker is discussed to avoid recurrence. The company pays special attention to ensure safety of the mines. The company has participated in the regional safety competition and has won 55 Prizes. The company has received national safety award for the Year 2000 for the "Lowest Injury Frequency Rate" for its Gumgaon Mine. For the second year in succession, The Gumgaon Mine of MOIL has been adjudged the best underground mine having lowest injury frequency rate for the year 2001. Tripartite safety committee meeting was arranged on 29th July, 2004 at Nagpur.

Safety policy for the company has also been crafted as per recommendation of the 5th National Safety Conference. This will further improve the safety standards of the mines. MOIL rescue team participated in All India Rescue Competition held at Talcher of MCL and bagged 1st Prize in Metal Mines category.

BIRD GROUP OF COMPANIES

Mining companies under the Bird Group take safety measures according to DGMS guidelines such as maintaining mines and haulage roads as per safety regulations, providing safety accessories to the employees working in the mines, first aid training, display of safety slogans, arrangement for fire fighting demonstration, vocational training to mines workers and celebration and participation in annual mines safety week.

FSNL

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

Apart from this, the safety day celebrations comprising of debate on safety are also held in all the units and corporate office, wherein the employees take part with full enthusiasm and the winners are given suitable prizes.

KIOCL

A safety department is functioning effectively. The company gives utmost importance to the occupational safety and health of the persons working in the company. Workers participation in safety management system is one of the important criteria adopted by the company. Area-wise safety committees are formed. Workers' participation in these safety committees is ensured. Safety inspections are carried out regularly by the safety officer along with the safety committee members and the safety points are discussed in the safety meetings held every month.

In order to inculcate safety consciousness and to develop the human resources, various training programmes such as refresher training, training on first aid, training on positive work culture, awareness programmes on environment, quality and safety management system are conducted. Further, to increase the awareness of safety among the mining communities safety campaign/propaganda is done by observing mines safety week celebrations every year under the guidance of Mines Safety Association, Karnataka. During the mines safety week celebrations, various competitions are held at both zonal level and the state level for the workers of different mines covered under Mines Safety Association, Karnataka. The company has won several prizes both at zonal and state level competitions.

CHAPTER-IX

WELFARE OF WEAKER SECTION OF SOCIETY

MINISTRY OF STEEL

The Ministry of Steel and the public sector undertakings under it comply with all Government guidelines with regard to the welfare of weaker sections of the society.

Statement showing the number of SC/ST/OBC/ex-servicemen

Men and women as on 31.12.2005 in respect of Ministry of Steel

Classification of Posts	No. of Employees in position	Men	Women	SC	ST	OBC	PH	Ex-service men
A	37	34	3	6	2	-	-	-
B	103	70	33	14	5	2	-	-
C	58	45	13	14	5	4	2	-
D	70	68	2	33	8	4	1	-
Total	**268**	**217**	**51**	**67**	**20**	**10**	**3**	**-**

SAIL

Some of the areas of assistance, which are also available to the weaker sections are the following:

- Fourteen scholarships are awards to deserving SC/ST undergraduate engineering students in various disciplines to encourage technical education among them. Bhilai Steel Plant has started giving 18 scholarships for SC/ST students from PM's Trophy Fund from 1.4.2004. Salem Steel Plant also provides 10 scholarships besides providing free uniform and books to SC/ST students from peripheral schools.
- In many cases, tuition fee in company run schools is exempt for SC/ST students. Steps are taken to provide education to more and more tribal children in company schools.
- The unemployed SC/ST youth are given specialized training in various technical trades to develop skill and knowledge. Such training is provided free of cost.
- The company has provided land for construction of school buildings in some of the steel townships as well as in other places for spreading education among the masses. Bokaro Steel Plant has allotted 12 rooms hostel for SC/ST students.
- The company has constructed roads in remote areas around the steel plants and also where the captive mines are located to improve communication and also increase activities such as organisation of health camps, school facilities, drinking water etc., under the peripheral development schemes.
- Bhilai Steel Plant has adopted 36 tribal children of Chhattisgarh region and Bokaro Steel Plant has adopted 12 Birhor tribe children. These plants are providing them with free education, boarding and lodging facilities.
- Construction of bridges, by-pass roads, metal-morum path, waterways, leveling/dressing area around township, pre-mixed roads. Installation of hand-pumps, tube wells and wells for villagers.
- Construction of school building, madarsas, school building for mentally retarded, deaf and dump children, providing school furniture therein and construction of hostels, women's collage building etc.
- Adult literacy campaign is carried out in most of the steel townships. Every year more and more men and women are being covered in this campaign.
- Development of fishery and cottage industry, providing sewing machines to village mahila mandals and promoting other self-employment generation schemes.
- SAIL has established a hockey academy with stadium and hostel facilities at Rourkela to tap and nurture the talent scattered in surrounding tribal area. The academy was successful in spotting a number of young talented tribal players and groom them under expertise of ex-Olympian.

The Presidential directive on scheduled castes and scheduled tribes continue to be implemented and monitored on a regular basis. The representation of SC/ST among total SAIL employees (including subsidiaries) has been 15.05% and 11.89% respectively as on 1.1.2005.

Group-wise representation of SC/ST in SAIL (including subsidiaries) as on 1.1.2005

Groups	Total No. of Employees	SC		ST		OBCs	
		No.	%	No.	%	No.	%
Group-A	15526	1736	11.18	746	4.80	548	3.35
Group-B	44632	5109	11.45	3437	7.70	3818	8.55
Group-C*	83517	13848	16.58	12882	15.42	5867	7.02
Group-C**	1585	1166	73.56	212	13.38	10	0.63
Total	**145260**	**21859**	**15.05**	**17277**	**11.89**	**10243**	**7.05**

*Excl. Safai karamcharies ** Only Safai karamcharies

NMDC

Manpower

The total number of regular employees in NMDC as on 31.12.2005 was 5477 out of which 998 persons belong to scheduled castes (18.22%), 1053 scheduled tribes (19.23%), 419 OBCs (7.65%).

Groups	Total No. of Employees	SC		ST		OBCs	
		No.	%	No.	%	No.	%
Group A	928	120	12.93	42	4.53	89	9.59
Group B	1070	159	14.86	174	16.26	49	4.58
Group C	2468	476	19.29	603	24.43	147	5.96
Group D (excl. Sweepers)	952	197	20.69	231	24.26	134	14.08
Group D (Sweepers)	59	46	77.97	3	5.08	0	0
Total	**5477**	**998**	**18.22**	**1053**	**19.23**	**419**	**7.65**

Other Welfare Measures

The details of various community/peripheral development works undertaken by our projects in and around their respective areas are given below:

Community/Peripheral Development Activities

The corporation is undertaking various peripheral development works in and around production projects in the following thrust areas:

- Medicare
- Education
- Drinking Water Supply

Medicare

(i) Free medical aid in all respects (both out-patient and in-patient), is given in the project hospitals to the villagers mainly tribals residing in the surrounding areas of the mines.

(ii) NMDC project organized the free orthopaedic camps in Chhattisgarh in which a number of local adivasis were treated/operated upon. Ambulance(s)/hospital equipment were procured and handed over to the district administration for use in providing medicare in interior villages.

Education

(i) Free educational facilities for children of tribals (adivasis) and scheduled caste students in project schools are provided. Besides constructing a number of school buildings, additional class rooms, ashrams and hostels, NMDC is regularly undertaking repair/renovation works to a number of school buildings of state Government and other tribal schools in the vicinity of its projects including electrification works where the local adivasi children are studying, apart from supplying colour TVs, fans, tube lights, play material, furniture, uniforms, books etc to SC/ ST children/certain schools and ashrams and furniture to degree college.

(ii) Suitable cash awards to all those adivasi children who pass out the fifth standard board examination in certain identified tribal schools with a view to inculcating a positive attitude towards education and motivate them to study at least up to primary level. In the DAV Schools functioning in projects, which is fully funded by NMDC, every year free ship is announced for the SC/ST children. NMDC has provided the entire infrastructural facilities including residential quarters for teaching staff and hostel buildings for the students of Govt. ITI at Bhansi.

(iii) At Bailadila, the local people are given special and general training at the training institutes to enable them to face competition and secure jobs. NMDC has also established another ITI at Bhansi for the benefit of local community. For this institute, the entire expenditure is borne by NMDC, though the administration of this institute is by DAV management.

Drinking Water

(i) A number of hand pumps/water tanks/open wells/tube wells have been constructed for supplying drinking water for the use of nearby villages. NMDC has also undertaken construction of overhead tanks in various areas for the benefit of local people and laid pipeline to bring drinking water to different camps (labour camps, refugee camps etc) away from project area. NMDC has provided drinking water to degree college/schools and repaired the public health engineering dept's hand pumps and public utility water tanks.

MSTC Ltd.

The Presidential Directives issued from time to time pertaining to policies and procedures of the Government in regard to reservation, relaxation, concession, etc. for the SC/ST/OBC candidates are kept in view while taking action /decision on any matter laid down therein.

Best efforts were made to comply with the directives in matters concerning recruitment and promotion. Adequate representation of SC/ST/OBC members was made available in both departmental promotion committees as well as selection committees (in case of recruitment).

In order to improve the efficiency of the employees belonging to the reserved categories, special attention was paid to their training and development in their respective fields of function. During the year 2005-2006 (till December, 2005) four SC and three ST employee of the company were sponsored for training programmes, both in-house and institutional. Apart from this, all welfare facilities provided to other employees of the company are also extended to them. In addition, all possible cooperation and assistance was provided to the MSTC SC/ST Employees' Council which functions primarily to safeguard the interests of the reserved section of employees of the company.

KIOCL

The total number of employees in KIOCL as on 31.12.2005 is 1904 out of which 304 persons belong to scheduled caste (15.96%), 77 persons belong to scheduled tribe (4.03%) and 267 persons belong to other backward classes (14.00%). Besides, there are 117 women (6.13%), 29 Physically Handicapped (1.52%) and 47 ex-servicemen (2.46%).

WELFARE MEASURES

(a) The Company has setup full fledged facilities at Kudremukh and Mangalore by establishing a modern township, hospital, recreation facilities etc. 10% of type "A" and "B" quarters and 5% of "C" and "D" type quarters are reserved for SC/ST employees.

(b) During the year 2004-2005, 15 numbers of merit scholarships and 40 numbers of merit-cum-means scholarships were sanctioned to the children of employees. Out of 55 numbers of scholarships, 20% of the scholarships i.e. 11 numbers are reserved for the children of SC/ST employees. During the year, only 10 applications were received from SC/ST employees and all the 10 applications were sanctioned scholarships. The qualifying standard of eligibility i.e. first class or 60% whichever is higher, is relaxable to 50% in the aggregate marks for sanction of scholarship to children of SC/ST employees.

RECRUITMENT

During the year 2005-06, (April 2005 to December. 2005) 4 candidates (General category) were recruited.

SIIL

WELFARE SCHEME FOR DEVELOPMENT OF SC & ST EMPLOYEES

Recruitment and promotions:

In the matter of recruitment and promotions to various posts, SC/ST candidates are being given the benefits, concessions as per the Government Directives.

The directives issued by Government of India from time to time relating to the matter of reservation of posts for SC/ST have been complied with by the company. There was no backlog of vacancies reserved for SC/ST candidates.

Training:

SIIL, being situated predominantly in a tribal area and in view of dearth of qualified SC/ST candidates, freshers from the institutes are being recruited in different disciplines and the job training is being given to the SC/ST employees so as to enable them to acquire the required skills for possible absorption in regular posts after the training.

Social Activities:

To look after the peripheral developmental activities in the nearby areas, a small medical cell is being provided by the company. Recognising its social responsibilities, the company undertakes programmes from time to time for the benefit of the tribal people in the local areas. As a part of this, free medical camps were conducted by SIIL with the help of local doctors in the nearby villages and medicines were distributed.

MOIL

Manganese Ore (India) Ltd is a labour intensive organization with over 7017 employees on its roll. About 77.68% of the total strength belong to SC/ ST/ OBC out of which 43.33% belongs to SC/ ST. The existing manpower in MOIL, catagorywise, is as below:-

Category	SC	ST	OBC	Others	Total
Group- A	19	10	26	143	198
Group-B	20	4	29	116	169
Group-C	304	275	274	608	1461
Group-D	952	1444	2078	680	5154

MOIL has undertaken several measures for the welfare of the SC/ST & OBC section of society. Some of them are as listed under:—

i. Adoption of tribal villages for upliftment of SC/ ST.

ii. Training in Sericulture for economic development of SC/ ST section near by mines area.

iii. Help to the schools in surrounding Mines.

iv. Organisation of Eye Camp/ Blood Donation Camp/ Child Welfare Camp specially for SC/STs.

v. Grant of subsidy to Gram Panchayat for water supply scheme for providing wholesome water.

vi. Giving financial assistance to Social Institutions who are working for the rehabilitation of the aged and handicapped persons.

vii. Donated tricycles to handicapped persons. Provided Sewing machines for development and upliftment of the tribal women.

MOIL constantly upgrades various welfare measures provided to the SC/STs with a view to improve the quality of life.

Bird Group of Companies

a. Existing employment:

Scheduled Castes (SCs) — 23%

Scheduled Tribes (STs) — 47%

OBCs — 11%

b. Fresh Recruitment:

Fresh recruitment of SCs, STs and OBCs would be made as per the schedule quotas for the respective sections.

c. Welfare activities:

- Providing educational facilities—BSLC and OMDC under the Bird Group extends aids to peripheral schools and colleges.
- Providing hospital facilities—OMDC and BSLC run hospitals mainly for the treatment of people and employees belonging to weaker section.
- Providing drinking water by dugwells, tubewells etc for the employees belonging to weaker sections and also nearby villagers.
- Undertaking of occupational health surveillance- The company undertakes program for malaria eradiction, pulse polio, RNTCP etc through the hospitals of OMDC and BSLC mainly for the weaker sections.
- Occupational health surveillance covering facilities like X-ray, pathological laboratory, audiometry, ECG, Lungs function test, dental clinic, operation theatre etc is conducted by OMDC from time to time for the employees belonging to weaker sections and also for nearby villagers.

CHAPTER-X

VIGILANCE

ACTIVITIES AND ACHIEVEMENTS OF VIGILANCE DIVISION OF MINISTRY OF STEEL

The Vigilance unit of the Ministry is headed by a chief vigilance officer (CVO) of the rank of joint secretary appointed on the advice of the Central Vigilance Commission (CVC). The CVO with one director and one under secretary and supporting staff, functions as the nodal point in the vigilance set-up of the Ministry. The vigilance unit is inter-alia responsible for the following in respect of the Ministry of Steel and the PSUs under its administrative control:

(i) Identification of sensitive areas prone to malpractices/temptation and taking preventive measures to ensure integrity/efficiency in Government functioning;

(ii) Taking suitable action to achieve the targets fixed by the Department of Personnel and Training on anti-corruption measures;

(iii) Scrutiny of complaints and initiation of appropriate investigation measures;

(iv) Inspections and follow-up action on the same;

(v) Furnishing the comments of the Ministry to the Central Vigilance Commission on the investigation reports of the Central Bureau of Investigation;

(vi) Taking appropriate action in respect of departmental proceedings on the advice of the CVC or otherwise;

(vii) Obtaining first and second stage advice of the CVC, wherever necessary;

(viii) Appointment of CVOs in the PSUs in consultation with CVC and Dept. of Personnel and Training;

(ix) Examination of complaints regarding allegations against the officials/officers of the PSUs under this Ministry for appropriate action;

(x) Maintenance and scrutiny of immovable property returns of officers and staff working in this Ministry.

Eleven PSUs are functioning under the administrative control of this Ministry. The vigilance unit in all PSUs is headed by a CVO appointed by this Ministry in consultation with CVC and DoPT.

During the year three meetings of the CVOs of the PSUs under the administrative control of this Ministry were convened wherein Secretary (Steel) reviewed the overall performance of the PSUs especially in the areas of preventive and punitive vigilance and suggested certain systemic improvements. As a result of the decisions arrived at in the meetings, a number of systemic improvements have been effected and the pendency has also come down considerably. All PSUs have been asked to obtain ISO certification for their procedures.

SAIL

The company adopted a pro-active approach to bring vigilance awareness among employees, vendors and customers. For this purpose large number of programmes were organized in the plants, units and different marketing offices across the country. Thrust has been given to e-commerce and e-payment. This has increased transparency in company's mode of conducting business.

System improvement and intensive examination of high value contracts and purchases continued to be the thrust area for the vigilance administration during the year. Important procedures were reviewed and wherever required further simplification has been undertaken for faster and transparent decision-making.

RINL (VSP)

Vigilance at VSP, proved to be an effective management tool with emphasis on preventive vigilance. Measures like review of procedures, identification of sensitive posts, conducting surprise/quality checks, mounting surveillance and rail/road weighments and re-weighments were undertaken. The vigilance observations were brought to the notice of the concerned for taking corrective actions/improvement in existing procedure systems wherever required.

Vigilance awareness weeks were observed during 2004-05 and 2005-06. In the vigilance awareness week conducted from 7.11.2005 to 11.11.2005, presentation-cum-interaction sessions were held for executives, steel executives' association, unions, customers, suppliers and contractors. A booklet titled "Important Guidelines Issued by CVC" was brought out. essay writing/elocution/debate competitions on vigilance related topics were conducted among the employees and students of educational institutions located in township and rehabilitation colonies. Prizes were distributed to the winners in a valedictory function graced by the top officials of VSP.

On the preventive vigilance front, greater thrust was laid on examination of tenders at the processing stage with a view to modifying certain restrictive tender clauses to increase competition.

Proactive vigilance work was done in the areas of estimation, award and execution of contracts pertaining to operation, maintenance, procurement and marketing and the management exhibited positive attitude towards the suggestions of the vigilance department.

In compliance with the directives of the Central Vigilance Commission on the e-governance, actions on the implementation of the following have been taken by the departments concerned in order to achieve transparency, reduced tendering and negotiation time, reduced administrative and processing costs:

- e-payment
- e-auction
- e-procurement

Close interaction was maintained with CBI. Pending cases were reviewed periodically and full co-operation was extended to them. All the periodical statistical returns/ reports were submitted to MOS, CVC, CBI and DPE, in time.

NMDC

A Vigilance committee has been constituted during the year, headed by Director (Production), to monitor the progress of disciplinary cases in NMDC.

The Chief Vigilance Officer, NMDC has been nominated as the "Nodal Authority" to receive complaints and grievances from employees, vendors, customers and the general public for timely attention by the concerned authorities.

As a part of the observance of "Vigilance Awareness Week", vendors and contractors meet organized in the head office to look into the systems and procedures in consultation with the vendors and contractors. Various suggestions, which came up during the meet are being looked into for implementation, wherever possible.

MOIL

The company is taking various measures to vigilance awareness. Preventive vigilance is being formulated at the corporate level and proper steps are being taken according to the instructions received from CVC/Administrative Ministry from time to time. It is the sincere endeavor of the company to inculcate utmost sincerity and honesty amongst the employees.

KIOCL

During the year under review, concerted efforts were taken up by vigilance to keep close watch on marketing activities of the company. Apart from regular inspections and surprise checks carried out by vigilance officers at Bangalore, Mangalore and Kudremukh, prevalent systems in operation were reviewed. System improvements were suggested and some of these suggestions have also been implemented.

Besides giving special attention of vigilance in the activities of marketing, some of the other areas of focus by vigilance in KIOCL during the current year were:

- Inventory planning and materials procurement
- Post facto approvals,
- Maintenance contracts,
- Disposal procedures for scrap and surplus items
- New projects
- Issue of consumables, and
- General administration

Through surprise checks and regular inspections, system improvements were recommended in some of these areas, particularly in tendering and procurement. 95 periodic inspections, 77 surprise inspections, and 133 scrutiny of records were carried out till December 2005.

Scrutiny and inspection of contracts/tenders on lines of CTE (Chief Technical Examiner) of CVC has been intensified. CTE type inspections, at least one case per month, are now being carried out on all locations. Inspections of 14 major works were carried out and improvements suggested.

As per CVC circular, action is taken to ensure that tenders/contracts issued above a threshold value of Rs.15 lakh are being posted in the website regularly every month and a strict monitoring of the same is being done. IT usage in e-procurement, tendering, commercial activities, etc is being steadily implemented. Raw materials and consumables, like chemicals are procured through e-procurement/reverse auction method. All significant tenders for materials, products, services, etc are put on the website of the company, in addition to NIT in newspapers, for wider access and greater transparency. This is being reviewed regularly. Auctions and disposal of scrap is being done through e-auctions.

A total of 38 posts were rotated/shifted under the job rotation scheme in sensitive locations till December 2005. Sensitive posts in areas like administration, civil works, commercial, contracts, finance and accounts, inspections, materials, medical wing, purchases, shipping, stores, etc have been identified. Assessment and identification of sensitive posts is a continuous process. The nature of sensitiveness of a post is a function of time. Wherever use of information technology has impact through greater transparency in transactions (like tenders, contracts, inspections, etc.), the scope for sensitivity in that post declines considerably. Vigilance department has periodic meeting with personnel department to continuously identify and improve upon the list of sensitive posts in the organization.

Twenty per cent of scrutiny of property returns was completed for the year, and further scrutiny is in progress. Revised format of property returns has been adopted from the year 2005-06 onwards.

Vigilance Awareness Week was conducted, as per CVC guidelines, from November 07 to 11, 2005, with workshops and seminars organized at Bangalore, and units at Mangalore and Kudremukh. Eminent speakers spoke on the subject of vigilance and its critical importance to management, and to society at large during the currency of the week. Customer/ stakeholders' meet was organized at Mangalore and Bangalore, in which interactive sessions were beneficial to both sides.

CHAPTER-XI

GRIEVANCE REDRESSAL MECHANISM

Ministry of Steel Grievance Cell

Steel Minister's Grievance Cell has been functioning in the Ministry of Steel since July 2004 to coordinate and monitor the grievances /complaints /suggestions of public and consumers relating to steel and steel products, received either in the Office of Minister of Steel or directly in the cell.

SAIL

Effective internal grievances redressal machinery exists in SAIL plants and units, separately for executives and non-executives. The grievance procedure has evolved after sustained deliberations and consent of employees, trade unions and associations. The grievances in SAIL plants/units are dealt in three stages and employees are given an opportunity at every stage to raise grievances relating irregularities, working conditions, transfers, leave, work assignments and welfare amenities etc. Such issues are effectively settled through the time-tested system of grievance management. However, majority grievances are redressed informally in view of the participative nature environment existing in the steel plants. The system is comprehensive, simple and flexible and has proved effective in promoting harmonious relationship between employees and management.

Status of public grievances/staff grievances for the period 1.4.2005 to 30.11.2005 is as under:

Grievances outstanding as on 1.4.2005	No. of Grievances received during the period	No. of Grievances disposed off	No. of Grievances pending as on 30.11.2005
76	1649	1702	23

NMDC

The grievance redressal machinery in NMDC is headed by an Additional General Manager in the Head Office and by Head of Projects in each of the four production projects. The machinery is working satisfactorily. However, the volume of grievances handled is very low, as such, computerization has not been done. Public dealing in the organisation being minimal, no time norms etc. have been fixed. However, as and when any public grievance (including in the press) is received, the same is promptly attended to. Monthly and quarterly reports on staff/public grievances are sent to Ministry indicating the position.

Status of Public Grievances / Staff Grievances for the period 1.4.2005 to 31.12.2005

S.No.	Name of Organization/PSU	Grievances outstanding as on 1.4.2005	No. of Grievances received during the period	No. of cases disposed off	No. of cases pending as on 31.12.2005
1.	NMDC (Public Grievances)	2	-	-	2
2.	NMDC (Staff Grievances)	3	-	2	1

MOIL

MOIL has its own grievance redressal procedure for executives as well as non-executive employees. The grievances of employees are accordingly dealt with as per rule.

The redressal of grievance machinery in MOIL consists of one grievance officer nominated for the purpose at each unit. The grievance officer nominated at the Head Office co-ordinates with the grievance officers at the units for their effective performance.

All grievance officials have been apprised of the manner in which the public grievances received at this end are to be disposed. The system adopted for dealing the grievance of public was constituted on the basis of instructions received from various authorities in the past.

FSNL

FSNL is engaged in rendering specialised services to the integrated steel plants in scrap recovery and processing operations. Hence no direct public dealings are made by the company. However, in case any public grievance is received, the same is redressed without any delay.

For redressal of staff grievance, grievance redressal scheme exists under which the grievances are redressed to the entire satisfaction of the individual concerned, in a time-bound schedule.

Status of Public Grievances/Staff Grievances for the period 1.4.2005 to 31.12.2005

Sl.No.	Name of organisation/ PSU	Grievances Outstanding As on 1.4.2004	No. of Grievance received during the period	No. of Cases Disposed off	No. of Cases Pending
PUBLIC GRIEVANCE					
1.	Ferro Scrap Nigam Ltd.	NIL	NIL	NIL	NIL
STAFF GRIEVANCE					
1.	Ferro Scarp Nigam Ltd.	2	2	-	4

MSTC

A public grievance cell has been constituted to deal with any grievance of any member of the public as well as the employees. Constitution of this cell has been widely circulated to all the offices of MSTC. Grievance received is examined by the cell in consultation with the HoD concerned and sometimes with the staff union, if the grievance is of collective nature. MSTC being a very small organisation having maximum 20 to 30 staff in each department/office, the staff has easy access to the HoDs and even CMD. Therefore, no necessity has been felt for setting up of formal machinery for redressal of employee grievance. Besides, in line with the Supreme Court judgement, a committee has also been constituted for prevention of sexual harassment of women at work place.

STATUS OF STAFF GRIEVANCES FOR THE PERIOD 1.4.2005 TO 31.12.2005

Sl.No.	Name of organisation/ PSU	Grievances Outstanding As on 1.4.2004	No. of Grievance received during the period	No. of Cases Disposed off	No. of Cases Pending as on 31.3.05
PUBLIC GRIEVANCE					
1.	MSTC Limited	NIL	NIL	NIL	NIL
STAFF GRIEVANCE					
1.	MSTC Limited	NIL	NIL	NIL	NIL

KIOCL

KIOCL has framed a well defined grievance procedure evolved under the code of discipline in March 1977 which covers all the employees, both executives and non-executives. Ever since the introduction, the scheme has been working satisfactorily without any complaint from any corner either from the recognised union or officers association. In view of the limited number of employees in the organisation, the grievances are easily identified and redressed at the grass root level itself.

Whenever any public grievance is received by the company in writing, the same are acknowledged promptly. The grievances so received are carefully examined in detail and analysed for taking quick and prompt action. Two directors and two general managers are designated as directors of grievances for redressal of the public/staff grievances.

Status of Public Grievances/Staff Grievances for the period 1.4.2005 to 31.12.2005

Sl.No.	Name of Organisation	Grievances Outstanding As on 1.4.2004	No. of Grievance received during the period	No. of Cases Disposed off	No. of Cases Pending as on 31.12.05
1.	Kudremukh Iron Ore Company Limited	Nil	15	12	3

STATUS OF PUBLIC GRIEVANCES FOR THE PERIOD 1.4.2005 TO 31.12.2005

Sl.No.	Name of Organisation	Grievances Outstanding As on 1.4.2004	No. of Grievance received during the period	No. of Cases Disposed off	No. of Cases Pending as on 31.12.05
1.	Kudremukh Iron Ore Company Limited	1	12	12	1

CHAPTER-XII

IMPLEMENTATION OF PROVISIONS OF PERSONS WITH DISABILITIES ACT, 1995

The Ministry of Steel and all the undertakings under it fully implement the Government rules with regard to enabling the disabled realize their full potential.

Status of implementation of the persons with Disabilities Act, 1995 during the year 2004-05

(as on 31.12.2005)

Name of the Organization: Ministry of Steel

Number of Employees		**Number of disabled Persons**			**Total (BL+ HI+L D)**	**%age of disabled persons (Col 3 & Col 1)**	**In case figure in Col. 4 is less than 3% reasons therefor**	**Action taken to fill up the shortfall**	**Remarks**
(1)		(2)			(3)	(4)	(5)	(6)	(7)
Group	No.	BL	HI	LD					
A	37	-	-	-	-	-	-	-	-
B	103	-	-	-	-	-	-	-	-
C	58	-	1	1	2	3.85	-	-	-
D	70	-	-	1	1	1.49	Absence of suitable candidates in the feeder grade	-	-

SAIL

REPRESENTATION OF THE PERSONS WITH DISABILITIES: As on 1.1.2005

Group	**No. of Employees**	**No. of Disabled Persons**			**Total VH+HH +OH**	**%age of Disabled Persons**
		VH	HH	OH		
A	15526	8	6	34	48	0.31
B	44632	9	66	303	378	0.85
C (Excl. Safai karamchary)	83517	28	70	496	549	0.71
C (Only Safai karamchary)	1585	0	2	2	4	0.25
Total	**145260**	**45**	**144**	**835**	**1024**	**0.70**

NMDC

Status of implementation of the Persons with Disabilities Act, 1995 during the year 2005-2006 (Apr.-Dec.,05)

Number of Employees	Number of disabled persons			Total BL+HI +LD	% of disabled persons (Col. 3 & Col. 1)	In case figure in Col. 4 is less than 3% reasons thereof*	Action taken to fill up the short fall
(1)	(2)			(3)	(4)	(5)	(6)
Group	**BL**	**HI**	**LD**				
A 928	-	-	2			NDMC being a mining organization is governed by the provisions of the Mines Act and Rules and Regulations thereof there of and considering the safety factor it is not possible to employ persons with disabilities in jobs involving working in the mines/plant.	NDMC has at present on its roll 34 employees with disabilities in various posts. In case of any recruitment in future, due consideration to eligible handicapped persons will be given.
B 1070	-	-	10	1+2+31	0.62%		
C 2468	1	2	15				
D 1011	-	-	4				
5477	**1**	**2**	**31**	**34**	0.62%		

Legends: BL————Blindness or low vision HI————Hearing Impairment
LD————Locomotor disability or cerebral palsy

*Not less than 3% for Persons with Disability of which 1% each for Persons suffering from (i)Blind or Low Vision (ii) Hearing Impairment (iii) Locomotor or cerebral palsy

MOIL

Group	Total No. of Employees as on 31.3.2005	No. of posts identified where Physically Handicapped Persons can be appointed	No. of disabled persons BL HI LD	%with regard to Col	In case Fig in Col. No. 4 is less than 3% reasons thereof	Action taken to fill up the shortfall
1	**2**	**3**	**4**	**5**	**6**	**7**
A	188	30	--			
B	198	85	--			
C	1373	260	8	3.07%		
D	5392	95	7	8.42%	(*)	(*)
TOTAL	**7151**	**460**	**15**	**3.47%**		

(*) Manganese Ore (India) Limited, being a Mining Company and major activities carried out are in underground Mines situated in remote places, it is not possible, due to statutory restrictions under Mines Act and Metaliferous Mines Regulations and because of the safety reasons, to deploy disabled persons on the jobs which are of strenuous nature at our Mines. There is no direct recruitment in the identified category since last 10 years. As and when the recruitment will be done and the same may be taken care off.

MSTC

IMPLEMENTATION OF THE PERSONS WITH DISABILITIES ACT, 1995.

Status of implementation of the Persons with Disabilities Act, 1995 during the year 2005-2006 (as on 31-12-2005) is given below:

Number of Employees		Number of Disabled Persons		Total BL+HI +LD	%age of disabled persons (Col. 3 & Col. 1)	In case figure in Col. 4 is less than 3% reasons therefore	Action taken to fill up the short fall
1		2		3	4	5	6
Group		HI	LD				
A	139	1	2	3	2.15		
B	114	1	2	3	2.63	*	
C	32	-	1	1	3.12		
D	19	1	-	1	5.26		
Total	304	3	5	8	2.63		

*No recruitment being done in Group B.

Legends: BL - Blindness or low vision HI - Hearing Impairment

KIOCL

STATUS OF IMPLEMENTATION OF PERSONS WITH DISABILITIES (EQUAL OPPORTUNITIES, PROTECTION OF RIGHTS AND FULL PARTICIPATION) ACT 1995:

Since the inception of KIOCL, i.e. from April 1976, the Government of India's directives on reservation of posts for the physically handicapped persons in recruitment are being complied with. As per the directives, the percentage of reservation made for the physically handicapped persons in KIOCL is given below:

Blind - 1%
Deaf - 1%
Orthopaedically Handicapped - 1%

The details of Physically Handicapped employees in different groups in position as on 31.12.2005.

No. of employees	No. disabled persons			Total BL+HI +LD	% of disabled persons (Col. 3 & Col. 1)	In case figure in Col. 4 is less than 3% reasons therefore*	Action taken to fill the shortfall	Remarks
1	2			3	4	5	6	7
Group	BL	HI	LD					
A 438	1	–	2	3	0.68	Furnished in Annexrue-I		
B 183	–	–	8	8	4.37			
C 1129	1	4	9	14	1.23	Furnished in Annexure-I		
D 154	–	3	1	4	2.59			
Total 1904	**2**	**7**	**20**	**29**	**1.52**			

Legends : BL - Blindness or low vision HI - Hearing impairment LD - Locomotor disability or cerebral palsy

* Not less than 3% for persons with disability of which 1% each for persons suffering from

i) Blind or low vision ii) Hearing impairment iii) Locomotor or cerebral palsy

KIOCL strives hard to provide appropriate safety and health measures in all the locations and specially where physically handicapped persons are employed and ensures that a particular disability does not come in the way of performance of the jobs allotted to them. The work environment is always maintained in such a manner that productivity / performance of the Physically Handicapped persons is in no way impaired by the disability.

No discrimination is made in recruitment or promotion on account of physical disabilities of the persons in the identified posts.

CHAPTER-XIII

PROGRESSIVE USE OF HINDI

Ministry of Steel

The Ministry of Steel made greater use of Hindi in official work during the year 2005-2006. Keeping in view the annual programme prepared and issued by the Department of Official Language [Ministry of Home Affairs] for implementation of the official language policy of the Union Government.

Hon'ble Minister of Chemicals & Fertilizers and Steel, Shri Ram Vilas Paswan presiding over the meeting of Hindi Advisory Committee

The work relating to the progressive use of Hindi in the Ministry is under the administrative control of a Joint Secretary and is being looked after by a Director level officer. The Hindi Section consists of a Joint Director, an Assistant Director, a Senior Translator, three Junior Translators and one Lower Division Clerk.

Official Language Implementation Committee

There is an Official Language Implementation Committee under the Chairmanship of a Joint Secretary in the Ministry. This committee reviews the progress made in the use of Hindi in the Ministry and its public sector undertakings. Meetings of the committee are held regularly. Three such meetings have been held upto 31st December 2005 during the current year.

Hindi Salahakar Samiti

Hindi Salahakar Samiti of this Ministry was reconstituted on 30th November 2004 under the chairmanship of the Minister for Steel. During the year the Samiti met on 11th April and 22nd September 2005. Next meeting of the Samiti was held on 14.01.2006.

Implementation of Section 3[3] of the Official Language Act, 1963

In pursuance of the Official Language Policy of the Government of India, almost all documents covered under Section 3[3] of the Official Language Act, 1963 are prepared both in Hindi and English. In order to ensure issue of letters in Hindi to Central Government offices located in Region "A", "B" and "C" check points have been identified in the Ministry to ensure compliance of the Official Language Policy.

Rajbhasha Shield/Trophies

In order to encourage the use of Hindi in the offices and undertakings under the administrative control of the Ministry of Steel, Ispat Rajbhasha Shield (First Prize), Ispat Rajbhasha Trophy (Second Prize) and Ispat Rajbhasha Trophy (Third Prize), a Rajbhasha Shield for the PSUs located in Region "C" have been instituted. These are given every year to the undertakings on the basis of their annual performance in progressive use of Hindi. Besides, a medal is also awarded to the officer/employee whose work in Hindi is rated to be the best in the Ministry.

SAIL awarded I[st] prize by Town Official Language Implementation Committee (Enterprises), Delhi

Incentive scheme for original work in Hindi

The cash incentive scheme for original work in Hindi introduced by the Department of Official Language is being implemented in the Ministry.

Cash prize scheme for ditation in Hindi

An incentive scheme for officers for giving dictation in Hindi is in operation in this Ministry.

Award for writing original books in Hindi

A scheme for awarding cash prizes for writing technical books in Hindi on various disciplines related to the steel industry and its allied subjects is also in operation in the Ministry. An amount of Rs. 15,000/-, Rs. 10,000/- and Rs. 7,500/- each, is awarded for the first, second and third prizes respectively. However, amount of the awards for the first, second and third prizes have been increased to Rs. 20,000/-, Rs. 16,000/- and Rs. 10,000/- respectively from the financial year 2005-06.

Hindi Divas/Hindi Fortnight

In order to encourage use of Hindi in official work amongst officers/employees of the Ministry an appeal was made by the Honorable Minister on 14th September 2005. Hindi Fortnight was organized in the Ministry form 1st September to 15th September 2005. During this period various Hindi competitions and Hindi workshops were organized.

Training in Hindi/Hindi Typewriting/Hindi Stenography

A programme has been drawn up for imparting training in Hindi/Hindi typing/Hindi stenography to those employees for whom in-service training is obligatory. Out of a total of 173 officers and staff [except group "D" employees], 172 possess working knowledge of Hindi. As far as Hindi typing and Hindi stenography is concerned, out of 27 LDCs and 33 stenographers 14 LDCs and 27 stenographers know Hindi typing and stenography, respectively.

SAIL

The company continued the thrust on implementation of Official Language Policy of Government of India. The company has won four first prizes in the area of promoting the usage of Hindi in official work and its Hindi home magazine "Ispat Bhasha Bharti" bagged the first prize from the Town Official Languages Implementation Committee set by Ministry of Home Affairs.

NMDC

During the year 2005-06 (April-December'05) the company continued its efforts for the progressive use of official language in all its production units and head office. Successful efforts were also made to use official language in the technical fields.

Rajbhasha technical/professional seminars were organized during the year in head office as well as in production units. Rajbhasha souvenir and technical booklets were also published apart from Hindi house journals.

NMDC was awarded the nation's highest award Indira Gandhi Rajbhasha Shield a number of times for excellent

implementation of official language in the company. NMDC has received the award **Nine times so far.** Ministry of Steel also declared prize n**ine times so far** for progressive use of official language Hindi in NMDC. NMDC got first award for best implementation of Rajbhasha during 2003-04 on 14.9.05.

Training in Hindi was imparted to the employees and more than 80% of the employees' acquired working knowledge of Hindi. Various programmes such as 'Hindi Day', 'R.B.Saptha', 'R.B.Pakhawada' and 'R.B.Maha' etc., were organized during the year (April-December '05) to bring awareness among the employees and their family members and also among the employees of other local offices located in and around the units.

MOIL

Effective steps have been taken by the Hindi Cell functioning at the corporate office. Further, "Hindi Fortnight" is organized every year. Facilities for learning Hindi have been made available to the employees who are not proficient in Hindi. The company, after receiving "CHALVAIJAYANTI" award continuously for 10 years, the same was permanently given to the company. The company has also received "SAHASTRABDI" Shield. For the year 2001-2002 and 2002-03, the company has received the "Indira Gandhi Rajbhasha Puraskar" instituted by Government of India. The company has started publication of house magazine "SANKALP" exclusively in Hindi in order to promote use of Hindi.

FSNL

The Company ensures strict adherence of all directives of the Government on implementation of official language policy. Hindi Diwas is celebrated in the company and various Hindi competitions like Hindi essay writing, Hindi gyan pratiyogita, Hindi prashnothari partiyogita etc. are conducted and the winners are given prizes. Annual cash awards are also given for Hindi noting/drafting and Hindi typing.

KIOCL

The company follows the directives issued from time to time by the Department of Official Language, Ministry of Home Affairs and the Ministry of Steel, Government of India for progressive use of Official Language Hindi.

Hindi training is given to the employees. Cash awards and increments are given as per the Government directives. Hindi workshops, orientation programmes are conducted regularly to create awareness, impart knowledge and encourage the employees to do their official work in Hindi. Cash awards are given to such of those employees who do the official work in Hindi.

All stationery, name plates and name boards of the company are in bilingual form. The Annual Report, MoU, House Magazine, Employees' Pension Scheme, Manuals etc., are printed in Hindi also. Hindi software is provided in computers in all departments.

Official language implementation committee meetings take place regularly and the progress during the previous quarter is reviewed in such meeting. The company takes active part in town official language implementation committee. Two Hindi competitions were conducted during the year for all Central Government and public sector offices in Bangalore. More than 45 offices took part in these competitions.

Hindi fortnight was celebrated in all the locations of the company. Programmes and several competitions were held and prizes distributed to the winners.

During the year six workshops are conducted to impart practical training to employees for doing their official work in Hindi.

Hindi advisory committee meeting under the Chairmanship of Hon'ble Minister for Steel, Chemicals and Fertilizers was held on 22nd September 2005 at Bangalore. The company was given the responsibility to make all the arrangements for the meeting.

Ministry of Home, Official Langauge Department, Government of India, has recognised the strength and services of the company and has given the responsibilities of conducting town official langauge implementation committee activities in Bangalore. The Chairman-cum-Managing Director is the chairman of Bangalore Town Official Language Implementation Committee (undertakings).

SIIL

During the period from 01.04.05 to till date the Section3 (3) was 100% complied with and under this provision 144 documents were released in bilingual form. Different schemes like "quarter of Hindi correspondence, learn Hindi word, noting and drafting and other Hindi competitions" for propagation of Hindi as official language were continued. "Hindi Day" on 14th September was celebrated and 54 prizes were given to the winners in different competitions conducted for employees and school children. During the year four meetings of official language

implementation committee were held. Pledge on different occasions such as Quami Ekta Diwas, Safety Day, Anti Terrorism Day and Vigilance Awareness Week was taken in Hindi. Employees having working knowledge of Hindi and proficiency were advised to write official notings in Hindi. Subjects on 163 files were inscribed in bilingual. The competent authority inspected different sections to review Hindi implementation.

CHAPTER-XIV

EMPOWERMENT OF WOMEN

Hon'ble Supreme Court of India in their judgment in August 1997 in the case of Visakha and others Vs. State of Rajasthan and others, recognizing the international conventions and norms, interpreted gender equality of women, in relation to work and held that sexual harassment at workplace, is against their dignity and is violative of Article 14,15(1) and 21 of the Constitution of India. As per the guidelines laid by the Supreme Court, all employers whether in the public or private sector should take appropriate steps to prevent sexual harassment. As a part of the complaint mechanism, a complaint committee with a third party representation and headed by a woman, with not less than half of its members should be women, be constituted in each organisation.

In compliance of the guidelines of the Supreme Court, Ministry of Steel has constituted a five-member committee, three of them are women and headed by a woman officer to look in to complaints related to sexual harassment at work place. All the public sector undertakings under the Ministry of Steel have been directed to implement the Supreme Court guidelines.

SAIL

SAIL has about 8500 women employees in both technical and non-technical area, which is around 6% of total employees. The company does not discriminate at either selection, recruitment, placement or promotion levels and equal opportunities are provided for the sexes at all levels. An equal career growth opportunity to all employees irrespective of the gender is the hallmark of SAIL's policy towards professional development of its employees. The number of growing women in senior positions is an indication of the fact that over the years, women would occupy some top positions in SAIL.

The smile says it all - a group of women workers in a SAIL Mine

The training policy of the company takes care of training and development needs of all its employees including the women employees through training needs analysis. Women employees are considered for specialized/technical/ managerial training exposures in all areas in keeping with their career growth and job profiles.

SAIL has made all out efforts for setting up of Committee on Sexual Harassment in each plant and unit of the company with representation from NGOs, crèches, separate washrooms, canteens for all employees in the company's precincts, etc. The statutory obligations of the company are also reflected in its policies for women employees, such as, maternity leave, child-care leave benefits.

SAIL has also taken a number of steps in various spheres for the larger benefit of the women in society. The activities range from, literacy programmes for girl child, awareness programmes on health, care, family planning, ante-natal services, organising health camps, informative programmes on AIDS Control. SAIL plants and units also have mahila samitis engaged in awareness initiatives on social issues as child labour/dowry, exploitation of women, support to economically weaker women towards being self-reliant through self-employment, education, involvement in awareness programmes etc.

RINL

Some of the initiatives taken towards women empowerment during the year 2004-05 and 2005-06 (from 1.4.2005 to 31.12.2005) are brought out below.

- Three women employees were sent for spring board training programme from March, 2004 to June, 2004 at New Delhi. It is a women development programme conducted by SCOPE.
- Twenty five women employees under went spring board training programme which was conducted as in-house training programme at centre for HRD of VSP.
- A workshop was conducted on 'Road Safety' on the occasion of World Health Day.
- Workshop was conducted at HRD centre to increase AIDS awareness on the occasion of AIDS Day in December 2004.

- Ten women employees were nominated for national seminar at Andhra University on the theme "Leadership-Challenges and Strategies". DGM (M-OB&G) participated in the panel discussion on Public Sectors as women friendly PSU.
- A seminar was conducted on WIPS Formation Day in August'04 on the theme "Women empowerment - a window in the pursuit of excellence" in which 500 women employees from Visakhapatnam and outside participated (out of whom 300 were from VSP).
- Some of the women employees were associated as members in interview boards for selection of candidates in recruitment and promotion.
- Ten women employees participated in Women in Public Sector (WIPS) National meet at Calcutta in the month of February 2005.
- In the month of May a counselling session was conducted for the housewives to manage the stress undergone by children during examinations.
- Special training programmes and workshops were conducted for women employees.
- Eighteen women counselors were trained to counsel women for their psychosomatic problems and also for family counseling.
- Women employees have been involved in formulation of procedure for data warehousing, reverse auction. They also participated as members of purchase committee, medical review committee, medical board and technical recommendation committees. Women were also included in the departmental promotion committee and selection committee for recruitment.
- A complaints committee for prohibition of sexual harassment of women in work place is also functioning in VSP
- With a view to increasing awareness and usage of Hindi in non-Hindi speaking employees' families, Hindi classes were organised for the housewives of Ukkunagaram. 89 ladies have been trained in Prathamica and Madhyama courses in the first session in which 97% of the ladies have passed the exam and 79% of them have acquired 1st class. Classes for Prathamica, Madhyama and Rashtra courses for the second batch of 117 ladies are going on.

MOIL

MOIL employs 863 women employees, which constitute 12.45% of its total workforce of 7017 as on 1st November 2005. In compliance of the directives of the Supreme Court guidelines relating to sexual harassment of women workers at work place were issued by Government of India, Ministry of Human Resources Development. Accordingly, a complaint committee comprising of three officials including a lady doctor was constituted in the year 1999. No case of any harassment has since been reported at any of the mines of the company or its corporate office. The directives have been widely circulated to bring awareness amongst the women workers.

Mahila Mandals are working effectively at all the mines of the company. Various cultural, social, educative and community activities, such as adult educating, blood donation camps, eye camps, family planning etc. are being organized regularly, mostly for the benefit of the women residing in the remote mine areas.

Every year 8th March is celebrated as International Women Day and various programmes are organized to mark the day.

The company grants maternity leave and special casual leave for family planning. The company has also set up crèches at its mines and gives time off for nursing mothers.

KIOCL

All necessary measures/statutory provisions for safeguarding the interests of women employees in matters like payment of wages, hours of work, health, safety and welfare aspects, maternity benefits etc. are being followed by the Company.

Based on the Supreme Court directives, conduct rules of the company has been amended by incorporating suitable clause for prohibiting sexual harassment of women at work place. A complaints committee has been constituted during September 1998 to deal with complaints made by victims of sexual harassment. The complaints committee comprises of a senior women executive as a chairperson, three nominated women representatives from the recognized union and lady advocate from High Court of Karnataka as a third party member.

A Women's Forum – Women in Public Sector (WIPS) is operating in KIOCL and most of the women employees are members of the said Forum. KIOCL is a life member for WIPS. Co-ordinators are being nominated on rotation basis from KIOCL to liaison with the WIPS and women employees (members) are being sent to attend annual meets/ regional meets of WIPS by the company.

Every year March 8th is celebrated by the women employees of the company as International Women's Day and function/programmes are organized at Kudremukh, Mangalore and Bangalore office on the occasion.

CHAPTER-XV

NEW INITIATIVES/INNOVATIVE SCHEMES

UNDP/GEF PROJECT (STEEL)

INTRODUCTION

The Ministry of Steel secured a grant of US$ 0.28 million in March 2001 under focal area "climate change" for development of a project proposal on "energy efficiency improvement in the steel re-rolling mill (SRRM) sector in India." The SRRM sector mainly comprises of small and medium enterprises (SMEs) with 75% share of small scale. There are over 2000 SRRM units in the country forming part of the secondary steel sector. Extensive survey of the issues associated with the current performance level of the steel re-rolling mills was carried out to identify the barriers that are responsible for technological obsolescence and poor energy efficiency levels of the industry in comparison to the developed countries. The GEF Council approved the project in May 2003 for a technical assistance grant of US$ 6.75 million and the project document was signed on April 12, 2004.

BRIEF DESCRIPTION

The UNDP/GEF project on energy efficiency improvement in the steel re-rolling mill (SRRM) sector is the first energy efficiency (EE) program in the country for SMEs. The five-year project aims at removal of barriers to information, finance and technology with action to policy approach by the Government. Simultaneously, the project will facilitate market transformation and will accelerate penetration of environmentally sustainable energy efficient technologies through successful demonstration of technology packages developed during the project development stage.

The project supports setting up of 30 model demonstration units in five geographical clusters covering 13 states of India and would strengthen the domestic equipment manufacturers. These investments will mainly come from the private sector industry and the financial institutions.

The GEF grant (US$ 6.75 million) and support from the Government of India through Steel Development Fund (US$ 7.28 million) would facilitate Technical Assistance (TA) activities like benchmarking, strengthening of institutional arrangements, effective information dissemination and capacity building of all key stakeholders including government departments and agencies.

Introduction of energy service companies (ESCOs) and third party financing mechanisms is an innovative approach that would be introduced for the first time in the SME segment. A Technology Information Resource and Facilitation Center (TIRFAC) has been planned to provide long term sustainability to the sector in the post project period through research, technology demonstration and development, design and business support facilities.

INFRASTRUCTURE DEVELOPMENT

The Project Management Cell (PMC) has been set up in the premises of Economic Research Unit (ERU) of Joint Plant Committee in Delhi. Renovation work of PMC has been completed and it is fully functional from January 2005.

The Project Operations Manual has been designed to facilitate functioning of the Project Cell and implementation of project programs in an effective, efficient and transparent manner so that the decision making process is not hampered.

The main policies laid out in the manual are based on existing establishment rules and regulations of the Ministry of Steel, public sector units, UNDP – country office and some of the policies being currently followed in the organization. The policies also take into consideration specific needs of the project and the size of team available for implementation.

TECHNOLOGY INFORMATION RESOURCE AND FACILITATION CENTER

a) Hardware and Software Centres

TIRFAC Hardware Center has been planned at NISST premises in Mandi Gobindgarh. The Software Centre has been set up at 39, Jawahar Dhatu Bhawan, Tughlaqabad Institutional Area (Near Batra Hospital), New Delhi as a part of existing building of Indian institute of Metals (IIM), Delhi Chapter. The centre is operational since June 2005. A consultant has been commissioned to prepare DPR for TIRFAC, which will be finalized by January 2006.

b) Developing Synergy between TIRFAC Hardware Center and Industrial Infrastructure Up-gradation Scheme (IIUS) at Mandi Gobindgarh

The project has plans to establish TIRFAC hardware center at Mandi Gobindgarh with a budget provision of Rs 8.83 crore and Software Center at New Delhi with a budget of Rs 3.95 crore.

Central Government has made a provision of Rs 50 crore for the Mandi Gobindgarh cluster under the Industrial Infrastructure Up-gradation Scheme (IIUS) for which fund is available as World Bank aid. Funds from this scheme can be obtained by forming special purpose vehicle by contributing 25% from the industrial cluster in public-private partnership. The SRRM sector has invited UNDP/GEF Project to participate in the scheme.

Out of the Rs 8.83 crore budget of TIRFAC hardware center at Mandi Gobindgarh, Rs 3.30 crore is required for establishing reheating furnace and related combustion facilities including upgradation of lab facilities of NISST. A part or whole of the remaining approximately Rs 5.53 crore could be earmarked towards contribution of the Ministry of Steel for the SPV under IIUS for development of Mandi Gobindgarh cluster. This can enlarge the scope of the proposed TIRFAC Hardware Center considerably and make it a complete one.

IMPLEMENTATION OF MODEL UNITS

a) Request for Participation (RFP)

The project had envisaged three model units in the first year. However, on demand from industry the process has been initiated for implementation of 10 model units. Letters were issued to 22 units that were studied during the project development stage to solicit request for participation (RFP). Eighteen units responded and submitted the papers out of which Project Development Agreement (PDA) were signed with 10 model units.

b) Design Team

Project Management Cell has formed a design team for designing of modern energy efficient reheating furnace for SRRM sector. The design of the first unit will be ready by 31st December 2005.

c) Pre-measurement Studies

Preliminary six-decile study has been completed in all 10 units during the year 2005 and a report on follow-up action has been provided to each of the units. The complete Technical and Financial Plan (TFP) has been prepared for each of the 10 model units and the same is finalized after extensive interaction with the units.

d) Development of Bankable Feasibility Reports (BFR)

Bankable Feasibility Reports (BFRs) for individual model units have been prepared by consultant based on specific needs identified during detailed study, investment grade audit (IGA) and in consultations with the experts. The draft reports have been submitted which are under finalization.

e) Procurement of Monitoring & Evaluation (M&E) Equipment

A complete set of automation and control equipment (PLC based) for reheating furnace has been procured and installed in one of the model units in Mandi Gobindgarh to demonstrate the actual benefits to the model units. The system will be commissioned by 31st December 2005

f) Inception Workshop for re-rolling units of Eastern Region

A one-day workshop has been planned by the end of January 2006 at Patna, to create awareness amongst re-rolling units located in eastern region of the country about UNDP/GEF Project (Steel) so that some of them could be selected as model units under the project.

SAIL

SAIL has finalized its corporate plan for the special steel plants viz. Alloy Steel Plant, Salem Steel Plant and Visvesvaraya Iron and Steel Plant. The plan focuses on achievement of the key strategic goal of SAIL with regard to the special steel

Dr. Mano Ranjan, Secretary (Steel) inaugurating the Coal Dust Injection System in SAIL's Bokaro Steel Plant

plants i.e. ensure standalone viability/profitability of these units. The cornerstone of corporate plan 2012 of special steel would be to attain synergic growth by de-bottlenecking with quality and cost competitiveness.

To reduce dependency of operations on imported coking coal, SAIL is trying to acquire indigenous coking coal blocks.

SAIL has signed a Head of Agreement with Gas Authority of India Limited (GAIL) for supply of 3.536 MMSCMD of natural gas for its integrated steel plants. Natural gas is an alternate auxiliary fuel for blast furnaces.

MOIL

About two-third of the company's production of manganese ore is by underground method. The handling of run of mine (ROM) ore in underground earlier used to be done manually. The company has during this year introduced an electrically operated side discharge loader (SDL) at its Balaghat manganese mine, initially on an experimental basis, for mechanical handling of the ROM. ore in underground. The experimentation has been successful, resulting in improvement in the labour productivity, handling costs and also the rate of mining and consequent improvement in safety.

The company had earlier introduced hydraulic sand stowing in place of manual back filling of the voids created in underground due to mining. However, this had resulted in the sand particulars adhering to ore and thereby deteriorating its quality. The company has therefore installed a "scrubber" on surface for effective washing of the ROM material from underground.

The company has previously been using "cut and fill method" of mining for its underground mining operations, which involves simultaneous back-filling of the voids created in underground due to mining. However, the company has now introduced a new method called sub-level open stopping.

New initiatives or Projects in pipeline with the company are:

- Wind turbine: Generation of electrical energy by tapping non-conventional source.
- Acquisition of metalliferous mines abroad through joint venture participation.
- Setting of ferro manganese and silico manganese plants.
- Setting up manganese dioxide ore grinding plant at Dongri Buzurg Mine.
- Expansion of EMD production to 2000 mtpa.
- Setting up of electrolytic manganese metal (EMM) plant of 1000 tpa capacity including R&D technology development.
- Setting up facilities for production of various manganese-based chemicals viz; manganese oxide (MnO), manganese sulphate (MnSO4), manganese sesquioxide (Mn2O3), manganic oxide (Mn3O4), potassium permanganate (KmnO4).

Bird Group of Companies

The Orissa Minerals Development Co Ltd under the Bird Group has already set up a 30,000 tpa capacity sponge iron plant at Thakurani, Orissa. The plant started commercial production from June 2004. Apart from this diversification programme the company has following programmes of diversification/ expansion in its hands for execution:

- The company is taking steps for expansion of the activities of sponge iron plant by installing another 30,000 tpa sponge iron plant at Thakurani.
- Along with sponge iron plant the company is also planning to install a power plant by utilising waste gas emitting from the sponge iron plant. The company has also programme for setting up induction furnace with continuous billet casting unit 6 TPD x 2,
- Arrangement for drawal of electric power from 33 KVA Sub-station Sundara to Thakurani Plant site (6 KM)
- Development of another railway siding is under progress to cope up with the augmented activity.
- The company has also taken measures to enhance the crushing capacity by installing and commissioning of additional crushing and screening plant.

FSNL

Installation of Electrical Sub-station
(11 KV/3.3 KV) for powering electrical equipment at Durgapur.

The project consists of laying of HT installation and construction of substation to operate Hydraulic Excavators and Cranes which need 3.3 KV power supply. This will replace the equipment presently being operated on diesel. The project will help to reduce operating cost, increase in operating life and availability of the equipment.

Installation of scrap sorting unit at NINL, Duburi

The scrap sorting unit is being installed in order to screen PCM fine, which is around 4% of total scrap generated from PCM. In absence of proper facility, the entire quantity of fines cannot be screened to the size required by the customer leading to mixing up of smaller size fraction in the dust. By installation of this facility both NINL and FSNL will be benefited.

KIOCL

The Hon'ble Supreme Court, in its verdict dated 30th October 2002, has directed that the mining at Kudremukh may be continued till December 2005. The company had filed a petition for direction on 3rd December 2003 before the Hon'ble Supreme Court seeking inter-alia permission to mine in the unbroken area of approximately 54 hectares for safety and natural slope stability and also to permit mining of primary ore.

The Hon'ble Supreme Court, after hearings, on 30th September 2005, has directed that no mining is permissible after 31st December 2005 in terms of the order dated 30th October 2002 and that our application be listed for January, 2006. Subsequent to the above order, the MOEF has filed an additional affidavit in the Hon'ble Supreme Court on 3-10-2005, inter-alia stating that to accomplish long-term slope stability, KIOCL be allowed to mine the weathered ore in the un-mineralised zone involving about 54.01 hectares.

The company has been exploring various alternatives for mining at other locations within the state and also elsewhere. The following efforts have been made in this direction:

a) The Government of Orissa has identified an area of over 54 sq. kms. (5400 hectares) containing probable low-grade hematite ore reserves. The entire allocated area is expected to contain about 180 million tonnes of iron ore containing 55-64% Fe. The company had issued a work order for prospecting on the geological department of Orissa Government. The prospecting work has been completed. Analysis of samples has also been completed and the report from the Director of Geology, Bhubaneswar has been received, which is under study.

b) The company has filed an application to the Government of Karnataka for grant of mining lease in Ramanadurg in the Bellary-Hospet area of Karnataka. Some of the applicants for grant of mining lease in this area have filed a petition in the High Court of Karnataka. The Hon'ble High Court is yet to pronounce its judgment on the writ petition. The Government of Karnataka has taken a decision to allot 50% of the Ramanadurg deposits in favour of KIOCL.

c) On 28.9.2004, KIOCL has entered in to a MoU with SAIL to form a joint venture company to mine iron ore at Kalta, Taldih and Barsua mines in Orissa. The ore characterisation studies, feasibility studies etc., are under way.

RECOGNITION AND AWARDS

The companies under the Ministry of Steel are high in the list of awards related to the industry. The following deserve mention of the many which constantly keep coming.

SAIL

The talent and innovation of all employees got recognition at the national level in the form of awards. In 2004, SAIL won four Prime Minister's Shram Awards, two Shram Veer and two Shram Shree. The company was also selected amongst the best four organizations for presenting excellence in human resource practices by ISTD-FICCI and it was the only public sector organization to have been selected for presenting by DMA-Watson Wyatt for innovative HR practice. Rourkela Steel Plant of the company was awarded the 'Golden Peacock Award' for innovative product and services by Institute of Directors.

RINL (VSP)

Some of the major awards received by RINL are indicated below.

- **National Energy Conservation Award 2002, 2003, 2004 & 2005**
- Rajiv Ratna National Award for **Best Chief Executive** to CMD, RINL
- **National Award for Excellence in Cost Management**
- **Organisational Excellence Award** 2005 from Indian National Suggestion Scheme Association (INSSAN)
- **National Water Management Award** 2004 & 2005 from CII
- **Leadership & excellence award in Safety, Health & Environment (SHE)** by CII
- **Business Achievement Award** for excellence in environmental conservation & pollution control
- **Prime Minister's Trophy** for best Integrated Steel Plant for 2002-03
- Six numbers of **Vishwakarma Rashtriya Puraskar** for non-executives in 2005

CMD, RINL receiving, National Energy Conservation Award for 2004-05

NMDC

On 11th April 2005 the CMD received the Raj Bhasha Shield (1st Prize) from Sri Ramvilas Paswan, Honorable Minister for Chemicals, Fertilizers and Steel of India for the year 2001-02.

On 29th May 200505 the CMD received Jawaharlal Nehru Memorial National Award 2004-05 for Excellent Chief Executive Gold Award and NMDC received Excellent Environment and Ecological Implementation Gold Award from International Greenland Society, Hyderabad.

On 14th June 2005 NMDC received Raj Bhasha Shield from Town Official Language Implementation Committee (Undertakings) for the year 2003-04.

On 15th September 2005 Sri B Ramesh Kumar, CMD received Bharat Ratna Sir Mokkshagundam Visvesvaraya Award 2005 instituted by Institution of Engineers (India), AP State centre and Government of AP.

On 14th September 2005, NMDC received Indira Gandhi Rajbhasha Shield for excellent implementation of official language and progressive use of hindi amongst the PSUs in region 'C' from Honorable Home Minister Sri Shivraj V Patil, Government of India for the year 2003-04.

On 08th Oct 2005, NMDC received CAPEXIL Special Export Award – 2004-05 received from Sri M Chidambaram, Hon'ble Union Minister for Finance.

On 22nd October 2005, Hon'ble Union Minister of Small Scale, Agro and Rural Industries Sri Mahavir Prasad, has presented Greentech Environment Excellence Silver Award for BIOP, Deposit-5,10&11A.

On 12th November 2005, NMDC received Coal India Award-Organization for the year 2004-2005 during the National Convention organized by Indian Institution of Industrial Engineering at Pune.

MOIL

MOIL is perhaps one of the few public sector enterprises in the country known for its continuous excellent performance. The company has been getting national/regional recognition for its good work in almost all the fields of activities. The following are some of the recognition the company has received at national level:

- Prime Minister's merit certificate for its excellent performance under MoU.
- National Safety Award.
- Rajbhasha Puraskar.
- Misrilal Jain Environment Award from FIMI.
- National Energy Conservation Award, 2005.

The company also recognizes the talents within the company and encourages its employees to actively participate and give suggestions for improvement in the performance of the company.

CMD of MOIL receiving National Energy Conservation Award-2005 from Hon'ble President of India Dr. A.P.J. Abdul Kalam

KIOCL

- In May, 2005, the company was presented 'GREENTECH' Safety Award (Gold Award) by Greentech Foundation in Mining Sector for outstanding achevement of the company in safety management;
- The company was conferred with 'Export Award 2004' by Kanara Chamber of Commerce and Industries, Mangalore in June, 2005 for highest export of iron ore concentrate and iron oxide pellets;
- Federation of Indian Mineral Industries, New Delhi has conferred 'FIMI Misrilall Jain Environment Award 2004-05 in August, 2005 for outstanding contribution to the national goal of sustainable development through environmental conservation and rational utilization of natural resources;
- In October, 2005 CAPEXIL conferred on the company Top Export Award as the top exporter of the products covered by the Bulk Minerals and Ores for the year 2004-05.;
- The company was conferred with 'Certificate of Excellence' by New Mangalore Port Trust, Mangalore for handling highest quantity of 46.97 lakh tonnes of iron ore and pellets by using mechanized system during the year 2004-05;
- GREENTECH Foundation, New Delhi has conferred 'Environment Excellence Gold Award 2004-05' for outstanding achievement in Environment Management in November 2004.

CHAPTER-XVII

PROMOTION OF STEEL USAGE

Promotion of steel is important in India because our per capita consumption is quite below the global average. Under the circumstances promotion is given due importance by the Ministry, companies and other bodies associated with the industry.

DESIGN GUIDEBOOKS, HANDBOOKS, MANUALS AND REPORTS

During the year 2004-2005 INSDAG published the following important guidebooks and manuals

- ***Steel Structures in Rural Application – Panchayat Meeting Halls***

  INSDAG has designed steel intensive panchayat meeting halls of various sizes ranging from 500 to 900 sq ft plan area. The designs are quite sturdy and durable and can be erected quite fast with possibility of future expansion.

- ***Design Handbook for Cold Formed Steel Sections***

  Since cold formed steel sections possess the inherent property of high strength to weight ratio and lesser weight per unit length the use of these sections lead to cost effective design. INSDAG handbook provides calculations and requirement of connections details and will be helpful in popularising their uses.

- ***Preparation of Steel Intensive, Modular type Community Toilet Blocks***

  The project has offered a cost effective durable design of a modular community toilet, which are quite suitable for Railway stations, municipalities, panchayats and slum areas.

- ***Guidebook on Fabrication and Erection of Steel Structure***

  The guidebook shows the path for right way of fabrication, joining and erection in construction. It also elaborates on contract procedures and costing techniques.

- **Guidebook on Effective usage of Steel Reinforcement Bars for Durable Construction Practices**
- **Design of Steel based Bullock Carts**
- **INSDAG Yearbook 2005**

MARKETING & TECHNICAL STEEL PROMOTION

In its drive to enhance steel consumption and to introduce innovative uses of steel in construction, INSDAG continued its marketing efforts vigorously at two levels:

1. Convincing decision-makers to opt for steel intensive construction, and
2. Marketing designs developed by INSDAG in various fields.

During the year 2004-2005, a third approach was conceived and started – design of real life buildings with steel/steel-concrete composite construction and to earn some consultancy fees. These buildings are being designed with proper optimization making them cost effective and attractive. These will work as demonstration units and will have chain reaction on installation of steel intensive buildings/structures in future. For changing the mind-set of potential users, INSDAG used the following methods during the year:

- Giving effective presentations before the decision-makers
- Participating in national/international exhibitions, with models and publications
- Conducting refresher courses for professionals
- Presentation of technical papers in national/international seminar and contribution of technical papers in journals.
- Advertisements in technical journals, seminar proceedings etc.

Some important marketing initiatives taken up by the INSDAG during the period are given below:

INSDAG has interacted with K Raheja Corporation, a premier promoter of multi-storeyed buildings in Mumbai, for convincing them to select steel-concrete composite construction in their future buildings. Arrangement drawing with RCC for a multi level car park in Mumbai prepared by them was modified by INSDAG to adopt steel-concrete composite construction with increased number of cars to be parked. The scheme is awaiting approval from the Mumbai Municipal Corporation.

INSDAG made a presentation to PWD Arunachal Pradesh Government on various steel options for different projects.

Kolkata Municipal Corporation (KMC) has interacted with INSDAG regarding designing of low cost houses in the urban slum areas with steel. Proposals were submitted to Kolkata Environmental Improvement Project (KEIP) for Canal Bank dwellers. The scheme submitted is under review by KEIP.

Chennai Port Trust had floated a tender for constructing a multi level car park. INSDAG highlighted the advantages of using steel in such areas. The authorities were convinced and decided for re-tendering after incorporating steel as the material of construction. Although work could not start due to poor bidding Chennai Port Trust is keen to go for steel-concrete composite construction with the help of INSDAG.

SELVEL, New Delhi has submitted a bid for four foot-over bridges coming up at different locations at New Delhi. INSDAG has agreed to be their structural designer. All foot over-bridges will be made of steel.

INSDAG delivered a presentation before Kolkata Municipal Development Authority (KMDA) on "Cost effective Steel Intensive Construction of Civic Amenities".

INSDAG has developed very efficient and handy design of a 'full steel bullock cart'. The Institute is training large number of fabricators across the country so that improved bullock carts are made available to the rural people. 400-500 bullock carts will be fabricated and distributed by main steel manufacturers. Some state governments are also planning to adopt large numbers of the same.

INSDAG is involved in the structural designing of the multistoried Handloom House in New Delhi with the new concept of "steel concrete composite technique". This project is under CPWD, Delhi. This will be a "landmark" building.

INSDAG is involved in the designing of a community hall christened "ISPAT PRAGATI KENDRA" at RDCIS township, Ranchi, from concept, architecture to structural designing. This is a very prestigious project. Quotations against tender are under evaluation.

The District Collector of Wardha has been contacted for proper distribution of steel bullock carts, which will be fabricated at Centre of Science for Villagers, Duttapur.

JSW has requested INSDAG for designing of two types of steel intensive designs for residential units for their colony. Basic data from JSW has been obtained and the design is in progress.

For enhancing the knowledge and skill of faculty and professionals in the country on structural steel design methods and technologies refresher courses and short-term training programme (STTP) were conducted.

To motivate the structural designers/architects/developers/builders towards more use of steel in their construction, professional award competition was started by INSDAG on the tune of SCI, UK in this year.

To create awareness among the students of architecture and civil/structural engineering about the unique uses of steel as a medium of expression of their innovative ideas and as a material of construction which can provide cost effective design of structures, competitions were held at zonal and central level for the students of architecture and engineering.

SAIL

- Widening reach of SAIL products in the domestic market.
- SAIL has appointed dealers for widening the reach of SAIL products.
- Focus on niche markets and high value products
- Regular advertisement for increasing the awareness for use of steel, through magazines and hoardings.
- Participation in seminars for providing technical inputs for segment specific applications.
- Branding of TMT Bars as SAIL-TMT developed as a step towards product image enhancement and attracting customers for use of quality materials.
- Participation in fairs and exhibitions highlighting usage of steel in different consumption areas.
- For promoting the generic use of steel and more importantly, making users (consumers) and common people steel friendly, an advertisement campaign was launched and aired on all major TV channels by the Indian Steel Alliance (of which SAIL is a prominent member,) between June-September 2004.

CHAPTER-XVIII

CORPORATE SOCIAL RESPONSIBILITY

In today's world success of any company is not measured solely by its balance sheet. Companies have a duty to contribute to the overall development of society, its employees and the environment in which they operate. Corporate social responsibility is a crucial benchmark for assessing companies today PSUs render the Ministry of Steel are not found wanting on this front.

SAIL

SAIL is committed to the realm of social responsibility. The major activities in this field are briefly enumerated below.

HEALTH & MEDICAL

There are 20 state-of-art hospitals situated throughout the country having a total strength of around 4000 beds for the benefit of employees, their dependents and the peripheral population and are managed by around 4400 doctors, medical and paramedical staff. SAIL has launched an AIDS awareness and control program in partnership with National AIDS Control Organization [NACO], Ministry of Health and Family Welfare. Till date about Rs.32 million have been received for implementing the policies of NACP-II in all plants/units. SAIL hospitals also implement the RCH programme across all plants/units.

Hon'ble Minister of Chemicals & Fertilizers and Steel, Shri Ram Vilas Paswan handing over Tsunami Relief Cheque to Hon'ble Prime Minister of India, Dr. Manmohan Singh. Secretary Steel, Dr. Mano Ranjan and Chairman SAIL, Shri V.S. Jain also seen in the picture.

PERIPHERAL DEVELOPMENT

Several socio-economic surveys reveal considerable benefits emanating from SAIL's efforts that reach interiors up to a radius of 8-15 kilometers. Programs are undertaken by each plant in close co-ordination with the state Government. District administration as well as the local panchayats, social organizations and people's representative of the area. For 2004-05 the company allocated a budget of Rs .5 crore to be spent on peripheral development activities. The budget has been increased to Rs. 9 crore for 2005-06. In the last five years the major plants have spent Rs.10 million each in their allocated budget to carry out various programs every year.

EDUCATION

SAIL has continuously strived to provide the best of education for the children and wards of employees. Over the years it has opened about 200 schools in the steel township, which employ more than 6000 teachers who impart modern day education to over 1,00,000 children. Bhilai and Bokaro Steel Plants have adopted tribal children and are providing them free education, boarding and lodging facilities.

SPORTS AND CULTURAL ACIVITIES

SAIL has developed and nourished sports and games over a period of time and established academies for handball, hockey and football at Bhilai, Rourkela and Bokaro respectively. The handball and hockey academies are joint ventures with Sports Authority of India (SAI). As a result of the training, the academies are proud to have produced national, commonwealth and SAF champions. SAIL has also given scholarships, amounting to Rs. 4,200/- per annum, which have encouraged about 30 SAIL family children to either win national medicals or be selected to the national teams.

RINL (VSP)

To discharge its obligation under CSR in a more focused manner, a policy on corporate social responsibility has been formulated and submitted for approval of the board of directors. The policy intends to make RINL/VSP a member of the global compact forum by subscribing to its principles, initiating voluntary measures addressing social and environmental concerns of the stakeholders and making CSR a key business process for sustainable development.

In the peripheral development area, activities like providing basic civic amenities and welfare for the people living in the surrounding villages were continued in 2005-06. Some of the activities are providing drinking water to rehabilitation colonies; imparting vocational training for men and women in all RH colonies and model villages; providing furniture in the schools and designing special bus for the school of physically and mentally challenged children (Arunodaya School). In addition to these activities, new initiatives were taken up in 2005-06 like conducting workshops "Towards Excellence" for the teachers in association with the Andhra University, UGC-Academic Staff College. For the students appearing in public examination, "Competency Development Programme" was conducted. Hindi training classes for housewives of the township were also taken up. In order to increase the social consciousness of the people living in the surrounding areas, a "multi purpose social service camp" was conducted covering topics like awareness on health including women and girl health, career guidance, clean and green environment, de-addiction, and self-employment.

NMDC

As a responsible corporate citizen and as part of its corporate social responsibility –

(i) NMDC has contributed Rs 1 crore towards Chief Minister's Relief Fund, Chhattisgarh for extending specialised medical treatment to the poor people affected by fatal diseases.

(ii) NMDC has contributed Rs 50 lakh towards Prime Minister's National Relief Fund for Tsunami victims. In addition, the employees and associations/ unions have also contributed to the extent of Rs.22.00 lakh towards the above.

(iii) NMDC has made commitment to donate Rs.50 crore to the Government of Chhattisgarh for establishment of a Medical College at Jagdalpur. Towards this, an amount of Rs.5.00 crore has been contributed during the year 2004-05.

Community Development works undertaken by NMDC at villages situated near Bailadila Projects, CG.

(iv) NMDC has contributed Rs 10 lakh to the Government of Karnataka for organizing 72nd All India Kannada Sahitya Sammelan. Further, Rs.10 lakh has been contributed for Humpi Utsav being celebrated in 2005.

(v) NMDC has contributed Rs 50 lakh towards Chief Minister's Relief Fund, Karnataka for extending medical relief to the poor people.

(vi) NMDC has contributed Rs 10 lakh to the Red Cross Society, Raipur for furnishing its newly constructed hall in its training centre.

(vii) NMDC has become a patron of Shiksha Deep Trust, Raipur by contributing Rs 11 lakh as one time contribution. This Trust is committed to help poor talented children of Chhatisgarh in their education by granting scholarships etc.

MOIL

With the advent of globalization, the concept of Corporate Social Responsibility (CSR) has emerged as one of the important aspects of corporate behaviour. A definite CSR has therefore not only becomes an integral part of an organization's credibility but has also emerged as an important tool to enhance the organizing capability to attract investors and client and to cash in the best of talents.

Numerous initiatives have been/being undertaken by MOIL are enumerated below:-

- Providing with primary health care facilities to downtrodden masses and under privileged children by giving free medical check up twice in a week in village, Gondi (Madhya Pradesh) and Kurmuda, Balapur, Hamesha, sitasoangi and Chikla in Maharashtra.
- Providing water supply line for drinking purposes at neighbouring village.
- Taking various socio-economic measures for the community development.
- Setting up educational institution and providing other allied service for educating the children of the dependent employees of the company and under privileged children.

- Taking adequate steps to protect the environment and maintaining ecological balance in and around mining areas.

Apart from planned CSR, MOIL has generously donated in recent past to Prime Minister/Chief Minister Relief Fund during natural catastrophe viz; Tsunami and Mumbai floods respectively.

Bird Group of Companies

The companies under Bird Group undertook various steps to fulfill Corporate Social Responsibility. Some of them are as below:

- The Orissa Minerals Development Co. Ltd (OMDC) under the group runs one 20-bedded hospital at Thakurani with ambulance facility. Villagers from adjacent villages are allowed free treatment in the hospital. One lady medical officer is attached to OMDC hospital for taking care of female patients. There are five staff nurses.
- The Bisra Stone Lime Co. Ltd (BSLC) runs one 40-bedded hospital at Birmitrapur with ambulance facility. Five staff nurses are engaged in this hospital. Villagers of adjacent villages are allowed treatment at this hospital with nominal charges. This hospital has link up with Ispat General Hospital (IGH) of Rourkela Steel Plant at Rourkela for emergency cases.
- Occupational health surveillance covering facilities like x-ray, pathological laboratory, audiometry, ECG, lungs function test, dental clinic, operation theatre etc is conducted by OMDC from time to time.
- The RNTCP, pulse polio, malaria eradication programme of the Government are also carried out through hospitals of OMDC and BSLC.
- Drinking water is provided by dug wells, tube-wells etc. There is provision for water lorry also in order to supply drinking water in the remote areas.
- OMDC arranged to renovate a number of ponds in the villages nearby for the purpose of provision of water.
- Both OMDC and BSLC extend aids to peripheral schools and colleges in the form of construction of building, arranging study materials, providing furniture, school buses etc. Active participation is made in TLC and other awareness programs.
- The mining companies under the group arrange to develop garden and lawns in different public places thus compensating the environmental scar due to mining and ancillary activities.
- In order to increase socio-economic activities preference is given by the operating companies to local villagers in respect of employment and also contractual work.
- In BSLC mines there is a club for ladies, members comprising women employees and housewives of male employees. This ladies club caters to the needs of various social activities.

KIOCL

Kudremukh Iron Ore Company Limited has contributed immensely towards community development in and around the project. Some such developmental works are in the following areas:-

- Pure drinking water facilities.
- Play grounds, buildings, books and other financial assistance to the educational institutions.
- Development of social, cultural and recreation facilities.
- Health and medical facilities.
- Assistance to the poor, disabled and downtrodden.
- Construction of buildings and provision of equipment to the hospitals.
- Construction of bridges/hanging bridges.
- Development of coastal region.
- Rehabilitation.
- Supply of water for irrigation purposes.
- Construction of irrigation tank.
- Construction of a panther enclosure at wild life safari of Pilikula Nisarga Dhama, Mangalore.
- Construction of hostel building at Srigeri/Kavoor, Mangalore.
- Beautification of Ratnagiri bore in Chickmagalur.
- Construction of Mahaveer Sarvajanika Samudaya Bhavan at Kalasa.
- Construction of a permanent Raita Bhavan at Mudigere.
- Assistance for replacement of water supply pipeline at Nellibeedu.
- Financial assistance for Construction of classrooms.
- Financial assistance towards provision of infrastructure facilities to residential School-cum-sai mandir.
- Financial assistance to Akshaya Patra Foundation towards purchase of Van for mid day meal programme.

Women Employees

All necessary measures/statutory provisions for safeguarding the interests of women employees in matters like payment of wages, hours of work, health, safety and welfare aspects, maternity benefits etc. are being followed by the company.

Free Medical Camp by WIPS (Women in Public Sector), Kudremukh

Details of women employees on rolls of the Company as on 31.12.2005 is given below:

Group	Total no. of employees	Women employees	% of representation
A	438	24	5.47
B	183	33	18.03
C	1129	35	3.10
D	122	14	11.47
D(S)	32	11	34.37
Total	**1904**	**117**	**6.14**

No. of women belonging to Special categories

Group	SC	ST	OBC	PH
A	5	—	2	—
B	-	—	3	3
C	3	4	3	4
D	3	2	2	—
D(S)	7	1	2	—
Total	18	7	12	7

CHAPTER-XIX

TECHNICAL INSTITUTES UNDER MINISTRY OF STEEL

The Ministry of Steel strives to constantly upgrade the technical skills of the workforce through courses and programmes. The following institutes set up for the purpose deserve a mention for their worthwhile role and contribution.

BIJU PATNAIK NATIONAL STEEL INSTITUTE

Based on the concept plan developed by the task force set up by the Ministry of Steel, a decision was taken to set up a National Steel Institute (NSI) at Puri, as a training–cum-service-cum-R&D centre under the management of Joint Plant Committee (JPC). The foundation stone for the Biju Patnaik National Steel Institute (BPNSI) at Puri was laid on 1st January 2001.The institute is registered under the Societies Registration Act, 1860 and started functioning from 1st January 2002. The Chairman, JPC also is the Chairman of the BPNSI. The BPNSI was established to help the domestic secondary steel industry to be in tandem with the rapid transformation which global and Indian steel industry has been undergoing. Presently, the BPNSI is conducting course on iron and steel manufacturing incorporating the best manufacturing practices followed. The Cabinet has on 20th February 2004 approved the setting up of the BPNSI at Puri as a full-fledged institute with capital funding from JPC. The shortfall in establishment expenditure will also be met by the JPC till the Institute becomes self-sustaining. An advance of Rs.10 crore has been given to the BPNSI from the JPC fund, the interest of which is to be utilized for undertaking research and development projects.

Some of the major initiatives taken by the BPNSI during the year 2005-06 are enumerated below:-

- Students got placement in reputed organizations like HAL, Apex Auto, Roongta Mines, Bhushan Steel etc.
- Conducted summer training programme on PLC and systems administration for 32 engineering students from May 16th, 2005 to June 15th, 2005.
- Undertook six deciles studies in 10 chosen units in SRRM sector on behalf of the UNDP-GEF project of the value of Rs.12 lakh.
- Received an order amounting to $60,000/- from M/s J P Planttech Co, Japan for preparing project design document for CDM initiative in OSIMA member units of Orissa.
- Got the order from UNDP-GEF project to manage their resident mission covering eastern region at Bhubaneswar.
- BPNSI has developed a waste to wealth project with RRL for converting ferruginous waste (iron ore fines and oily mill scales) and carbon residues and coke wasting including charcoal fines into a highly metallised sponge iron and hot charging directly into induction furnace.

NATIONAL INSTITUTE OF SECONDARY STEEL TECHNOLOGY

The National Institute of Secondary Steel Technology (NISST) was set up as a Society on 18th August, 1987 with its registered office at Chandigarh under the chairmanship of Development Commissioner for Iron and Steel with the following aims and objectives:-

- To provide trained manpower to secondary steel sector by conducting short term and long term courses.
- To bring awareness about the state-of-the-art technology by holding seminars, symposia, workshops and in-house training programmes relevant to secondary steel sector.
- To provide various industrial services and testing facilities.
- To extend consultancy services to the industry in terms of solving technological problems, improving energy efficiency and reducing pollution levels.
- To conduct research, development and design work in frontier areas for providing updated technology to this sector.
- To organize for documentation and information retrieval services to the industry.
- To provide a platform for interaction between industry and educational as well as research institution.

The following areas of the secondary steel sector are under the purview of the Institute:

- Electric Arc and Induction Furnace units
- Ladle Refining facility
- Rolling Mills (Hot & Cold)
- Direct Reduced Iron Units

The Institute has its own campus constructed on six acres of land located on G T road, Mandi Gobindgarh, Punjab. The Institute has well equipped laboratories with testing facilities covering different fields besides hostel facility for students and staff quarters. It has two regional centers located at Nagpur and Kolkata. The Institute is managed by a Board of Governors consisting of members from industries, education institutions, industrial associations and Ministry of Steel. The Joint Secretary, Ministry of Steel looking after the work of DCI&S is the Chairman of the Institute. The revenue expenditure of the Institute is met by own earnings from activities, interest from the corpus and shortfall is met by JPC.

Various initiatives taken/milestones achieved by the Institute during the current year are given below:-

- The Institute has been conducting job oriented certificate courses(JOCC) in rolling technology andsteel making technology for last many years. This year there is a record admission of 120 students at all centres.
- Various training programmes were successfully conducted by the NISST at different centres.
- NISST has developed a theme on "production of micro alloyed steels through induction furnace and controlled rolling route" as a part of its research activity with the fund provided by Ministry of Steel.
- A major initiative has been taken to up-grade the pollution control laboratory to category-B under UNDP/GEF Project assistance.
- NISST has been associating with UNDP/GEF project for some of their activities. Recently UNDP/GEF Project has set up a Resident Mission at NISST complex, Mandi Gobindgarh.
- The Institute has helped local industries to improve their quality of product, reduce energy consumption and improve productivity.

INSTITUTE FOR STEEL DEVELOPMENT AND GROWTH

The initiatives for setting up the INSDAG emanated from the steel producers and the Institute was registered as society on 26th August 1996. The mission of the institute is to work in unison with all stakeholders so as to evolve wage and means for efficient use of steel and provide optimum value to the customers.

The Institute primarily works towards the development of technology in steel usage and market for the steel producers. INSDAG is housed in part of the office of the Joint Plant Committee at Kolkata. INSDAG was expected to function and grow on contribution from the industry. However, the membership is contribution is barely 20% of the total fund requirement, with the balance being met through grants from the JPC.

CHAPTER-XX

NATIONAL STEEL POLICY - 2005

1. OBJECTIVE

1.1 **Strategic Goal:** The long-term goal of the national steel policy is that India should have a modern and efficient steel industry of world standards, catering to diversified steel demand. The focus of the policy would therefore be to achieve global competitiveness not only in terms of cost, quality and product-mix but also in terms of global benchmarks of efficiency and productivity. This will require indigenous production of over 100 Million Tonnes (MT) per annum by 2019-20 from the 2004-05 level of 38 MT. This implies a compounded annual growth of 7.3 percent per annum.

1.2 The above strategic goal is justified on the ground that steel consumption in the world, around 1000 MT in 2004, is expected to grow at 3.0 percent per annum[1] to reach 1,395 MT in 2015, compared to 2 percent per annum in the past fifteen years. China will continue to have a dominant share of the world steel demand. At home, the Indian growth rate of steel production over the past fifteen years was 7.0 percent per annum. The projected growth rate of 7.3 percent per annum in India compares well with the projected national income growth rate of 7-8 percent per annum, given an income elasticity of steel consumption of around 1.

1.3 In terms of consumption of steel, defined as production plus imports minus exports, the present equation is 38+2-4 = 36 MT in 2004-05. Table 1 gives the equation for 2019-20 and the projected compounded annual growth rates for production, imports, exports and consumption.

Table 1: Production, Imports, Exports and Consumption of Steel *(in million tonnes)*

	Production	Imports	Exports	Consumption
2019-20	110	6	26	90
2004-05	38	2	4	36
CAGR*	7.3%	7.1%	13.3 %	6.9 %

Notes: * Compounded Annual Growth Rate

2. INDUSTRY STRUCTURE

2.1 The iron and steel industry in India is organized in three categories' viz. main producers, other major producers and the secondary producers. The main producers and other major producers have integrated steel making facility with plant capacities over 0.5 MT and utilize iron ore and coal/gas for production of steel. In 2004-05, the main producers i.e. SAIL, TISCO and RINL had a combined capacity of around 19.3 MT and capacity utilization was 104 percent. The other major producers comprising of ESSAR, ISPAT and JVSL had a capacity of 6.4 MT with capacity utilization of 97 percent. The secondary sector is dispersed and consists of:

(a) Backward linkage from about 120 sponge iron producers that use iron ore and non-coking coal, with a capacity of around 13 MT, providing feedstock for steel producers. The capacity utilization in 2004-05 was 75 percent.

(b) About 650 mini blast furnaces, electric arc furnaces, induction furnaces and energy optimizing furnaces that use iron ore, sponge iron and melting scrap to produce steel. Their capacity is around 14.7 MT, and capacity utilization in 2004-05 was 58 percent.

(c) Forward linkage with about 1,200 re-rollers that roll out semis into finished steel products for consumer use. These are small and medium enterprises, whose reported capacity is around 15 MT, and capacity utilization in 2004-05 was 55 percent.

3. SWOT ANALYSIS OF THE INDUSTRY

3.1 The strengths, weaknesses, opportunities and threats for the Indian steel industry have been tabulated below. The national steel policy lays down the broad roadmap to deal with all of them.

Strengths 1. Availability of iron ore and coal 2. Low labour wage rates 3. Abundance of quality manpower 4. Mature production base **Opportunities** 1. Unexplored rural market 2. Growing domestic demand 3. Exports 4. Consolidation	**Weaknesses** 1. Unscientific mining 2. Low productivity 3. Coking coal import dependence 4. Low R&D investments 5. High cost of debt 6. Inadequate infrastructure **Threats** 1. China becoming net exporter 2. Protectionism in the West 3. Dumping by competitors

4. STRATEGY

4.1 A multi-pronged strategy would be adopted to move towards the long-term policy goal. On the demand side, the strategy would be to create incremental demand through promotional efforts, creation of awareness and strengthening the delivery chain, particularly in rural areas. On the supply side, the strategy would be to facilitate creation of additional capacity, remove procedural and policy bottlenecks in the availability of inputs such as iron ore and coal, make higher investments in R&D and HRD and encourage the creation of infrastructure such as roads, railways, and ports.

5. STEEL DEMAND

5.1 **Urban Areas**: The present steel consumption per capita per annum is about 30 kg in India, compared to 150 kg in the world, and 350 kg in the developed world. [1] The estimated urban consumption per capita per annum is around 77 kg in the country, expected to reach approximately 165 kg in 2019-20, implying a CAGR of 5 percent. Apart from the anticipated growth in the construction, automobile, oil and gas transportation, and infrastructure sectors of the economy, conscious promotion of steel usage among architects, engineers and students by the Institute of Steel Development and Growth (INSDAG) and the large producers will drive this additional consumption. Steps would be taken to encourage usage of steel in bridges, crash barriers, flyovers and building construction. Benefits of steel usage would be added to the technical education curricula in the country.

5.2 **Rural Areas:** The rural consumption of steel in India remains at around 2 kg per capita per annum, primarily because steel is perceived to be expensive among the village folks. Based on the promotional efforts mentioned above, and an active focus on opening new block level rural stock points, a target is set for raising the per capita rural consumption of steel to 4 kg per annum by 2019-20, implying a CAGR of 4.4 percent.

5.3 **Exports:** Although the focus of Indian steel industry is on the domestic market, export will be another window on the demand side. The growth of exports of steel from India has been around 10 percent per annum over the past decade. That speaks for the international cost competitiveness of the steel sector. It takes assiduous effort to create, and hold on to export markets. While the business decision to export will depend on the prevailing relative prices, the Government would encourage strategic alliances with buyback arrangements and dedicated export production through 100% export-oriented units. A growth rate of around 13 percent per annum is envisaged up to 2019-20. The issues related to exports have been discussed in section 13 on Trade Policy.

6. STEEL SUPPLY

6.1 While the country has rich endowments of iron ore and non-coking coal, and has cheap labour, this advantage is neutralized considerably by low material and energy efficiency, poor quality, poor productivity, and high cost of coking coal, power, freight and finance. The policy for making the critical inputs available to the industry is outlined in the following paragraphs.

6.2 **Critical Inputs:** In order to support steel production of 110 mT by 2019-20, at 100 percent capacity utilization, the required quantities of critical inputs such as iron ore, coking and non-coking coal can be seen in Table 2 below. The projected requirements are based on the assumption that new capacities will be 60 percent through the Blast Furnace (BF) route, 33 percent through the Sponge Iron – Electric Arc Furnace (EAF) route and 7 percent through other routes.

Table 2: Critical Inputs for Steel Production

(in million tonnes)

	Iron Ore	Coking Coal	Non-Coking Coal
2019-20	190	70	26
2004-05	54	27	13

6.2.1.1 **Iron ore:** At present, the in-situ reserves of relatively rich iron ore in India are 11.43 billion tonnes of haematite and 10.68 billion tonnes of magnetite ores. Though the reserves of haematite ore appear to be large, high-grade lumpy reserves constitute only 8.7 percent of the total. Further, the present commercial mining capacity for iron ore is only 175 mT^2. Production of iron ore in 2004-05 was 145 MT, of which 54 MT was domestically consumed and 78 MT was exported. Of the 600 mining leases, only 246 were operated in 2003-04.

6.2.1.2 In order to ensure availability of 190 MT of iron ore for domestic production of steel by 2019-20, Government would encourage investments in creation of an additional modern mining and beneficiation capacity of 200 MT. The size of these investments will be around Rs. 20,000 crore. The current policy of captive mining

leases for the private sector would continue, but it is necessary that investment plans be put in place for idle mining leases. State governments would recommend renewal of existing leases only against credible mining investment plans in a specified period. The Government would lay down priorities and guidelines for the State governments to recommend fresh mining leases, having regard to the entrepreneur's mining investment plans, and technical and financial capabilities. Environmental and forest clearances would be granted within a pre-specified time frame. Though local value addition would be given priority, the Government would encourage iron ore trading in order to make this essential raw material available to the iron and steel industry throughout the country. The Government would encourage investments in adding value to iron ore fines. Scientific mining and economies of scale would also be encouraged through consortia of small users and by prescribing a minimum economic size for mines.

6.2.2 **Exports of iron ore:** After remaining stagnant at around 35 MT for about a decade (between 1991-92 to 1999-2000), exports of iron ore from India have grown in the last 4 years to 78 MT in 2004-05 on the back of large exports of iron ore fines to China. Fines and concentrates, which have little use in India except as a negative environmental externality, make up about 90 percent of Indian iron ore exports currently. As investments are made into beneficiation, sintering and pelletization in the country, which will use these fines, the growth in exports of iron ore is likely to decline. Exports have thus been estimated to be around 100 MT by 2019-20. In terms of future policy, exports of iron ore, especially high-grade lumps, would be leveraged for imports of coking coal or for investment in India. Long-term export supply of iron ore would be confined to a maximum of five-year contracts. This duration would be reviewed from time to time. A judicious balance would continue to be maintained between exports and domestic supply of iron ore.

6.2.3.1 **Coking coal:** The proven reserves of prime coking coal are only 4.6 billion tonnes. The quality of Indian coking coal is also not suitable for steel. The production of coal during 2001-02 was 328 MT, out of which coking coal amounted to only 29 MT. The low ash coking coals required by steel makers was around 10 MT in 2001-02. Coking coal production has declined at an annual rate of 4.7 percent during the decade ending 2001-02.[3]

6.2.3.2 Poor quality domestic prime coking coal has to be blended with imported coal. Currently the steel industry imports around 19 MT of coking coal annually, and procures 7.5 MT from indigenous sources including captive mines. By 2019-20, about 70 MT of coking coal will be required, of which 85 percent will have to be imported.

6.2.3.3 The imperatives of coking coal security require that new sources of coking coal be tapped. Accordingly, the Government would aim for the coal sector to become market-driven, but in the meantime continue allocation of captive coking coal blocks to steel plants, and establish mechanisms to share their surplus resource with other steel plants. The Government would encourage joint ventures and equity participation abroad by steel and coal companies. Simultaneously, efforts would be made to develop and adapt technologies, which have synergy with the natural resource base (non-coking coal) of the country. The steel industry would be encouraged to make investments in washing and beneficiation of coal.

6.2.4 **Non-*Coking Coal:*** With proven reserves of 74 billion tonnes, non-coking coal constitutes around 82 percent of the total coal reserves in India. Production of non-coking coal at 294 MT during 2001-02 was 91 percent of the total coal production of 328 MT. In 2004-05, the steel sector consumed about 8 MT of non-coking coal, excluding thermal coal for captive power plants.

6.2.5.1 **Sponge iron grade non-coking coal:** The sponge iron industry using non-coking coal as input material will play an important role in future as a substitute input for coke. The capacity of sponge iron industry would increase from the current 13 MT to 20 MT by the end of 2010-11, at a growth rate of 6.5 percent per annum, and thereafter, till 2020, grow to 38 MT. The current trends indicate that a large number of sponge iron based steel units may come up in the states of Orissa and Jharkhand. By 2019-20 the steel industry will demand around 26 MT of non-coking coal of higher grades.

6.2.5.2 Available data show a declining rate of growth in production of non-coking coal in India. In the decade of 1980s, the growth rate was 6.5 percent, which fell to 3.9 percent in the 1990s. In the last five years the growth rate has been 4.7 percent.[5] The power plants are, therefore, planning to import large quantities of thermal coal. Further, Indian coal is high in ash content, which will force non-coking coal based steel production also to go for some imports.

6.2.5.3 While market forces should allocate resources to their most efficient uses, which would require the coal sector to be deregulated, a strategy for the transitional period would be needed. Accordingly, the sponge iron and steel industry would get first priority in the allocation of higher grades of non-coking coal of below 12 percent ash content, being essential feedstock. Greater flexibilities would be introduced in the form of sale of surplus coal, re-allocation of existing unused linkages with Coal India Limited, and allocation to consortia of small users. Joint ventures of public sector companies with the private sector would be explored in order to finance the required investments.

6.2.6.1 **Natural Gas:** The pricing mechanism for natural gas, taking into account the cyclical nature of the steel industry, needs to move gradually towards market-determined prices. It would also be desirable to put in place the regulatory framework, as natural gas stocks are limited in the country and sufficient level of competition has to be ensured in this sector. Further the industry needs time for adjustment as price shocks lead to loss of business confidence.

6.2.6.2 Considering the importance of gas based steel plants due to (a) environmental cleanliness, (b) shortages of coking coal required for other major routes, and (c) natural gas being a feedstock for sponge iron plants and not just a heating source, the present system of allocation and pricing of natural gas to the steel sector would remain under continual review.

6.2.7 **Refractories**: Refractories are used to line various high temperature vessels used in the steel manufacturing process. India has a refractory industry of 80 units with 1.6 MT capacity, and utilization of just 55 percent in 2004-05. It needs modernizing and upgrading. The Government would foster closer technical interaction between the steel industry and the refractory industry so as to achieve fewer breakdowns, reduced down time and prompt hot repairs. The Government would also support basic and applied research in utilizing indigenous refractory raw materials through partnerships between steel and refractory producers.

7. INFRASTRUCTURE

7.1 **Inland transportation***:* It is estimated that every tonne of steel production involves transportation of 4 tonnes of material. The envisaged addition of 75 MT of steel annually implies 300 MT of additional traffic. In a globally integrated economy, minimization of the overall cost of transportation becomes an important instrument of maintaining the competitive edge in both the domestic and overseas markets.

7.2 Table 3 below shows the year-on-year growth in gross capital formation for 'Railways' and 'Transportation by other means'.

Table 3: GCF in Transport Related Infrastructure *(Rs. Crore)*

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Railways	5069	5019(-0.99)	5307(5.7)	5491(3.5)	6981(27.1)	8860(26.9)	11609(31.0)
Transport by other means	16460	18153(10.3)	21272(17.2)	25802(21.3)	21117(-18.2)	16476(-22.0)	29872(81.3)

Note: Figures in parentheses indicate year-on-year variation.

Source: National Accounts Statistics- 2004-05*.*

7.3.1 **Railways:** The railways transport iron ore and coal from mines and ports to the plants, and steel to ports and consuming areas. However, over the last decade railways has been consistently losing traffic originating in the steel sector to the roads. The share of railways in transporting finished steel has declined from 71.9 percent in 1991-92 to 34.4 percent in 2001-02. The decline has been largely on account of railway's competitive weakness in the face of challenges from other modes of transport like roads, pipeline and coastal shipping. Replacement of the 'equalized railway freight' by 'freight ceilings' is also partly responsible for the modal switch.

7.3.2 On the basis of the present share of railways and roads in the movement of raw materials and finished/ saleable steel, the expected scenario by 2019-20 appears to be as follows:

Table 4: Modal Distribution of Traffic, 2004-05 and 2019-20

Expected traffic originating in the steel sector to be handled by the railways (MT)				
	2004-05		2019-20	
	Railways	Road	Railways	Road
Raw Materials*	80	34	230	100
Finished Steel	11	27	33	77
Total	91	61	263	177

* Excludes traffic due to export of iron ore.

7.3.3 Based on the average lead distance over which the freight needs to be computed for raw materials for steel making and finished products, it is estimated that the total traffic generated for railways originating due to the iron and steel industry would be around 120 billion tonne kilometer by 2020. The total traffic for railways including export of iron ore will be around 150

billion tonne kilometer. This estimate, however, may change somewhat depending on the exact location of the new (green-field) plants and mines coming up in the next two decades.

7.3.4 The Railway facilities, therefore, would need to be expanded substantially in view of the renewed investor interests in the creation of additional steel capacities – both in green-field and brown-field projects. The outlay for railways as a percentage of total plan outlay has come down from 10.3 percent (up to 4th Plan) to 6.8 percent (10th Plan). Resource constraints may necessitate participation by the steel industry in the creation of railway infrastructure, especially in the capital-intensive areas of laying tracks and procuring wagons. Besides ensuring availability, the railways would also need to re-examine their freight structure and improve quality of services. Dedicated freight trains in the private sector would be encouraged.

7.4.1 **Roads:** Similarly, the existing road network needs to be expanded and strengthened considerably for reducing the transaction costs of the Indian producers. The steel plants and mines need to be integrated with the on-going programmes of national highway development and also with the proposed rural road schemes for expanding the delivery chain of steel across the country, especially the rural areas.

7.4.2 Geographical coverage of the country by road transportation remains woefully low despite the quantum jump in construction of roadways across India in the recent years. Performance of the Indian road sector is poor in terms of effective sustained velocity of movement. This is demonstrated by the fact that roads now carry an overwhelming 85 percent of passenger traffic and 70 percent of freight, and that highways account for around 40 percent of this movement while making up only 2 percent of the overall road network. The steel industry would be encouraged to create links to the nearest available highways. But the task of expanding the highway network would continue through public-private partnerships.

7.5.1 **Ports:** After liberalization of the economy, the Indian steel industry has become highly dependent on port infrastructure both in terms of imports of critical input materials like coal and coke and export of saleable steel. Keeping in view the strategic goal of achieving a production of 110 MT of steel per annum and an annual export level of 26 MT by 2019-2020, the port facilities would also have to be expanded substantially. The projected bulk to be handled at ports is shown below:

Table 5: Growth in Port Traffic, 2004-05 to 2019-20

	Bulk to be handled at ports (MT)						CAGR
	2004-05			2019-20			
	Import	Export	Total	Import	Export	Total	
Raw Materials*	19.3	78	97.3	85	100	185	4.4%
Steel	2	4	6	6	26	32	11.8%
Total	21.3	82	103.3	91	126	217	5.1%

*Including iron ore.

7.5.2 The current Government policy allows private capital in port development. Steel producers would be encouraged to develop port and berth facilities so as to improve productivity, turn around time, capacity to handle larger vessels and other operational parameters of efficiency.

7.6 **Power:** The additional requirement of power for the steel industry would be 7,000 MW by 2019-20, requiring an additional investment of Rs. 24,500 crore. The Electricity Act, 2003 and the National Electricity Policy allow captive generation of power and trading of surplus power. This will facilitate growth of investment in captive power plants by the steel industry. At the same time the Government would encourage the industry, and the secondary sector in particular, to bring down the specific consumption of power.

7.7.1 **Financial Resources:** In order to achieve the strategic goal of 110 MT of steel production by 2019-20, the industry would need additional capital to the tune of Rs. 230,000 crore. In addition, funds would be required for technological upgrade of existing facilities. However, the outstanding advances of the banking sector to the industry at the end of 2003-04 were only Rs. 26,295 crore. The cost of capital in India is among the highest as shown in Table 6.

Table 6: Cost of Capital (% per annum)

Japan	USA	Germany	China	S. Korea	Brazil	India	World
1.4	4.1	4.2	5-6	6	9.75	11	5

Source: World Bank Report, 2004

7.7.2 To mobilize such vast resources, direct foreign investment would be encouraged. In addition the external commercial borrowing norms would be reviewed periodically to facilitate smooth inflows of debt, and to bring down the cost of capital. Steel is one of the six sectors that figure in the index of industrial production for "infrastructure," but the fiscal incentives available to the infrastructure projects are not available to the steel industry. Suitable incentives would therefore be devised for the steel industry.

8. STEEL PRICES

8.1 Following de-regulation of prices for integrated steel plants in 1991-92, the domestic prices of steel have become market-determined. Market prices remain in step with international prices, though generally lower. During industry downturns, prices fall and during upturns, they rise. While rationalization of the customs and excise duty structure is aimed primarily at reducing fiscal and revenue deficits, it has an indirect influence on consumer prices. At present, there are around three thousand units manufacturing steel and steel products, which are marketed by over 100,000 traders for ultimate consumers. This dispersal of the distribution chain has been the principal reason why no price regulation of the steel trade has ever been in force. Government has recently set up a Competition Commission to look into complaints of monopolistic pricing.

8.2 **Steel futures:** The cyclical nature of the steel industry deters fresh investments due to risks of recession. The mismatch between demand and supply also leads to price volatility witnessed during recent times. Stagnation in steel prices for long periods followed by sudden spurt also affects the consumers and the infrastructure industry. Therefore, the efforts of various stakeholders to develop risk-hedging instruments like futures and derivatives would be supported.

9. HUMAN RESOURCES

9.1 The anticipated steel production of 110 MT by 2020 would require an additional workforce of 220,000 after accounting for the expected productivity improvements.[1] Further the creation of 1 man-year of employment in the steel industry generates an additional 3.5 man-years of employment elsewhere in the economy due to its strong linkages with other sectors such as transport, mining, construction, machinery, and steel fabrication. The total additional employment generated in the economy due to expected production of 110 MT by 2020 would be around 1 million.

9.2 The profile of the required human resources will have a larger share of the skilled and semi-skilled labour force. It is a matter of concern that availability of scientists, engineers and technicians per thousand of population in India is 7.05 compared to 113 in Japan, 90 in U.K., 53 in Korea, 54 in Australia and 85 in Germany.[2] Further, the task is not limited to increase in the stock of technical manpower. The technical and professional institutes of the country would also be required to impart new competencies and capabilities in tune with changes in technology and the needs of globalization. The existing training and research institutes under the Ministry of Steel would be brought under an umbrella organization with representation from each segment of the industry. The functions of this organization would include (a) suitable training programmes especially for the secondary small scale units, (b) promotion of steel consumption through dissemination of information on availability and suitability of steel for various applications, and (c) collection and analysis of data on important parameters of the industry.

10. TECHNOLOGIES, RESEARCH AND DEVELOPMENT

10.1 Though the choice of technology will be determined by entrepreneurs based on techno-economic considerations, the Government would encourage adoption of technologies, which:

- Have synergy with the natural resource endowments of the country.
- Are conducive to production of high-end and special steel required for sophisticated industrial and scientific applications.
- Minimize damage to the environment at various stages of steel making and mining.
- Optimize resource utilization.
- Facilitate modernization of the steel industry so as to achieve global standards of productivity and efficiency.
- Development of front end and strategic steel based materials.

10.2 India's expenditure on Research and Development has been negligible not only in absolute terms but also as a percentage of GNP at 0.86 percent. This can be compared to the developed world with an average ratio of 2.5 percent.[3] In the case of steel industry, the ratio of expenditure on R&D as a percentage of turnover is only 0.26 percent.

10.3 The low priority to indigenous R&D has given rise to adoption of technologies that are more suited to conditions prevailing in the developed world. For example, resource position of raw materials requires development of technologies, which can use indigenous coking coals and non-coking coals and for improvement in quality of high alumina Indian iron ore. But lack of innovation and adaptation to Indian conditions is resulting in large-scale import of coking coal and low performance in iron making. Aggressive R&D efforts would, therefore, be mounted to create manufacturing capability for special types of steel, substitute coking coal, enrichment and agglomeration of iron ore fines, develop new products suited to rural needs, enhance material and energy efficiency, utilize waste, and arrest environmental degradation. Public sector steel companies would enhance R&D expenditure in the coming years to finance internal R&D efforts and sponsor outside research, which may provide a framework for inter-disciplinary cooperation with the private sector across national boundaries. Government's contribution to fostering basic and applied R&D will be enhanced.

11. ENVIRONMENTAL CONCERNS

11.1 With a view to making various operations in steel industry environment friendly, environmental audit and life cycle assessment of existing steel plants (including sponge iron units) would be encouraged so that the relevant processes reduce emissions and effluents, minimize and better manage solid waste generation, and improve resource conservation such as energy and water. There are some fine examples of high-level environmental performance in the steel sector already. However, the steel sector would join the efforts of other industries to improve environmental performance even more. The secondary steel producers would be proactively assisted in shifting to processes that are more environment-protective. A similar policy would be followed in assisting natural resource industries, such as iron ore and coal mining, where scientific mining and mineral processing would be encouraged.

12. SECONDARY AND SMALL SCALE SECTOR

12.1 The secondary sector primarily consists of non-integrated and comparatively small steel producers. However there are large variations amongst various units in terms of scale of operations, product-mix and technology. The secondary sector plays an important role in providing employment, meeting local demand of steel in rural and semi-urban areas, and meeting the country's demand of some special products required in small volumes.

12.2 The Government will strive to provide the necessary feedstock to these units at reasonable prices from major plants through the existing mechanism of State Small Industries Corporations.

13. TRADE POLICY

13.1 **Exports:** It is estimated that the country will achieve an export ratio of around 25 percent of the total production in 2019-20 from 11 percent in 2004-05. This is comparable with a 30 percent share of exports in global production. The Government will support all efforts to make available export credit, provide trade information, and cut transaction costs in general. In view of the slow progress of multi-lateral negotiations, Government would focus on regional trade agreements to broaden the export base. Exports of value-added steel and steel products, including indirect export of steel through project exports, would be encouraged.

13.2 **Imports:** Import duty rates have been brought down progressively in the post-deregulation period. The Indian steel industry has been able to successfully withstand the competitive pressures of overseas producers. However, integration with the global economy requires that the industry should be protected from unfair trade practices, which become common especially during the periods of downturn. The Government would, therefore, institute mechanisms for import surveillance, and monitor export subsidies in other countries.

14. INVESTMENT PROMOTIONS AND POLICY IMPLEMENTATION

14.1 The very nature of steel production, especially through the integrated route, requires a number of clearances of the central and state governments for investment in the steel sector. Delays at various levels not only add to project costs but also discourage fresh investments. Hence a suitable executing mechanism will be evolved to discharge the following functions:

- Provide a single-window clearance for large projects, to be followed by statutory clearances by the concerned ministries.

- Prepare and implement an action plan for achieving the strategic goal of 110 mT of steel production by 2019-20, with separate plans for the growth of flats and long products.
- Prepare and implement road maps for technological and productivity improvements benchmarking them to global standards.

Twin Slab Casters at SAIL's Bokaro Steel Plant

- Monitor the implementation of the National Steel Policy.
- Conduct reviews to remove infrastructural, procedural and institutional bottlenecks and to achieve policy coordination among central Ministries and State Governments.

CHAPTER-XXI

RIGHT TO INFORMATION ACT, 2005

INTRODUCTION

With a view to promoting openness, transparency and accountability in the administration and good governance of the country the Government of India introduced Right to Information Bill in Lok Sabha on 23rd December 2004. The Bill was passed by the Lok Sabha on 11th May, 2005 and later passed by the Rajya Sabha on 12th May, 2005. The President gave his assent to the Bill on 15th June, 2005 and the same has become Right to Information Act, 2005 and was published for general information. This is a landmark in the history of Indian democracy. The provisions of sub-section (1) of section 4, sub-section (1) & (2) of section 5, sections 12, 13, 15, 16, 24, 27 and 28 came into force w.e.f. 15th June 2005 and the remaining provisions of the Act came into force w.e.f. 12th October 2005.

OBJECTIVE

The objective of the Act is to promote openness, transparency and accountability in the administration and good governance of the country and at the same time to protect the citizens' right to information to enable every citizen to secure access to the information under the control of public authorities. Correspondingly, dissemination of such information has become an obligation for all public authorities.

Implementation of the Right to Information Act, 2005 in the Ministry of Steel

Right to Information Act, 2005 having been passed by the Parliament and assented by the President, all public authorities (departments/ministries/state governments, etc) are required to set up necessary infrastructure to operationalise the Act. The Ministry of Steel has created a separate cell to handle the work relating to implementation of the Right to Information Act, 2005 in the Ministry of Steel and for monitoring its implementation in the public sector undertakings and other offices under it vide Office Order No.1(3)/2005-Estt. dated 6th July, 2005.

Following the creation of the Right to Information Cell, implementation of the provisions, which became operational w.e.f. 15th June 2005 started. The manual of 17 items had been prepared and Public Information Officer/Assistant Public Information Officers were designated and the information was hosted on the Ministry's Web-site www.steel.gov.in within the specified time frame. All the public sector undertakings and the Government managed company under the Ministry of Steel were instructed to take immediate similar action for implementing the same. Meetings with officers of the Ministry to discuss about the provisions of the Act were held. Monitoring meetings with officers of PSUs including Government managed company were held. The progress of the implementation in PSUs was monitored. Consequently, reports regarding preparation of 17 manuals and designation of Public Information Officer/Assistant Public Information Officer and hosting of the information in respective website were received from all the PSUs/Govt. managed company within the specified time frame. After 12th October 2005 i.e. when all the provisions of the Act became operational, requests for information were received and the requested information was provided to the requesters. Since, it is a continuous process, the citizen's requests, seeking information would be serviced effectively by Ministry of Steel according to the provisions of the Right to Information Act.