

Annual Report 2010-11



MINISTRY OF STEEL

GOVERNMENT OF INDIA

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Annual Report 2010-2011



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The production, financial and other related figures for 2010-11 (April-December 2010) are provisional.



*Hon'ble Minister of State for Steel (Independent Charge) Shri Beni Prasad Verma being received by
Secretary (Steel) Shri P. K. Misra*



CHAPTER I

HIGHLIGHTS

1. TRENDS AND DEVELOPMENTS IN STEEL SECTOR

- India is the 5th largest producer of crude steel in the world and is expected to become the 2nd largest producer by 2015-16.
- India continues to maintain its lead position as the world's largest producer of direct reduced iron (DRI) or sponge iron during January-December 2010, a rank it has held on since 2002.
- 222 MoUs have been signed with various States for planned capacity of around 276 million tonne.
- Investment plans are in the States of Orissa, Jharkhand, Chhattisgarh, West Bengal, Karnataka, Gujarat and Maharashtra. The details of the break-up of the MoUs signed by the State Governments of Orissa, Chhattisgarh, Jharkhand and Other States are given in the table below:

State	No. of MoUs signed	Approx. Capacity (in million tonne per annum)
Orissa	49	75.66
Jharkhand	65	104.23
Chhattisgarh	74	56.61
West Bengal	12	21.00
Other States	22	18.20*
Total	222	275.70
<i>*estimated</i>		

1.1 Highlights of 2010-11 (up to December 2010)

During April-Dec. 2010, the following is the estimated industry scenario as compared to same period of 2009-10:

- ❖ Crude steel production was at 50.59 million tonne, a growth of 4.5 per cent. The Main Producers produced 17.66 million tonne during this period, which was a growth of 1.8 per cent compared to same period last year. The Major Producers produced 10.08 million tonne during this period, which was a growth of 2.5 per cent compared to same period last year.
The rest i.e. 22.85 million tonne was the contribution of the Other Producers, which was a growth of 7.8 per cent compared to same period last year.
- ❖ Pig iron production for sale in April - December 2010 was 4.22 million tonne, a 0.7 per cent decline over same period of last year. The Main Producers accounted for only 11.6 per cent of the same, the rest being the share of the Other Producers.
- ❖ In case of total finished steel (alloy + non-alloy) during April - December 2010 :
 - Production for sale was at 47.30 million tonne (mt), a growth of 7.9 per cent
 - Steel exports increased by 17.3 per cent as it reached an estimated 2.46 million tonne while steel imports were at an estimated 5.36 million tonne, a growth of 2.8 per cent.
 - India remained a net importer of steel.

- Domestic steel consumption was at 44.28 million tonne and increased by 8.0 per cent, indicating further strengthening of demand.

1.2 Major initiatives taken by the Ministry of Steel during the year

- National Steel Policy 2005 is under review and the process for drafting a 'National Steel Vision' has since been initiated
- Five year strategy paper has been prepared for promotion of Steel sector in the country.
- A policy paper on R&D has also been prepared with special focus on beneficiation, coal ash reduction and promotion of production of high grade value added Steel in the country.
- New techno-economic bench marks have been evolved on International pattern for improvement in performance of Steel PSUs.
- Sevottam Compliant Citizen's Charter has been evolved and included in the Result Framework Document (RFD) of the Ministry.
- In order to enhance financial powers of SAIL Board, the Government conferred 'Maharatna' status on SAIL in May 2010.
- The Government conferred 'Navratna' status on RINL in November 2010 to enable the Company to become globally competitive.



Shri P.K. Bishnoi, CMD, RINL receiving the certificate for conferment of 'Navratna' status on RINL



- An Inter Ministerial Group (IMG) to monitor and coordinate various issues concerning major steel investments in the country has been constituted under the Chairmanship of Secretary (Steel) for conducting coordination meetings with the steel investors, concerned Central Ministries/Departments and the State Governments. Last meeting of IMG was held on 20.12.10 and problems of steel industry were discussed in depth.
- The present per capita consumption of steel in the country is only around 49 kg against the world average of 182 kg. A study has been commissioned through the Joint Plant Committee (JPC) during the 2010-11 to estimate the per capita demand for iron and steel in the rural sector of India and to determine the factors that can contribute to its enhancement. The findings of the study are expected to be finalized by June 2011.
- Ministry of Steel feels that Policy regarding iron ore export should aim at attracting investment in steel making capacity so that the value additions and export of finished products are promoted instead of exporting raw materials.
- In the Group of Ministers (GoM) meeting to consider National Mineral Policy, 2008, there was an agreement that iron ore resources of the country should be conserved for the use of domestic steel industry. It was decided that although conservation of iron ore resources of the country is of paramount importance, the same may not be achieved by banning or capping the export of iron ore but by taking recourse to appropriate fiscal measures.
- Due to consistent efforts of Ministry of Steel, export duty has been imposed on iron ore. Initially in 2007, an export duty of ₹ 300/- per tonne was imposed on all varieties of iron ore. Subsequently, export duty was revised from time to time. The present rates of duty on iron ore exports w.e.f. 29.04.2010 are as under:
 - i) Iron ore fines (all sorts) - 5% ad-valorem
 - ii) Iron ore other than fines(including lumps & pellets) - 15% ad-valorem
- A Forum of Steel Consumer Council to facilitate regular interaction of producers and consumers and redress the problems faced by the consumers relating to supply/availability of steel products and other related issues had been set up in the Ministry. The 23rd Meeting of Consumer Council was held on 16 July 2010, under the Chairmanship of the Hon'ble Steel Minister. The various issues affecting the consumers of Steel namely opening of new stockyards and monitoring of their working, monitoring of the trend of domestic steel prices, review of prevailing excise and import duties and availability of steel material, figured prominently in the meeting.



Hon'ble Minister of State for Steel (I/C) Shri Beni Prasad Verma reviewing the revival plan of Jagdishpur unit of SAIL. Also seen in the picture are (to the left) Shri C. S. Verma, Chairman, SAIL and Shri S. N. Singh, MD, Rourkela Steel Plant

- **International Coal Ventures Limited (ICVL)**, a Special Purpose Vehicle, with equity participation to an extent of ₹ 3500 crore by SAIL, RINL, Coal India Ltd, NMDC and NTPC Ltd. for acquisition of metallurgical and thermal coal assets abroad has been incorporated. ICVL will function like a Navratna company (with powers to clear proposals involving investment of upto ₹ 1,500 Crore). ICVL is assisted by a panel of investment bankers on acquisition of coal assets abroad through equity purchase, JVs in existing mines or Greenfield projects in Australia, Canada, Indonesia, Mozambique, Russia and USA. A MoU was signed between ICVL and the Provincial Governor of Kalimantan, Indonesia on 25th January, 2011 envisaging direct allocation of mineral resources in the Province for ICVL.
- 8.38% of the total government equity in NMDC was offered for sale through FPO. The entire proceeds from the offer for sale totaling ₹ 9930.42 crore has been deposited in the government account.
- Disinvestment of 10% Government of India's shareholdings in MOIL has been completed. The Government earned ₹ 618.76 crore by disinvestment of MOIL.
- The Government has also decided to disinvest 10% of its shareholding in SAIL and for raising of 10% of additional equity by SAIL, in two discrete tranches. Each tranche will consist of 5% raising of fresh equity capital by SAIL and 5% disinvestment of Government of India's share. The process has since commenced.
- In order to encourage R&D activities in iron & steel sector, Ministry of Steel is providing financial assistance from Steel Development Fund (SDF) and Plan Fund. 64 research projects initiated by public and private undertakings, research laboratories, educational and other promotional institutions have so far been approved at a cost of ₹ 442 crore during 2010, of which the SDF component is ₹ 278 crore. So far 31 projects have been completed and 24 research projects are underway.
- ₹ 118 crore was allocated from Plan Fund during the 11th five year plan for promotion of R & D in steel sector. Under this scheme 8 R& D projects have been approved with Plan fund of ₹ 111 crore.
- For ensuring quality of Steel, seven items such as galvanised sheet, steel wire for pre-stressed concrete etc. have been brought under a quality control order issued by the Government. The matter to bring more steel items under this order is under examination.

1.3 Major initiatives in the PSUs

1.3.1 Mega Expansion Plans of SAIL, RINL & NMDC Ltd.

The Steel PSUs are in the midst of the capacity expansion plans. The major thrust of the modernization and expansion plans is to adopt the best modern technology, which in addition to being cost effective should also be energy efficient and environment friendly.

- The progress of the expansion of SAIL, RINL and NMDC is monitored on a regular basis in the Ministry. As a consequence of monitoring, a number of systemic improvements have been put in place in project implementation.
- The expansion and modernization programme of the Steel Authority of India Ltd. (SAIL) is underway at all its steel plants to enhance the hot metal production capacity. Recently after onset of global recession and in view of the pressure on steel prices and possibility of diminished margins a review of overall expansion and modernization plans carried out in SAIL. The proposed production built-up, as envisaged originally to go upto 26.18 million tonnes per annum, is now to be achieved in two phases. In phase-I the capacity would be ramped upto 23.46 million tonnes and the same would be increased to 26.18 million tonnes in phase-II. The current phase of expansion and modernization is targeted to be completed by the financial year 2012-13. Out of the total investment on Modernization and Expansion, a provision of ₹ 10,883 crore has been made in the financial year 2010-11 and this investment target is expected to be fulfilled by the end of the financial year.
- In respect of RINL, expansion plan for increasing liquid steel capacity from 3.0 million tonne to 6.3 million tonne at an estimated cost of around ₹ 12,228 crore by 2011 is progressing as per schedule. Stage-I of the project would be completed by March, 2011 and Stage-II by December, 2011.



- NMDC is setting up a 3 MTPA Integrated Steel Plant at Nagarnar in Chhattisgarh. The environmental clearance for the plant has been accorded by Ministry of Environment and Forests.
- SAIL has planned to set up Steel Processing Units (SPUs) at various locations in Bihar (Bettiah, Mahnar, Gaya); Uttar Pradesh (Lakhimpur); Madhya Pradesh (Gwalior, Ujjain and Hosangabad); Himachal Pradesh (Kangra); Assam (Guwahati) and Jammu & Kashmir (Srinagar) to meet customers' demand for supplying sized and finished steel near the point of consumption, particularly in states where there are no steel plants and where steel consumption is low compared to the national average. The SPU at Bettiah is under implementation. For SPUs envisaged at the other locations, tendering activity for various packages is in progress.

1.3.2 Merger/acquisitions/revival and restructuring of PSUs

Various proposals for merger of PSUs under the administrative control of Ministry of Steel are underway:

- The Government had approved the merger of Sponge Iron India Limited (SIIL) with NMDC Ltd. in May, 2008. After approval of the Government, the two companies completed all the requisite statutory compliances. The merger process of SIIL with NMDC now stands completed.
- The Union Cabinet in its meeting held on 10th September, 2009 approved the restructuring plan of Bird Group of Companies. The restructuring proposal envisaged converting companies under BGC into Government Companies/ Public Sector Undertakings and vesting their strategic control to RINL in a subsidiary cum holding structure. It envisaged to make Orissa Mineral Development Company (OMDC) and Bisra Stone Lime Company (BSLC) subsidiary Companies of Eastern Investments Ltd. (EIL), winding up of Karanpura Development Company Ltd. (KDCL) and Scott & Saxby Ltd. (SSL), waiver of outstanding Government loans and interest in respect of Companies under Bird Group, conversion of Government loan into equity of BSLC. Thereafter, EIL to be made a subsidiary of Rashtriya Ispat Nigam Limited (RINL) thus bringing EIL, OMDC and BSLC under the umbrella of RINL in order to make these companies economically viable and sustainable. The commercially unviable companies viz. KDCL & SSL were proposed to be wound up and their employees to be adjusted in other sister companies under the Group or would be offered Voluntary Retirement Scheme (VRS). The above Cabinet decisions regarding restructuring of BGC have been implemented. EIL has become the holding company of OMDC and BSLC and RINL has now become the holding company of EIL.
- A revival/restructuring package for HSCL Ltd. is being evolved by the Government aiming at expediting the process of modernization of Steel Plants and infrastructure projects. HSCL would be in a position to take up fresh infrastructure projects and earn profit after the implementation of the revival package. The Note for Cabinet Committee on Economic Affairs (CCEA) regarding restructuring has been prepared and circulated. However, there are some financial issues that have to be finally resolved with the Ministry of Finance, particularly regarding the waiver of grants and loans.

1.3.3 Expansion of Distribution Networks

- In order to ensure availability of commonly used items of steel in the rural areas across the country, a decision was taken to have at least one dealer in each district. For this purpose, SAIL and RINL are expanding their distribution networks at a fast pace. As on January 1, 2011, SAIL had 2579 dealers in place covering 630 districts in the country against 200 dealers in 2006; and RINL has appointed 120 dealers as against nil in 2003.

1.4 Highlights of PSUs under the Ministry of Steel during April-December, 2010

- Profit after Tax (PAT) of the companies under this Ministry was around ₹ 8618.20 crore during the year 2010-11 (upto December 2010).
- The contribution of the companies under this Ministry, to Central and State Government exchequer by way of excise duty, customs duty, dividend, corporate tax, sales tax, royalty etc. was around ₹ 13657.37 crore during the year 2010-11 (upto December 2010).
- The net worth of major PSUs under the Ministry of Steel took quantum leaps, indicating their robust

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financial health as summarised in the following table:

PSU	(₹ in crore)	
	Net worth as on 31.03.2005	Net worth as on 31.12.2010
SAIL	10011.00	36115.00
RINL	6878.00	13266.00
NMDC	2568.77	18601.00
MOIL	257.26	2011.19
MSTC	154.96	450.00
KIOCL	1846.69	1960.84
MECON	(-) 234.76	173.23

1.4.1 Steel Authority of India Ltd. (SAIL)

- Profit before tax of ₹ 4969.41 crore and profit after tax of ₹ 3374.13 crore.
- Sales turnover of ₹ 33905.40 crore.
- The SAIL Board approved an interim dividend to the shareholders at 12% of the company's paid-up capital amounting to ₹ 495.65 crore for the financial year 2010-11.
- Produced 11.14 million tonne of hot metal, 10.24 million tonne of crude steel and 9.46 million tonnes of saleable steel, by achieving 2%, 1% & 1% growth over the corresponding period of the previous year.
- Production of Special steel/Value added products at nearly 3.52 million tonne was best ever achieved, with a growth of 2% over the best of 3.44 million tonne in corresponding period of the previous year.
- SAIL and M/s Rail India Technical and Economic Services (RITES) have entered into a Joint Venture Agreement for setting up of a wagon manufacturing facility in Kulti, Bardhaman Dist. of West Bengal.

1.4.2 Rashtriya Ispat Nigam Ltd. (RINL)

- Production in major units exceeded 100% capacity utilization for the ninth consecutive year by achieving 110%, 110% & 111% capacity utilization for Hot metal, Liquid steel & Saleable steel respectively.
- Sales Turnover of ₹ 7755 crore was achieved during Apr-Dec'10 (with export sales value of ₹ 249 crore), registering a growth of 3% over the corresponding period of 2009-10
- Sales volume of Value added Steel of 16.57 lakh tonnes was achieved during Apr-Dec'10. against 16.55 lakh tonnes over the corresponding period last year
- Commissioning of Raw Material Handling Plant (under 6.3 MTPA expansion) for delivery of iron ore fines from new yard to intermediate point of iron ore feeding to blast furnaces has been carried out.
- Power system for BF-3 and SMS-2 have been energized.
- High capacity EOT crane for Secondary Refining bay of SMS-2 commissioned.
- Coke Oven Battery dedicated to the Nation by Hon'ble Union Minister of Steel
- MoU signed with Indian Railways for setting up of Axle plant named as 'Uttarbanga RINL RAIL Karkhana Ltd.' at New Jalpaiguri, West Bengal



1.4.3 NMDC Ltd.

- NMDC sold 16.33 million tonne of Iron Ore in domestic market during 2010-11 (upto Dec'10) as against 14.62 million tonne during corresponding period of last year (CPLY).
- The company exported 1.57 million tonne of Iron Ore to Japan, South Korea and China valued at approximately ₹ 940 crores during current year (upto Dec'10) compared to 2.61 million tonne valued at ₹ 809 crores in the CPLY.
- Total Sales during the year was 17.90 million tonne (upto Dec'10) as against 17.23 million tonne during CPLY.
- NMDC produced 16.53 million tonne of Iron Ore during 2010-11 (upto Dec'10) compared to 17.07 million tonne in CPLY.
- NMDC has earned profit before tax of ₹ 6564 crore (upto Dec'10) during the year 2010-11 compared to ₹ 3608 crore during CPLY
- NMDC has signed an MoU with Severstal-a Russian Steel Maker for setting up a two million tonne Steel Plant in Karnataka.

1.4.4 MOIL Ltd.

- MOIL Ltd. produced 8.14 lakh tonnes of manganese ore during 2010-2011 (upto December, 10).
- The total income of the company was ₹ 955.56 crores (provisional) during 2010-11 (upto December, 10)
- The Profit Before Tax of the company was ₹ 656.18 crores (provisional) during 2010-11 (upto December, 10).
- The Profit After Tax was ₹ 435.21 crores (provisional) during 2010-11 (upto December, 10).
- During the year 2010-11, the name of the company has been changed from Manganese Ore (India) Limited to MOIL Limited.



A panoramic view of Dongri Buzurg Open Cast Mine of MOIL at night

- During 2010-11, the Central Government disinvested 10% of total paid up equity of MOIL Ltd., through 'Offer for Sale'. The State Governments of Maharashtra and Madhya Pradesh also off-loaded 5% each of total paid up equity of MOIL Ltd. from their respective shareholdings along with Government of India. Accordingly, 20% of the total equity of MOIL Ltd. were divested to the public through 'Offer for Sale'. The shares of the company have been listed on the National Stock Exchange of India Limited and Bombay Stock Exchange on 15th December, 2010.

1.4.5 MSTC Ltd.

- The total volume of business for the period April-Dec.'10 stands at ₹ 9993.36 Crore.
- In the e-Commerce front, MSTC have done a business of ₹ 5315.82 Crore during April-Dec.'10.

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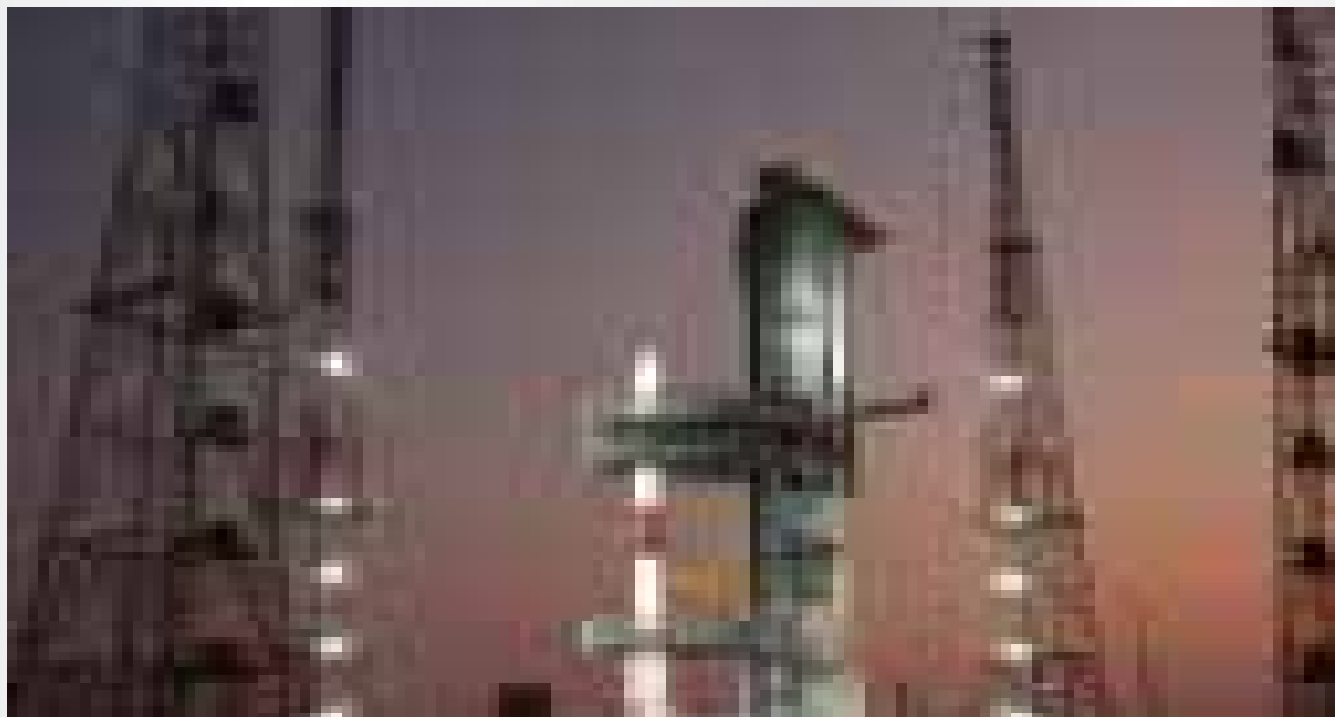
- Total quantity of thermal coal booked 1.02 Million Ton during the year 2009-10 and booked 6.50 Lakh MT during April-Dec.'10.
- Achieved highest ever Profit Before Tax of ₹ 136 crore during 2009-10. Profit Before Tax stands at ₹ 83.67 crore during April-Dec.'10.
- For the first time tea auction for 'Tea Serve', an organization supported by Government of Tamilnadu, has been successfully executed.
- Utilization of Stockyard at Haldia is ready for operation. Agreement between MSTC and M/s Indo Arya Central Transport Co. Ltd. for subletting of the stockyard has been signed on 22nd December 2010.

1.4.6 Hindustan Steelworks Construction Ltd. (HSCL)

- Overall performance of the Company improved till QR-III of FY11 over the corresponding period of FY10.
- Overall turnover target till QR-III of FY11 has been fulfilled (106 %).
- Overall turnover increased by ₹ 88.03 crore till QR-III of FY11 over the corresponding period of FY10 (16 %).
- Order Booking target of ₹ 960 crore for 2010-11 has already been fulfilled (156 %).
- Operational Profit till QR-III of FY11 recorded ₹ 36.39 crore against the target of ₹ 35.75 crore. The achievement is 102 %.
- Incurred net loss of ₹ 39.12 crore till 31.12.2010 is less than the envisaged net loss of ₹ 41.11 crore as per MoU projection.
- Interest on GOI loan is as high as 11.77 % w.r.t. turnover till QR-III of FY11.
- Manpower strength stands at 840 as on 1.1.2011.

1.4.7 MECON Ltd.

In September 2008, MECON achieved a landmark by turning its negative net worth into positive and by September 2009 it had wiped out its accumulated losses. As on 31.12.2010, the net worth of MECON stands at ₹ 173.23 crore. This is a significant achievement as compared to the company's negative net worth of ₹ (-) 257.91 crore as on 31.03.04.



2nd Launch Pad at Satish Dhawan Space Centre, Sriharikota built by MECON on Total Turnkey Basis



1.4.8 KIOCL Ltd.

- Production of 2.50 lakh tonnes of Pellets in the month of November 2010 is the highest quantity of Pellets produced in any month after switching over to use of Hematite Ore sourced from outside sources since January 2006;
- Despatch of 2,68,000 tonnes of Pellets during May 2010 is the highest quantity of Pellets sold in any month during the year;
- The Board of Directors of the Company have approved a proposal for payment of Interim Dividend for the year 2010-11 @ 20% of Profit After Tax amounting to ₹ 5.118 crores plus Dividend Tax as applicable.

1.4.9 Bird Group Of Companies (BGC)

(1) Eastern Investment Limited (EIL)

- During 2010-11(April-December 2010), the Income from receipts was ₹ 6.46 crores (provisional) as compared to ₹ 12.18 crores during 2009-10.
- During 2010-11(April-December 2010), the profit before tax was ₹ 6.28 crores (provisional) as compared to ₹ 11.93 crores during 2009-10.
- During 2010-11(April-December 2010), the profit after tax was ₹ 6.06 crores (provisional) as compared to ₹ 11.07 crores during 2009-10.

(2) The Orissa Minerals Development Company (OMDC)

- During 2010-11 (April-December 2010), the sales turnover was ₹ 41.52 crores (provisional) as compared to ₹ 82.35 crores during 2009-10.
- During 2010-11(April-December 2010), the profit before tax was ₹ 19.78 crores (provisional) as compared to ₹ 112.26 crores during 2009-10.
- During 2010-11(April-December 2010), the profit after tax was ₹ 11.58 crores (provisional) as compared to ₹ 74.44 crores during 2009-10.

(3) The Bisra Stone Lime Company Limited (BSLC)

- During 2010-11(April-December 2010), the sales turnover was ₹ 44.13 crores (provisional) as compared to ₹ 56.88 crores during 2009-10.
- During 2010-11(April-December 2010), the profit before tax was ₹ (-)3.89 crores (provisional) as compared to ₹ 620.63 crores during 2009-10*.

* Note:

- Abnormal Profit arose during 2009-10 due to waiver of accumulated interest on Govt. Loan to the tune of ₹ 624.20 Crores as per approved Restructuring Scheme.
- Income Tax likely to arise due to waiver of interest, assessed to be about ₹ 117.82 Crores, has not been taken in to consideration it is to be waived as per the scheme.

CHAPTER-II

ORGANISATIONAL STRUCTURE AND FUNCTIONS OF THE MINISTRY OF STEEL

2.1 Introduction

The Ministry of Steel is under charge of the Minister of State for Steel (Independent Charge). The Ministry is responsible for 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. The list of subjects allocated to the Ministry may be seen in Annexure-I. There are 10 public sector undertakings under the administrative control of the Ministry of Steel. The list of Minister-in-charge and the officers down to the level of Deputy Secretary is given in Annexure-II.

2.1.1 Key functions of the Ministry of Steel

- Development of Steel Plants in Public and Private Sectors, the re-rolling industry and ferro-alloys
- Policy formulation regarding production, distribution, pricing of iron & steel and ferro alloys
- Development of iron ore mines in the public sector and other ore mines like manganese ore, chrome ore, limestone and other minerals used in the iron and steel industry (but excluding mining lease or matters related thereto)
- Providing a platform for interaction of all producers and consumers of steel in the country
- Identification of infrastructural and related facilities required by steel industry
- Overseeing the performance of 10 PSUs and their subsidiaries.

2.1.2 Allocation of responsibilities

The Ministry of Steel has a Secretary, three Joint Secretaries, five Directors, three Deputy Secretaries, one Joint Director and other supporting officers and staff. The Ministry also has a Financial Adviser in the rank of Additional Secretary, an Economic Adviser and a Chief Controller of Accounts. A Technical Wing under the charge of an Industrial Adviser gives advice in respect of technical matters besides discharging some secretariat work of technical nature like Research and Development.

2.2 Functions Of Key Sections/Units In The Ministry

2.2.1 Administration

- General office administration and house-keeping
- Office equipment, procurement and maintenance
- Civil defence
- Departmental security
- Medical claims
- Issue of various items of contingencies to the officers/officials of the Ministry
- Protocol matters

2.2.2 Establishment

Matters relating to administrative/Personnel matters of all officers/officials in the Ministry of Steel, and issues related to the welfare of women.

2.2.3 Parliament Cell

Parliamentary matters relating to Ministry of Steel, including President's Address and Budget; meetings of the Consultative

Committee and Standing Committee; Visits of Parliamentary Committees/Study Group to PSUs/Projects under Ministry of Steel.

2.2.4 Library

The library looks after all matters relating to acquisition of books, manuals, newspapers, journals, other reference books and maintaining catalogues etc.

2.2.5 NIC Cell

NIC Cell provides Information and Communication Technology (ICT) support to the Ministry. This includes design, development and implementation of e-Governance, Application and ICT-enabled services on Ministry-wide intranet portal, design, hosting and maintenance of the Ministry's official website in National Informatics Centre (NIC) domain, capacity building in the area of information technology by conducting in-house training programmes for officials and staff of the Ministry and providing technical consultancy on ICT related matters to the Ministry, its PSUs and subordinate organisations.

2.2.6 Hindi Section

For implementation of the Official Language Policy, a Hindi Section functions in the Steel Ministry.

2.2.7 Right to Information Cell (RI Cell)

This Cell looks after the work relating to implementation of the Right to Information Act, 2005 in the Ministry of Steel and monitoring its implementation in the Public Sector Undertakings and other offices under this Ministry, including submission of Annual Report relating to RTI activities to the Chief Information Commissioner.

2.2.8 Coordination Section

A Section for the Ministry dealing with all matters requiring coordination in respect of the subjects allotted to various Sections/Desks and takes care of the following:

- Comments on the Drafts Cabinet Notes received from other Ministries/Departments
- Preparation of Brief Note/Agenda for Press Conferences/meetings of Hon'ble Ministers
- Preparation of Induction Note for Minister/Secretary and material for President's Address to Parliament
- Monthly report to the Department of Personnel and Training's (DoPT's) on implementation of Appointments Committee of Cabinet (ACC) proposals
- Monthly report to the Department of Public Enterprises (DPE) with regard to implementation of PESB recommendations. Circulation of guidelines/orders/instructions relating to Public Sector Enterprises issued by various agencies from time to time
- Parliamentary Questions/Assurances of other Ministries/Departments pertaining to Ministry of Steel as a whole
- Preparation of Annual Report of the Ministry of Steel

2.2.9 Vigilance Desk

The important activities looked after by this unit include:

- Identification of sensitive areas prone to malpractices/temptation and taking preventive measures to ensure integrity/efficiency in Government functioning
- Scrutiny of complaints and initiation of appropriate investigation measures
- Furnishing the comments of the Ministry to the Central Vigilance Commission (CVC) on the investigation reports of the Central Bureau of Investigation
- Appointment of Chief Vigilance Officers (CVOs) in the PSUs in consultation with CVC and Department of Personnel & Training



2.2.10 Technical Wing

Entrusted with full-fledged secretariat/administrative work relating to R&D, Energy & Environment Management, rendering technical advice, besides judging winners for the Prime Minister's Trophy for the best integrated steel plant.

2.2.11 Industrial Development Wing

Industrial Development Wing (IDW) is primarily concerned with the growth and development of iron and steel industry in the private sector.

In addition, SAIL OP, PC, CIP, RS Sections, RM-I and RM-II Sections, HSK Section, MF, Steel Development and VSP Desks deal with matters pertaining to their respective PSUs including Parliamentary Questions, and policy issues.

2.2.12 Development Commissioner for Iron & Steel (DCI&S) Cell

On the recommendation of the Expenditure Reforms Commission (ERC), an administrative decision was taken to close down the office of the Development Commissioner for Iron & Steel (DCI&S), Kolkata along with its four regional offices located at Chennai, Mumbai, Kolkata and New Delhi with effect from 23rd May, 2003. The residual work except the collection of data from secondary sector was transferred to DC Cell in the Ministry of Steel.

The DCI&S Cell is handling matters relating to allocation of Iron and Steel to Small scale industry (SSI) units through Small Scale Industries Corporation (SSIC)/National Small Scale Industries Corporation (NSIC). In 2008, the Government of India decided to nominate NSIC as an agency parallel with SSICs for distribution of steel material to SSI units in states where SSICs also operate.

In order to ensure that small scale industries obtain raw materials at reasonable price, the Government provides nominal handling charges of approximately ₹ 500-550 per tonne to the corporations. The allocation of iron and steel items during the last three years for the distribution to SSI units are as follows:

Corporations	<i>(Quantity in '000 MTs)</i>		
	2008-09	2009-10	2010-11*
SSIC	581	581	567
NSIC	118	162	199
Total	699	743	766
<i>* as on 31st December, 2010</i>			

The distribution policy for the year 2010-11 is given on the Ministry of Steel's website: www.steel.nic.in

2.3 Other Related Organs of the Ministry of Steel

2.3.1 Joint Plant Committee

The Joint Plant Committee (JPC) was established in 1964, following the recommendations of Dr. K.N. Raj Committee, for the purpose of formulating guidelines for production, allocation, pricing and distribution of iron and steel materials in the country. Indian steel industry was deregulated in 1992, which marked a turning point for the JPC. From that point onwards, the role, charter, and activities of the JPC changed considerably as it moulded itself into the role of data bank for the Indian steel industry, operating in a liberalised market-driven economy.

The JPC is headquartered at Kolkata with four regional offices in New Delhi, Kolkata, Mumbai and Chennai and an Economic Research Unit at New Delhi serving as a wing of JPC to carry out techno-economic studies. At present, the JPC comprises of the following members:

- Chairman - Joint Secretary, Ministry of Steel, Government of India
- Four representatives from Steel Authority of India Ltd. (SAIL)
- One representative each from TATA Steel Ltd. and Rashtriya Ispat Nigam Ltd. (RINL) and;
- One representative from Indian Railways, as an important consumer of steel



2.3.2 Economic Research Unit

The Economic Research Unit (ERU) is a part of the Joint Plant Committee (JPC). It was constituted in September, 1983 on the recommendations of the Bureau of Industrial Costs and Prices to assist the Ministry of Steel/JPC on economic policy and research. The ERU is mainly responsible for analysis of data collected by the JPC and for conducting specific studies/analysis entrusted to it by the Ministry of Steel.

2.3.3 Activities of JPC & ERU

The National Steel Policy, 2005 has laid down the long term Vision of Growth for the Indian steel industry, which is on the threshold of undergoing a major change, in terms of number, production, capacity and technology, among others. India has achieved the rank of being the fifth largest producer of crude steel in the world, besides being the world's largest sponge iron producer. In such an environment, JPC, accredited with the ISO 9001: 2000 certification for its data/information services, has been pursuing a charter of jobs, keeping in mind the information needs of a rapidly changing industry.

Data & Information Services: JPC is officially empowered to collect data on the Indian iron and steel industry, resulting in the creation and maintenance of basic data bank on this industry. Major data items collected include:

- Capacity, Production and Stock of both Main and Secondary Producers of steel covering segments like crude steel, semi-finished steel, non-flat steel and the entire downstream range of flat steel;
- Domestic market prices of iron and steel;
- Export-import of iron and steel;
- Production, prices and reserves of raw materials for steel making;
- Production, availability and consumption of refractory;
- Consumption data of related category of iron & steel features in the database as a derived item.

Besides regular liaison with the units, segment-specific surveys form a major database maintenance activity for updating the population frame and aid policy decisions at the government level. Completed surveys include those on sponge iron, blast furnace, induction furnace/electric arc furnace, re-rolling and refractory units. A survey on Indian Ferro-Alloy Industry has been initiated.

Dissemination of information: Besides collection of data, dissemination of information to all stakeholders of Indian steel industry is another key activity of JPC. Major channels of information dissemination include:

- **JPC Bulletin on Iron & Steel:** Provides a monthly trend scenario of the Indian iron and steel industry in a global perspective.
- **Performance Review - Iron & Steel:** Encapsulates an exhaustive account of the developments in different aspects of the Indian iron and steel industry in the previous fiscal year.
- **Annual Statistics:** Provides a statistical profile of five-yearly database on different areas of Indian steel industry.
- **Reports:** Include reports of various surveys conducted by JPC namely sponge iron, pig iron, Cold Rolled-Galvanised Plain/Corrugated, Electric Arc Furnace/ Induction Furnace.
- **Special Publications:** Include occasional publications, focusing on industry status, trends in development etc. and published under the aegis of the Ministry of Steel.
- **Through the website, www.jpcindiansteel.org:** Information on different aspects of the domestic iron & steel industry.

Some of the key projects undertaken by the Economic Research Unit (ERU) include: Estimating category-wise demand for the 11th Five Year Plan, estimating capacity and production in the Induction Furnace Sector (study undertaken on behalf of the Expert Group formed for revising JPC data), revision of targets of National Steel Policy in view of acceleration in economic growth, assessing adequacy of infrastructure for the proposed expansion in steel capacity in



the 11th Plan with special reference to Orissa, Chhattisgarh and Jharkhand. Besides monthly analysis of market prices, formation of pre-budget proposals for the steel sector, studies on competitiveness of the Indian steel industry, ERU also functions as the Secretariat to the Steel Price Monitoring Committee and to the Sub-committee on relative movement of Hot Rolled Coil & Cold Rolled Coil prices.

Support services: Varied support was provided to the steel industry or the Ministry of Steel on different issues/activities, related to development of industry and/or spread of awareness on usage of steel. Some of the key activities here include:

- Organisational responsibility of the Steel Consumers' Council meetings of the Ministry of Steel, which provides a forum for interaction between the producers and consumers of steel in the country.
- Showcasing the multifaceted usage of steel in daily life through organisation and participation (every year since 2002) in the 'Steel Pavilion' of the Ministry of Steel in the 'India International Trade Fair' (IITF), New Delhi.
- JPC took initiatives to propagate knowledge, awareness on the benefits of usage of steel and bridge the information gap between the producers and end-users of steel. This was achieved through lending support to, as well as organising of seminars/workshops on technology, infrastructure, environment, market trends, budget, policymaking and other topical issues.
- Education is the stepping stone to greater success. The Biju Patnaik National Steel Institute (BPNSI) in Puri/Orissa, the National Institute for Secondary Steel Technology (NISST), Mandi Gobindgarh and the Institute for Steel Development and Growth (INSDAG) in Kolkata are the institutions initiated in this regard under the aegis of the Ministry of Steel.

Secretarial functions of the SDF: JPC is the secretariat of the Steel Development Fund (SDF) Managing Committee comprising Secretary, Ministry of Steel as the Chairman and Secretary, Department of Expenditure, Government of India and Secretary, Planning Commission, Government of India as Members. The Joint Secretary, Ministry of Steel is the Member Secretary. The Ministry of Steel has decided to promote Research and Development for which funds are earmarked every year, from SDF. This fund thus provides financial assistance to the industry from the interest of SDF corpus for taking up projects like, technology upgradation, measures connected with pollution control, activities related to Research & Development. Out of the SDF Corpus, JPC also renders assistance in matters relating to:

- Rebate to the Small Scale Industries Corporation (SSIC) engaged in the distribution of steel.
- Award of Prime Minister's Trophy for the best integrated steel plant.
- Market Development Projects.
- Global Environment Facility/UNDP project for environment and pollution control in the iron and steel sector.

2.3.4 Ferrous Scrap Committee (FSC)

JPC has also been entrusted with the secretarial functions of the Ferrous Scrap Committee (FSC) which inter-alia include management of the Ferrous Scrap Development Fund. FSC was established in 1979, vide notification of the Government of India, in the erstwhile Ministry of Steel, Mines and Coal, Department of Steel and was re-constituted on 28th July, 1997. At present, it comprises of the following members:

- Chairman - Joint Secretary, Ministry of Steel, Government of India
- Director/Deputy Secretary (Finance), Ministry of Steel, Government of India
- President, Iron, Steel Scrap & Shipbreakers Association of India
- Chairman and CEO, Gujarat Maritime Board
- FSC performs the following functions:
 - Support to Infrastructure development conducive to ship breaking activities
 - Support to Scrap handling / processing facilities
 - Conducting studies on various aspects of ship breaking.



2.4 List of Public Sector Undertakings and Companies under the administrative control of the Ministry of Steel

SL. No.	Name of the company	Headquarters	Subsidiaries
1.	Steel Authority of India Ltd.	Ispat Bhawan, Lodi Road, New Delhi - 110003	Maharashtra Elektros melt Ltd., Chandamul Road, Chandrapur-442401 (Maharashtra)
2.	Rashtriya Ispat Nigam Ltd.	Administrative Building, Visakhapatnam - 530031 (Andhra Pradesh)	Bird Group of Companies AG 104, Saurav Abasan 2nd Floor, Sector II, Salt Lake City, Kolkata-700091
3.	NMDC Ltd.	Khanij Bhawan, 10-3 -311/A, Castle Hills, Masab Tank, Hyderabad-500028 (Andhra Pradesh)	J&K Mineral Development Corporation Ltd. 33 B/ B IIInd Extn Gandhi Nagar, Jammu-180004 (J&K)
4.	MOIL Ltd.	MOIL Bhawan, 1-A, Katol Road, Nagpur-440013 (Maharashtra)	
5.	MSTC Ltd.	225-C, Acharya Jagdish Chandra Bose Road, Kolkata-700020 (West Bengal)	Ferro Scrap Nigam Ltd., FSNL Bhawan, Equipment Chowk, Central Avenue, Bhilai-490001 (Chhattisgarh)
6.	Hindustan Steelworks Construction Ltd.	5/1, Commissariat Road, (Hastings), Kolkata - 700022 (West Bengal)	
7.	MECON Ltd.	MECON Building, Ranchi-834002 (Jharkhand)	
8.	KIOCL Ltd.	II Block, Koramangala Bengaluru-560034 (Karnataka)	
9.	ICVL	Ispat Bhawan, Lodi Road, New Delhi - 110003	
*Sponge Iron India Ltd. has been merged with NMDC Ltd. with effect from 01.07.2010			



CHAPTER-III

THE INDIAN STEEL SECTOR : DEVELOPMENT AND POTENTIAL

3.1 Introduction

In initial phase, India had only three steel plants - the Tata Iron & Steel Company, the Indian Iron and Steel Company and Visveswaraya Iron & Steel Ltd and a few electric arc furnace-based plants. The period till 1947 thus witnessed a small but viable steel industry in the country, which operated with a capacity of about 1 million tonne and was completely in the private sector. From the fledgling one million tonne capacity status at the time of independence, India has now risen to be the 5th largest crude steel producer in the world and the largest producer of sponge iron. As per official estimates, the Iron and Steel Industry contributes around 2 per cent of the Gross Domestic Product (GDP) and its weight in the Index of Industrial Production (IIP) is 6.2 per cent. From a negligible global presence, the Indian steel industry is now globally acknowledged for its product quality. As it traversed its long history during the past 63 years, the Indian steel industry has responded to the challenges of the highs and lows of business cycles. The first major change came during the first three Five-Year Plans (1952-1970) when in line with the economic order of the day, the iron and steel industry was earmarked for state control. From the mid-50s to the early 1970s, the Government of India set up large integrated steel plants in the public sector at Bhilai, Durgapur, Rourkela and Bokaro. The policy regime governing the industry during these years involved:

- Capacity control measures: Licensing of capacity, reservation of large-scale capacity creation for the public sector units.
- A dual-pricing system: Price and distribution control for the integrated, large-scale producers in both the private and public sectors, while the rest of the industry operated in a free market.
- Quantitative restrictions and high tariff barriers



Pandit Jawaharlal Nehru, the first Prime Minister of India during a visit to a SAIL Steel Plant



- Railway freight equalisation policy: To ensure balanced regional industrial growth.
- Controls on imports of inputs, including technology, capital goods and mobilisation of finances and exports.

The large-scale capacity creation in the public sector during these years contributed to making India the 10th largest steel producer in the world as crude steel production grew markedly to nearly 15 million tonne in the span of a decade from a mere 1 million tonne in 1947. But the trend could not be sustained from the late 1970's onwards, as the economic slowdown adversely affected the pace of growth of the Indian Steel Industry. However, this phase was reversed in 1991-92, when the country replaced the control regime by liberalisation and deregulation in the context of globalisation. The provisions of the New Economic Policy initiated in the early 1990's impacted the Indian steel industry in the following ways:

- Large-scale capacities were removed from the list of industries reserved for the public sector. The licensing requirement for additional capacities was also withdrawn subject to locational restrictions.
- Private sector came to play a prominent role in the overall set-up.
- Pricing and distribution control mechanisms were discontinued.
- The iron and steel industry was included in the high priority list for foreign investment, implying automatic approval for foreign equity participation up to 50%, subject to the foreign exchange and other stipulations governing such investments in general.
- Freight equalisation scheme was replaced by a system of freight ceiling.
- Quantitative import restrictions were largely removed. Export restrictions were withdrawn.

The system, thereafter, underwent marked changes. For steel makers, opening up of the economy opened up new channels of procuring their inputs at competitive rates from overseas markets and also new markets for their products. It also led to greater access to information on global operations/techniques in manufacturing. This, along with the pressures of a competitive global market, increased the need to enhance efficiency levels so as to become internationally competitive. The steel consumer, on the other hand, was now able to choose items from an array of goods, be it indigenously manufactured or imported.

This freedom to choose established the sovereignty of the consumer and galvanised steel producers to provide products/ service levels in tune with the needs of the consumers. With the opening up of the economy in 1992, the country experienced rapid growth in steel making capacity. Large integrated steel plants were set up in the Private Sector by Essar Steel, Ispat Industries, Jindal Group etc. Tata Steel also expanded its capacity. To sum up, some of the notable milestones in the period were:

- Emergence of the private sector with the creation of around 9 million tonne of steel capacity based on state-of-the-art technology.
- Reduction/ dismantling of tariff barriers, partial float of the rupee on trade account, access to best-practice of global technologies and consequent reduction in costs - all these enhanced the international competitiveness of Indian steel in the world export market.

After 1996-97, with the steady decline in the domestic economy's growth rate, the Indian steel industry's pace of growth slowed down and in terms of all the performance indicators - capacity creation, production, consumption, exports and price/ profitability - the performance of the industry fell below average. In foreign trade, Indian steel was also subjected to anti-dumping/ safeguard duties as most developed economies invoked non-tariff barriers. Economic devastation caused by the Asian financial crisis, slowdown of the global economy and the impact of glut created by additional supplies from the newly steel-active countries (the steel-surplus economies of erstwhile USSR) were the factors that pulled down growth levels.

However, from the year 2002, the global industry turned around, helped to a great extent by China, whose spectacular economic growth and rapidly-expanding infrastructure led to soaring demand for steel, which its domestic supply could not meet. At the same time, recoveries in major markets took place, reflected by increase in production, recovery of prices, return of profitability, emergence of new markets, lifting of trade barriers and finally, rise in steel demand - globally. The situation was no different for the Indian steel industry, which by now had acquired a degree of maturity, with emphasis on intensive R&D activities, adoption of measures to increase domestic per capita steel consumption and



other market development projects, import substitution measures, thrust on export promotion and exploring global avenues to fulfil input requirements.

The rapid pace of growth of the industry and the observed market trends called for certain guidelines and framework. Thus was born the concept of the National Steel Policy, with the aim to provide a roadmap of growth and development for the Indian steel industry. The National Steel Policy (NSP) was announced in November 2005 as a basic blueprint for the growth of a self-reliant and globally competitive steel sector. The long-term objective of the National Steel Policy is to ensure that India has a modern and efficient steel industry of world standards, catering to diversified steel demand. The focus of the policy is to attain levels of global competitiveness in terms of global benchmarks of efficiency and productivity. The National Steel Policy seeks to facilitate removal of procedural and policy bottlenecks that affect the availability of production inputs, increased investment in research and development, and creation of road, railway and port infrastructure. The Policy focuses on the domestic sector, but also envisages a steel industry growing faster than domestic consumption, which will enable export opportunities to be realised.

3.2 Production, consumption and growth of steel

The National Steel Policy 2005 had projected consumption to grow at 7% based on a GDP growth rate of 7-7.5% and production of 110 million tonne by 2019-20. These estimates will be largely exceeded and it has been assessed that, on a 'most likely scenario' basis, the crude steel production capacity in the country by the year 2012-13 will be nearly 110 million tonne.

The table below shows the trend in production for sale, import, export and consumption of total finished steel (alloy + non-alloy) in the country:

Year	Total finished steel (alloy + non-alloy) ('000 tonne)			
	Production for sale	Import	Export	Consumption
2005-06	46566	4305	4801	41433
2006-07	52529	4927	5242	46783
2007-08	56075	7029	5077	52125
2008-09	57164	5841	4437	52351
2009-10	60892	7296	3235	57675
Apr-Dec 2010-11*	47296	5359	2462	44275

*Source: JPC; * =Provisional*

Crude steel production has shown a sustained rise since 2004-05 along with capacity. Data on crude steel production, capacity and capacity utilization are given in the table below:

Year	Crude steel		
	Capacity ('000 tonne)	Production ('000 tonne)	Capacity utilisation (%)
2005-06	51171	46460	91
2006-07	56843	50817	89
2007-08	59845	53857	91
2008-09	66343	58437	88
2009-10	72963	64875	89
Apr-Dec 2010-11*	56597**	50594	89

*Source: JPC; * =Provisional; ** 2.5 million tonne capacity added during April-December 2010*

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- The growth was driven by capacity expansion from 47.99 million tonne per annum (MTPA) in 2004-05 to 75.463 MTPA in 2010-11 (upto December 2010).
- Crude steel production grew at a CAGR of 8.4 per cent during the five years, 2005-06 to 2009-10.
- Production for sale of total finished steel at 60.89 million tonne during 2009-10 as against 46.566 million tonne in 2005-06.
- With growth in production for sale lagging behind consumption growth, India has turned into a net importer of finished steel in 2007-08. Exports have also declined to ensure greater domestic availability.

The above crude steel performance has been contributed largely by the strong trends in growth of the electric route of steel making, particularly the induction furnace route, which accounted for 31 per cent of total crude steel production in the country during 2009-10 and has emerged as a key driver of crude steel production.

The process route-wise production of crude steel in the country during 2005-06, 2009-10 and April-December 2010-11 (provisional) are shown in the table below and indicates the emergence of the electric route of production compared to the oxygen route:

Crude steel production by Process Route	Percentage share (%)		
	2005-06	2009-10	2010-11* (April-December Estimated)
Basic Oxygen Furnace (BOF)	52	45	47
Electric Arc Furnace (EAF)	18	24	26
Induction Furnace (IF)	30	31	27
Total	100	100	100
<i>Source: JPC; *=Provisional</i>			

India is also a leading producer of sponge iron with a host of coal based units, located in the mineral-rich states of the country. Over the years, the coal based route has emerged as a key contributor to overall production; its share has increased from 69% in 2005-06 to 70% in 2009-10. Capacity in sponge iron making has also increased over the years and currently stands at 32 million tonne. The table below shows the production of sponge iron in the country in the last five years and 2010-11 (April-December 2010) indicating the break-up of the share of coal and gas based route of production:

Year	Production of sponge iron				(unit: million tonne)	
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11* (April-December)
Coal based	10.28	13.08	14.53	15.57	14.58	15.52
Gas based	4.54	5.26	5.84	5.52	6.16	4.48
Total	14.82	18.34	20.37	21.09	20.74	20.00
<i>Source: JPC; *=Provisional</i>						

India is also an important producer of pig iron. Post-liberalisation, with setting up of several units in the private sector, not only imports have drastically reduced but also India has turned out to be a net exporter of pig iron. The private sector accounts for nearly 90% of total production for sale of pig iron in the country. The domestic availability situation



of pig iron is given in the table below:

Year	Pig Iron Domestic Availability Scenario					('000 tonne)
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*(Apr-Dec)
Production for sale	4695	4953	5284	6207	5734	4217
Import	3	3	11	8	11	7
Export	440	707	560	350	278	209
Consumption	4136	4336	4621	5870	5465	3937
<i>Source: JPC, * = provisional</i>						

3.3 Global ranking of Indian steel

Global crude steel production reached 1414 million tonne in calendar year 2010, a growth of 15 per cent over 2009. China was the largest crude steel producer in the world with production reaching 626.56 million tonne, a growth of 9.2 per cent over 2009. India once again emerged as the 5th largest producer in 2010 and recorded a growth of 11.3 per cent as compared to 2009. India also emerged as the largest sponge iron producing country in the world in 2010, a rank it has held on since 2002. If proposed expansions plans are implemented as per schedule, India may become the second largest crude steel producer in the world by 2015-16.

World crude steel production in 2010*		
Rank	Country	Production (million tonne)
1	China	626.56
2	Japan	109.60
3	USA	80.59
4	Russia	67.00
5	India	66.80
6	South Korea	58.45
7	Germany	43.82
8	Ukraine	33.56
9	Brazil	32.82
10	Turkey	29.00
<i>Source: World Steel Association; *=Provisional</i>		

3.4 Plan outlay for 11th Five-Year Plan (2007-12)

For the 11th Five Year Plan (2007-12), the Planning Commission has approved total outlay of ₹ 45607.08 crore (i.e. Internal and Extra Budgetary Resources [I&EBR] of ₹ 45390.08 crore and Gross Budgetary Support [GBS] of ₹ 217 crore).

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No.	Name of the Scheme/programme	(₹ in crore)		
		Outlay for 11th Plan (Approved)		
		I&EBR	GBS	Total
A. Scheme of PSUs				
1.	Steel Authority of India Ltd.	27409.00	0.00	27409.00
2.	Rashtriya Ispat Nigam Ltd.	9569.18	0.00	9569.18
3.	Sponge Iron India Ltd.*	25.00	0.00	25.00
4.	Hindustan Steelworks Construction Ltd.	0.00	35.00	35.00
5.	MECON Ltd.	9.00	63.00	72.00
6.	MSTC Ltd.	30.00	0.00	30.00
7.	Ferro Scrap Nigam Ltd.	60.00	0.00	60.00
8.	NMDC Ltd.	7147.00	0.00	7147.00
9.	KIOCL Ltd.	650.00	0.00	650.00
10.	MOIL Ltd.	342.90	0.00	342.90
11.	Bird Group of Companies	148.00	1.00	149.00
<i>* Merged with NMDC Ltd. w.e.f. 01.07.2010</i>				
B. Scheme of Ministry of Steel				
1.	Scheme for promotion of R&D in the Iron & Steel Sector	0.00	118.00	118.00
Total (A+B)		45390.08	217.00	45607.08



Former Prime Minister of India, Smt Indira Gandhi inspecting a Blast Furnace at Bhilai Steel Plant on 9th February, 1963



During the 11th Five Year Plan, a new scheme viz. "Scheme for promotion of Research and Development in Iron & Steel sector" has been approved with a budgetary provision of ₹ 118 crore for implementation. The objective of the scheme is to develop path-breaking technologies in an environment friendly manner. The scheme was approved by Ministry of Finance with the observation that the scheme may be initiated in the Financial Year 2009-10. The Working Group on Steel Industry set up by the Planning Commission for the 11th Five-Year Plan (2007-12) had projected a total demand of 70.34 million tonne for finished steel and a total production of 80.23 million tonne of crude steel by the end of the 11th Plan, that is, 2011-12. Both the 11th Plan projections and the NSP targets are likely to be considerably surpassed.

The 11th Plan would be crucial for realising the objectives pronounced in the National Steel Policy 2005 of building a modern and efficient domestic steel industry of global standards with a capacity to cater to diversified product demands. The Working Group on Steel Industry has made recommendations consistent with the targets/objectives of the National Steel Policy, 2005.

The rejuvenated steel market in the country has already witnessed the announcements of mega expansion plans of leading domestic producers in the form of Greenfield and/or Brownfield projects in different parts of the country. The decision of Posco, South Korea, to set up their 12 million tonne integrated steel plant in Orissa has given the Indian steel industry a feel of what 'globalisation' is all about. This was soon followed by Mittal Group's announcement of plans to set up their 12 million tonne integrated steel unit in Orissa.

However, the domestic Indian steel producers did not lag behind. Indian conglomerate TATA Steel's \$12 billion takeover of Anglo-Dutch giant Corus Group Plc, transformed TATA Steel Ltd. into a significant global steel producer, which may well be regarded as a benchmark even in the history of the Indian steel industry. Such developments only prove that the Indian steel industry has entered a mature phase.

3.5 Steel: Key facts

Indian steel scene: April - December, 2010-11 *		
Item	Finished Steel Quantity (million tonne)	% change
Production for sale	47.296	7.9
Import	5.359	2.8
Export	2.462	17.3
Consumption	44.275	8.0
Crude steel Production	50.594	4.5
Capacity Utilisation (%)	89%	
<i>Source: JPC; * = Provisional</i>		

Besides achieving the rank of the 5th largest global crude steel producer, India has also made a mark globally in the production of sponge iron/direct reduced iron (DRI). Courtesy a mushrooming growth of coal-based sponge iron units in key mineral-rich pockets of the country, domestic production of sponge iron increased rapidly, enabling the country to achieve and maintain the number one position in the global market. With a series of mega projects, either being implemented or at the proposal stage, which once operational will re-write the structure of the steel industry and its dynamics; and a domestic economy carrying forward the reform process further, the future of the Indian steel industry is definitely optimistic.

In this journey of progress, the Indian steel industry has also taken significant steps in improvement of productivity, conservation of natural resources and energy, import substitution, quality upgradation; environment management and research and development. Some of the notable developments are:

- **Introduction of Stamp Charging and Partial Briqueting of Coal Charge (PBCC) for production of metallurgical coke:** In this process, it has been made possible to replace part of the metallurgical coal requirements



by non-coking/ semi-coking coal, with higher strength of the coke and less emission.

- **Installation of energy recovery coke ovens to meet power requirements as well as to reduce emission:** Energy recovery type coke ovens have been set up by many steel companies like SesaGoa, JSW Steel, VISA Steel, Neelachal Ispat Nigam Ltd. (NINL) and Gujarat NRE Coke Limited.
- **Use of non-coking coal in iron making:** Processes such as Corex have now been introduced in some of the steel plants to produce hot metal by predominantly using non-coking coal. The Coal Dust/ Pulverised Coal Injection System has been introduced in several blast furnaces to partially substitute coke. In addition, there has been large-scale growth of sponge iron units based on non-coking coal.
- **Use of Direct Reduced Iron (DRI)/Sponge iron in steel making:** Earlier, only scrap could be used as a feed material in electric arc furnaces. With growing scarcity of scrap, a replacement could be found in the form of DRI produced from iron ore with reformed natural gas/ non-coking coal as reductant.
- **Use of hot metal in electric arc furnaces:** Setting up of Basic Oxygen Furnaces is capital intensive and successful only at a large scale. However, with the advent of modern electric arc furnaces, steel could be produced in electric arc furnace by use of hot metal that substantially replaces steel scrap and results in huge savings in electricity consumption.
- **Adoption of continuous casting:** The first solidified form of steel in the melting shops used to be ingots. With the advent of continuous casting in the late 1970s, continuous cast blooms/ billets/ slabs resulted in significant energy savings as well as improved productivity. Adoption of thin slab casting has further resulted in additional energy savings in the hot strip mills.
- **Import substitution:** Till the early 1980s, Indian steel production was centered mostly on non-flat products. Critical flat products such as thin gauge Hot Rolled coils, Deep Drawing/ Extra Drawing grade Cold Rolled coils, thin gauge Galvanised Plain/ Galvanised Corrugated sheets and Tin Mill Black Plate used to be mostly imported. With the setting up of modern hot strip mills in the 1990s; cold rolling mills and galvanizing lines from the 1980s; and colour coating lines from the 1990s, India is now well equipped to produce various grades of flat products.
- **Value-added production:** Earlier, integrated steel plants had to earmark part of the hot metal production for production of pig iron for foundries. From the early 1990s, mini-blast furnaces were set up in the country that supplied pig iron to the foundries and enabled the integrated steel plants to concentrate on production of value-added steel items.
- **Increasing size/volume of blast furnaces:** Most of the blast furnaces of the steel plants were of small volume. In order to increase productivity, the blast furnaces in the steel plants have gradually been revamped or newly set up with bigger volumes. The biggest blast furnace in India at present is with JSW (4013 cubic metres), followed by Tata Steel Limited (TSL) (3814 cubic metres), and RINL (3200 cubic metres).
- **Reducing coke consumption in blast furnaces and improving productivity:** Indian blast furnaces used to consume as high as 850 kilograms of coke per tonne of hot metal and Blast Furnace productivity was hovering at less than one tonne per cubic meter per day. Introduction of modern technologies and practices, viz. high top pressure, high blast temperature, pulverized coal injection; attention to burden preparation and distribution; higher use of sinter in place of lumps etc. have resulted in reduced coke consumption and improved productivity. Today, coke rate in some of the blast furnaces is less than 500 kg/tonne hot metal and productivity exceeds 2 tonne per cubic metre per day.
- **Enhancing steel quality:** Earlier, the steel making furnaces used to complete the steel making within the furnaces themselves. With the introduction of modern steel making technologies/ practices and secondary refining technologies such as ladle metallurgy, vacuum degassing etc., it is now possible to produce steel of much lower inclusion and much lower content of oxygen, nitrogen and hydrogen. The ladle furnace technology has also made it possible to cut down the steel-making time in converters or Electric Arc Furnaces and to enable production of steel of low sulphur and phosphorus content.
- **Efforts to reduce energy consumption and emissions:** Iron and Steel making involves energy intensive processes. The international norm of energy consumption is 4.5 to 5.5 Giga calories per tonne of crude steel. With adoption



of modern technology and equipment, beneficiation of raw materials and use of high grade imported coking coal, Indian Steel plants have been able to achieve energy consumption at the level of 6.5 to 7.0 Giga Calories only. Further, steps are being taken to achieve much lower energy consumption and corresponding lower Green House Gas (GHG) emission by the end of 11th Five Year Plan. With the growth of steel industry, increasing attention is being paid to environment management. Steps such as afforestation, installation of pollution-control equipment are likely to abate the pollution emanating from steel industry. The Indian iron and steel industry is taking advantages of the Clean Development Mechanism under the Kyoto Protocol, thereby improving energy efficiency and reducing GHG emission.

3.6 Present growth scenario and future outlook

India was the 5th largest producer of crude steel in the world in 2010, based on rankings released by World Steel Association. Domestic crude steel production grew at a compounded annual growth rate of 8.4 per cent during 2005-06 to 2009-10. This growth was driven by both capacity expansion (from 47.99 million tonne in 2004-05 to 72.96 million tonne in 2009-10) and improved capacity utilisation. India, the world's largest producer of direct reduced iron (DRI) or sponge iron, is also expected to maintain its lead in the near future. Sponge iron production grew at a CAGR of 11 per cent to reach a level of 20.74 million tonne in 2009-10 compared to 14.83 million tonne in 2005-06. India is expected to become the second largest producer of steel in the world by 2015-16, provided all requirements for fresh capacity creation are met.

Indian steel industry has just come out of the slowdown that affected its performance during 2008-09. Domestically, 2010 ended on a relatively better and encouraging note, with CSO reporting an overall improvement of economic situation through its GDP data, which showed a robust 8.9 per cent growth during Apr-Sept 2010-11. IIP too had registered a strong 10.2 per cent growth during Apr-Sept. 2010-11, further bolstering the idea that the demand side is back on stable footing. For steel, this is of key importance and the growth rates registered for leading end-use segments like manufacturing, consumer durables, construction, the stable growth of the service sector and agriculture sector spell good news. April-December 2010 provisional data released by JPC indicates a 8 per cent rise in consumption of total finished steel. Globally also there are signs of improvement in economic conditions and firming up of demand and prices.

3.7 Trends in production, private/public sector

Traditionally, Indian steel industry has been classified into Main Producers (SAIL plants, Tata Steel and Vizag Steel/ RINL), Major Producers (plants with crude steel making capacity above 0.5 million tonne - Essar Steel, JSW Steel, Jindal Steel & Power and Ispat Industries) and Other Producers. The latter comprises of numerous steel making plants producing crude steel/finished steel (long product/flat product)/ pig iron/ sponge iron and are spread across the different states of the country. [The details of production for sale of Main and Secondary producers may be seen in the Annexure-III. Other related details are reflected in the Annexures-IV to XI.]

The following table highlights the total as also the contribution of the private and public sector in crude steel production in the country:

	Indian Crude Steel production				(in million tonne)	
	2005-06	2006-07	2007-08	2008-09	2009-10 *	2010-11* (April-December)
Public Sector	16.964	17.003	17.091	16.372	16.714	12.579
Private Sector	29.496	33.814	36.766	42.065	48.161	38.015
Total Production	46.460	50.817	53.857	58.437	64.875	50.594
% share of Public Sector	36.5	33.5	32	28	26	25
<i>Source: JPC; *=Provisional</i>						



3.8 Foreign investments and private sector participation

Domestic and foreign investors have shown a great deal of interest in setting up steel capacities in the country. Prospective investors include the existing public sector as well as private sector manufacturers, reputed foreign manufacturers, sponge iron makers going in for forward integration, as well as small rolling mills trying to get into backward integration, among others.

3.9 Role of the Ministry of Steel

The pre-deregulation phase has seen the Ministry of Steel in the key role of a regulator which was essential, given the operating economic conditions, the limited presence of industry and the scarcity of key raw material for steel-making at home. Through skillful and judicious decisions on allocation and pricing and formulating related policy measures, the Ministry of Steel had played an important role in taking the steel industry forward in this phase.

In the post-deregulation period, the role of the Ministry of Steel has primarily been that of a facilitator for the Indian steel industry, being responsible for the planning and development of the iron and steel industry, development of essential inputs such as iron ore, limestone, dolomite, manganese ore, chromites, ferro alloys, sponge iron, and other related functions. In its present day role, the Ministry of Steel is extending all possible support for the development of the Iron and Steel Industry in the country, in matters like:

- Facilitating expedited growth of steel capacity investments through active coordination and formulation of right policy directives. An Inter-Ministerial Group (IMG) is functioning in the Ministry of Steel, under the Chairmanship of Secretary (Steel) to monitor and coordinate major steel investments in the country.
- Providing linkage for raw materials, rail movement clearance etc. for new plants and expansion of existing ones.
- Facilitating movement of raw materials other than coal through finalisation of wagon requirements and ensuring an un-interrupted supply of raw materials to the producers.
- Regular interactions with entrepreneurs proposing to set up new ventures, to review the progress of implementation and assess problems faced.
- Identification of infrastructural and related facilities required by the steel industry, and coordination of infrastructure requirement of steel sector with the concern Ministries/Department.
- Promoting, developing and propagating the proper and effective use of steel and increasing the intensity of steel usage, particularly in the construction sector in rural and semi urban areas, through "Institute for Steel Development and Growth (INSDAG)" in Kolkata.
- Encouraging research and development activities in the steel sector. An Empowered Committee under the Chairmanship of Secretary (Steel) provides overall direction to research efforts on iron and steel in the country and approves specific research projects placed before it for funding, fully or partially, from the Steel Development Fund. Efforts are being made to further augment R&D activities in the country with Government budgetary support during the 11th plan period.
- Providing technical inputs to the Norms Committee in Director General of Foreign Trade (DGFT), Department of Commerce, to fix/revise input-output norms to facilitate export of iron, steel, ferro-alloy, refractories and engineering products.
- Providing technical input to Ministry of Environment & Forests (MoEF) for grant of Host Country Approval under the Clean Development Mechanism (CDM) and United Nations Framework Convention on Climate Change (UNFCCC).
- Co-ordinating with Bureau of Indian Standards for formulation /amendment of Indian standards for Iron & Steel products.
- Co-ordinating with Central Pollution Control Board/MoEF for environment management and pollution control and waste management.
- Facilitating improvement in performance of integrated steel plants through the Prime Minister's Trophy Scheme, giving recognition to the best performing steel plant in India.



- Addressing the problem of shortage of technically qualified manpower to sustain development and growth of the iron and steel industry in India.
- The organisation of Steel Consumer Council provides a forum for interaction of all producers and consumers of steel in the country.
- Facilitating Human Resources in the steel sector through training institute under its control.

The Indian Steel Industry has withstood international competition despite the reduction of basic customs duty on steel from 25-30% in 2002-03 to 5% currently. The industry now operates in an open economy where exports and imports respond to increases or decreases in the domestic demand driven primarily by market signals.

While exports of finished steel were sustained at a level of 4-5 million tonne per annum during the 10th Plan, imports sharply increased from about 1.75 million tonne in 2003-04 to 5.4 million tonne in April-December 2010 (provisional data), not because of fall in competitiveness but to fill up supply-demand gap in the domestic market.

However, industry slipped into a slowdown phase in latter half of 2008-09, prompted by a massive sub-prime crisis which originated in the USA and impacted global operations in varying degrees throughout the world. Steel industry globally, saw cutbacks in production, decline in price and profitability, slowdown in demand and delays/shelving of proposed expansion projects. However, helped to a considerable extent by the well-designed policy stimulus packages of the Government of India, the steel industry in the country has successfully overcome the adverse effects of a global economic slowdown and domestic steel consumption has registered a positive growth during the year 2009-10 and during April-December 2010, domestic consumption of total finished steel has increased by a strong 8% rate. Also, globally prices are showing signs of firming up and 2010-11 has brought in a promising note for the Indian steel sector, with production growth estimated at least in the range of 5-7% and Central Statistical Organisation (CSO) reporting an overall improvement of economic situation through its GDP data, which showed a robust 7.9 per cent growth during July-September 2009 and 7.6 per cent growth in Index of Industrial Production (IIP) during April-November 2010.



CHAPTER-IV PUBLIC SECTOR

4.1 Introduction

The companies under the Ministry of Steel have performed well in the last five years. Profit After Tax (PAT) of the Companies under the Ministry of Steel was around ₹ 8604.81 crore during the year 2010-11 (upto December 2010). The details may be seen at Annexure-XIV. The contribution to Central and State Government exchequer by way of excise duty, customs duty, dividend, corporate tax, sales tax, royalty etc. was around ₹ 13657.37 crore during the year 2010-11 (upto December 2010). The details may be seen at Annexure-XV.

4.2 Steel Authority of India Limited (SAIL)

The Steel Authority of India Limited (SAIL) is a company registered under the Indian Companies Act, 1956 and is an enterprise of the Government of India. It has five integrated steel plants at Bhilai (Chhattisgarh), Rourkela (Orissa), Durgapur (West Bengal), Bokaro (Jharkhand) and Burnpur (West Bengal). SAIL has three special and alloy steels plants viz. Alloy Steels Plant at Durgapur (West Bengal), Salem Steel Plant at Salem (Tamil Nadu) and Visveswaraya Iron and Steel Plant at Bhadravati (Karnataka). In addition to these, a Ferro Alloy producing plant at Chandrapur is owned by Maharashtra Elektros melt Limited which is a subsidiary of SAIL. SAIL has eleven units viz. Research and Development Centre for Iron and Steel (RDCIS), Centre for Engineering and Technology (CET) and Management Training Institute (MTI), all located at Ranchi, Central Coal Supply Organisation (CCSO) located at Dhanbad, and Raw Materials Division (RMD), Environment Management Division (EMD), Growth Division (GD) and SAIL Safety Organisation (SSO) all located at Kolkata.



Chairman, SAIL Shri C.S. Verma (extreme left) receiving the ICWAI's ICON of the year trophy



During the year, pursuant to the Order of amalgamation issued by the Ministry of Corporate Affairs under Section 396 of the Companies Act, 1956 on 28th July, 2009, the Bharat Refractories Limited has been amalgamated with SAIL w.e.f. 1st April, 2007. The BRL has four plants in the states of Jharkhand and Chhatisgarh and is engaged in the business of manufacturing, trading and otherwise dealing in assorted types of refractories. Consequent to amalgamation, it has become an unit of SAIL and renamed as SAIL Refractory Unit (SRU).

The Central Marketing Organisation (CMO), with its headquarters at Kolkata, coordinates the countrywide marketing and distribution network. The SAIL Consultancy Division (SAILCON) functions from New Delhi.

4.2.1 Capital structure

The authorised capital of SAIL is ₹ 5000 crore. The paid-up capital of the company was ₹ 4130.40 crore as on 31st March, 2010, out of which 85.82% is held by the Government of India and the balance 14.18% by the financial institutions/ GDR-holders/banks/employees/individuals etc.

4.2.2 Further Public Offer

The government has approved on 8.4.2010 issue of additional share capital by SAIL amounting to 10% of the existing paid-up share capital and 10% offer for sale of government's share holding in two discrete tranches of equivalent amount.

4.2.3 Financial performance

The company recorded turnover of ₹ 43,934.70 crore in the financial year 2009-10. The post-tax net profit for the year was ₹ 6,754.37 crore. The company has paid dividend @ 33 % of paid up equity capital for the year 2009-10. The sales turnover and net profit after tax for nine months ended 31st December, 2010 were ₹ 33905.04 crore and ₹ 3374.13 crore respectively.

4.2.4 Production performance

The details of the actual production is given below:

Items	('000 tonne)	
	2009-2010	2010-11 (upto December 2010)
Hot metal	14505	11135
Crude Steel	13506	10227
Saleable Steel	12632	9414

4.2.5 Raw materials

SAIL has fulfilled the requirement of iron ore from its captive mines of its steel plants by producing about 23.44 million tonnes during 2009-10. The production of fluxes from captive mines was 2.31 million tonnes. During 2009-10, continued thrust on production of Coal from SAIL's captive collieries resulted in record annual production of over 1.36 million tonnes, registering a growth of 34%.

During year 2010-11 (April-December'2010) production of iron ore, fluxes and Coal from SAIL's captive collieries was 18.2 million tonnes, 1.74 million tonnes and 0.86 million tonnes respectively.

4.2.6 Manpower

The manpower strength of SAIL (including MEL) as on 31st March, 2010 was 117664 (after 1585 employees of erstwhile Bharat Refractories Limited (BRL) joined SAIL as a part of merger of BRL with SAIL. The net reduction in manpower achieved during the year stood at 5930. The Manpower Strength of SAIL (including MEL) as on 01.1.2011 was 113403, (Executive 15510 / Non-Executive 97893), achieving reduction of 4261 manpower during the year 2010-11 (upto December, 2010).



Upgraded and modernised Blast Furnace No 7 at SAIL's Bhilai Steel Plant

4.3 Maharashtra Elektros melt Ltd. : A subsidiary of SAIL

Maharashtra Elektros melt Limited is situated in Chandrapur, Maharashtra, and is a major producer of ferro manganese and silico manganese for captive use of SAIL plants.

The authorised and paid-up share capital of the company as on March 31, 2010 was ₹ 30 crore and ₹ 24 crore respectively. SAIL's holding is approximately 99.12% of the paid-up capital.

4.3.1 Financial performance

During the year 2009-10, the company recorded a turnover of ₹ 382.06 crore and made a net profit of ₹ 79.23 crore. The turnover and net profit after tax of the Company during April'2010 to December'2010 is ₹ 298.83 crore and ₹ 18.14 crore respectively.

4.3.2 Production performance

The production of different grades of ferro alloys is as under:

Material	2009-10	(tonne)
	2010-11 (April '10 to December 2010)	
High Carbon Ferro Manganese	71062	58594
Silico Manganese	42149	21903
Medium Carbon Ferro Manganese	1605	1625

4.4 Rashtriya Ispat Nigam Ltd. (RINL)

Rashtriya Ispat Nigam Limited (RINL), the corporate entity of Visakhapatnam Steel Plant (VSP) set up its first shore based integrated steel plant 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 with state-of-the-art technology, incorporating extensive energy saving and pollution control measures. RINL-VSP has an excellent layout capable of expanding upto 20 MTPA. RINL-VSP is today on the growth path and almost



doubling its capacity to 6.3 MTPA of liquid steel and the new units are set to come on stream progressively from 2011-12.

Within a short period of time since its commissioning, the plant achieved high levels of performance in production and technological norms. 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. VSP has been awarded all the three international standards certificates, namely, ISO 9001:2000, ISO 14001:1996 and OHSAS 18001:1999. RINL-VSP is the first Indian steel plant to get the 'Capability Maturity Model Integrated (CMMI) - Level 3' certification issued by 'Software Engineering Institute (SEI) of Carnegie Mellon University', USA for implementation of IT systems in VSP. RINL-VSP is the first PSE & first in Steel sector in India to get BS EN 16001 (Energy Management system) certification on 28.12.10, a recent feather in its cap. The company has emerged as a good corporate citizen and has contributed substantially for the development of the region.

The physical performance in terms of production and percentage achievement of rated capacities along with financial/marketing performance for the year 2010-11 (Actual upto Dec '10 and forecast for the period Jan-Mar '11) is given below:

Item	2009-10	2010-11	
		Actual (Apr-Dec)	Forecast (Jan-Mar)
Production (in thousand tonnes) & (Capacity utilization)			
Hot Metal	3900 (115%)	2812 (110%)	1010(120%)
Crude Steel	3205 (113%)	2340 (110%)	822(118%)
Saleable Steel	3167 (119%)	2217 (111%)	780(119%)
Financial performance (₹ in Crores)			
Gross Turnover	10635	7755	3300
Profit After Tax	797	285	150
Net worth	12885	13266	13266
Value Added steel production of 1.73 million tonnes and is 78% of the saleable steel produced during April-December '10.			

4.5 NMDC Ltd.

NMDC Limited a "Navratna" public sector company under the Ministry of Steel, Government of India, is primarily engaged in the business of exploring minerals and developing mines to produce raw materials for the industry. It is also expanding its activities towards steel making and other value added products.

Incorporated on November 15, 1958, NMDC has been actively contributing to development of the nation for five decades and grown from strength to strength on its journey to nation building. From a single-product-single-customer company, NMDC has grown to be a major iron ore supplier to the domestic steel industries. NMDC is also doing exploration and prospecting works for high value minerals like diamond in Andhra Pradesh and gold in Tanzania.

NMDC operates large mechanized iron ore mines in the country at Bailadila (Chhattisgarh) and Donimalai (Karnataka). The Diamond Mine of NMDC is situated at Panna (Madhya Pradesh).

All the iron ore production units of NMDC have been accredited with ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 certifications. The R&D Centre of NMDC has been accredited with ISO 9001:2008 certification.

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As part of the Greenfield expansion / diversification programme, NMDC is setting up an Integrated Steel Plant of 3 million tonne per annum (MTPA) capacity at Nagarnar, Chhattisgarh. The project is estimated to cost about ₹ 15,525 Crore.

NMDC is in the process of expanding its business through forward integration by setting up - (a) 2.0 mtpa Pellet Plant in Chhattisgarh (b) 1.2 MTPA Pellet Plant at Donimalai in Karnataka and Expansion of SIIL (merged with NMDC w.e.f.1.7.10).

NMDC has planned to expand its business through horizontal integration in the fields of Coal, Rock Phosphate, Lime Stone, Gold and Diamond.

NMDC has already diversified its activities in the field of renewable energy by setting up Wind Mill in Karnataka and is exploring the possibilities in solar energy.

4.5.1 Capital Structure

The Authorized share capital of the company is ₹ 400 crores. The paid up equity share capital is ₹ 396.47 crores. Outstanding loans from Government of India are Nil.

4.5.2 Financial Performance

The financial performance of the company for the year 2010-11 as against previous year 2009-10 is as below:

Item	2009-2010	2010-11(upto Dec) (prov.)	(₹ in crores)
			2010-11 Jan-Mar (Estimated)
Sales/Turnover	6239.09	7643.32	3501.68
Gross Margin	5283.94	6643.94	2963.06
Profit/loss before tax	5207.32	6563.61	2936.39

4.6 MOIL Ltd.

MOIL Ltd., earlier known as Manganese Ore (India) Limited, is a Miniratna Category I Public Sector Undertaking under the Ministry of Steel. It is the largest producer of Manganese ore in India. MOIL was established in 1962. At the time of inception, the Central Province Manganese Ore Co. Ltd. (CPMO) held 49% of shares and the remaining 51% in equal proportion by Govt. of India and the State Government of Madhya Pradesh and Maharashtra. Subsequently, in 1977, Govt. of India acquired the shares held by CPMO in MOIL and MOIL became a wholly owned Govt. Company with effect from October, 1977.

MOIL produces and sells different grades of Manganese Ore as below:

- High Grade ores 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 for dry battery cells and chemical industries.

MOIL has set up a plant based on indigenous technology to manufacture Electrolytic Manganese Dioxide (EMD). This product is used for the manufacture of dry battery cells. EMD produced by the Company is of good quality and well accepted by the market. A Ferro manganese plant having a capacity of 10,000 MT per annum was set up in 1998 by MOIL Ltd. for value addition. MOIL Ltd. has also set up a 5,00,000 TPA Integrated Manganese Beneficiation Plant at Balaghat Mine and diversified in field of wind power generation by setting up 20MW wind farm in the Nagda and Ratedi hills near Dewas in Madhya Pradesh.



4.6.1 Finance

As on 31/12/2010, the Authorised and Paid-up Capital of the Company are ₹ 250.00 cores and ₹ 168.00 cores respectively. Government of India holds 71.57% shares in MOIL with State Governments of Maharashtra and Madhya Pradesh holding 4.62% and 3.81% shares respectively.

4.6.2 Operational & Financial Results

The physical and financial performance of the Company for the years 2008-09, 2009-10 and 2010-11 are given below :-

S. No.	Item	2008-09	2009-10	(₹ in crore)	
				2010-11 (upto Dec. 2010 (provisional)	2010-11 (Jan-Mar'11) (Estimated)
1.	Production				
	a) Manganese Ore ('000 Tonnes)	1175	1093	814.31	335.69
	b) E.M.D. (Tonnes)	1240	1150	629	225
	c) Ferro Manganese (Tonnes)	10120	9555	7076	1924
2.	Total Income	1407.99	1101.73	955.56	280.92
3.	Profit before Tax	1006.76	706.79	656.18	131.36
4.	Profit After Tax	663.79	466.35	435.21	87.72
5.	Paid-up Share Capital*	28.00	168.00	168.00	168.00
6.	Reserves*	1292.87	1509.37	1843.19	1910.46
7.	Net Worth	1320.87	1677.37	2011.19	2078.46
8.	Book value per share (Rupees)*	4717.40	99.84	119.70	123.72
9.	Earning per share (Rupees)*	2370.69	27.76	25.91	5.22
10.	Dividend	133.00	94.08		--

* During 2009-10 the company has issued bonus shares in the ratio of 1:5 and also the face value of the shares has been changed from ₹ 100/- to ₹ 10/- each. Consequent upon this, the number of shares has increased from 28 lacs to 16.80 crores and paidup share capital has increased from ₹ 28.00 crores to ₹ 168.00 crores. Accordingly, the book values of shares and Earning per share of shares have also changed.

4.6.3 Marketing

About 95% of manganese ore is used in steel industries. As the performance of Steel Industry and demand of Manganese ore are interlinked, the Manganese ore market is primarily driven by the growth prospects of steel industry. The financial year 2009-10 has been a year of challenge. But due to stimulus measures taken by Government of India, the year which began amidst the gloom of an economic downturn, ended with indication of vibrant economic rebound. The overall economy of the world was under pressure particularly till the first half of the year 2009-10. The market started showing some strength from later part of the year and the demand for steel, started picking up resulting in increase in demand of the manganese ore as well. The total income and profit after tax of the Company during the year 2009-10 were ₹ 1101.73 Crore and ₹ 466.35 Crore respectively. The sales performance achieved during 2009-10 and 2010-11 is as under:

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Sr. No.	Details	2009-10		2010-11 Upto 31.12.10 (Provisional)		2010-11 (Jan.-Mar'11) Estimated	
	Sales	Quantity (Tonnes)	Value ₹ Crores	Quantity (Tonnes)	Value ₹ Crores	Quantity (Tonnes)	Value ₹ Crores
1	Manganese Ore						
	Domestic	1175230	910.09	721571	814.18	367420	255.71
	Export	-	-	-	-	-	-
	Total	1175230	910.09	721571	814.18	367420	255.71
2	EMD	857	5.80	707	4.82	130	0.89
3	Ferro Manganese	7479	40.27	6538	43.17	2462	14.59
4	Other income*	-	145.57	-	93.39		9.73
5	Grand Total		1101.73		955.56		280.92

* including sale of Electricity

4.6.4 Cost Reduction Plans

The Company has introduced following cost reduction measures:

- Proper manpower planning and introduction of Voluntary Retirement Scheme to reduce surplus manpower.
- Judicious mechanization of various mining operation to improve the overall production and productivity thereby reducing cost per ton ultimately.
- Implementation of benchmarks so fixed for consumption of major consumables such as Steel, Cement, Explosives, Spares, POL etc.

4.7 MSTC Ltd.

MSTC Limited formerly known as Metal Scrap Trading Corporation Limited was set up in September 1964 for regulating export of ferrous scrap from India. The status of the Company underwent a change in February 1974 and it was made a subsidiary of Steel Authority of India (SAIL). In the year 1982-83, the Corporation was converted into an independent PSU under the Ministry of Steel. It was the canalizing agency for import of carbon steel melting scrap, sponge iron, hot briquetted iron and re-rollable scrap till February 1992. It was also the canalizing agency for import of old ships for breaking, import of which was decanalized and put under OGL with effect from August 1991.

Presently, the company undertakes trading activities, e-commerce, disposal of ferrous & non-ferrous scrap, surplus stores and other secondary arising generated mostly from Public Sector Undertakings and Govt. Departments, including Ministry of Defence. The Company also undertakes import of raw materials in bulk required by large industrial houses on back-to-back basis. The items of import include petroleum products, LAM Coke, Coking Coal, DR Pellets, HR Coils and Melting Scrap etc. It also undertakes trading in items within the country in competition with any other private trader

4.7.1 Capital Structure And Share Holding Pattern :

As on 31.03.2010, the Authorised Capital of the Company is 50,00,000 Equity Share of ₹ 10/- each (of ₹ 5.00 Crore) and Paid up Capital 22,00,000 Equity Share of ₹ 10/- each (of ₹ 2.20 Crore). Bonus Share issued at 1:1 in 1993-94.

The share holding pattern of the company is as below:

Sl. No.	Name of Share holder	% of Holding
1.	Government of India	89.85
2.	Others	10.15
	Total	100.00



4.8 Ferro Scrap Nigam Ltd. (FSNL)

FSNL is a wholly owned subsidiary of MSTC Ltd. with a paid up capital of ₹ 200 lakhs. The Company undertakes the recovery and processing of scrap from slag and refuse dumps in the nine steel plants at Rourkela, Burnpur, Bhilai, Bokaro, Durgapur, Visakhapatnam, Dolvi, Duburi and Ranchi. 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 and 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.



An FSNL employee carrying out lancing operations

4.8.1 Physical performance

The production performance of FSNL for the last two years and for the year 2010-11 (upto December 2010) is given below:

Item	2008-09	2009-10	2010-11* (April-Dec)	2010-11 (Jan-March- Estimated)
Recovery of scrap (lakh metric tonne)	22.63	23.71	19.62	6.50
Market Value of Production (₹ in crore)	995.82	1043.40	863.10	286.00
* Provisional				



4.8.2 Financial performance

Item	2008-09	2009-10	2010-11* (April-Dec)	(₹ in lakhs) 2010-11 (Jan-March- Estimated)
Total Turnover i.e, Service charge realised including misc. Income,etc.	13730.33	15861.01	11787.00	4713.00
Gross Margin Before Interest & Depre.ciation	1683.17	2119.28	1121.98	308.02
Interest & Depreciation	1251.96	1543.29	1036.14	243.86
Profit Before Tax	431.21	576.00	85.84	64.16
* Provisional				

4.9 Hindustan Steelworks Construction Limited (HSCL)

Hindustan Steelworks Construction Limited (HSCL) is one of the major construction agencies in the Public Sector established in 1964 under the administrative control of Ministry of Steel. The mandate for its incorporation was to mobilize indigenous capability for putting up integrated steel plants in the country. The organization rose to the occasion and successfully met the challenge by bringing together competent human resources and mobilizing a fleet of updated construction equipment. Since then, there has been no looking back. In the years that followed, HSCL contributed immensely in setting up of almost every major steel plant in India. As the Company grew in resources and expertise, it diversified in other areas like Power Plants, Mining Projects, Irrigation Projects including Dams and Barrages, Oil Refineries, Railways, Airports, Buildings and Commercial Complexes, Rural Roads, Highways, Flyovers, minor and major Bridges for Railways and Road traffic, infrastructure for Educational Institutions, Health Centers and Hospitals etc. The Company undertook and successfully completed a number of Turn Key Projects also for various clients. Today, HSCL is an ISO 9001-2008 Company and its capabilities cover almost every field of construction activities.

At present the Company is crying out a number of project packages under the capacity expansion programme of SAIL and RINL along with regular Operation and Maintenance jobs of these plants. The Company has a plan to secure more and more up coming high value Civil and Structural Packages in Steel Plants during the 11th Plan. Besides this, the Company is in execution of major Infrastructure projects in diversified sectors all over the country.

In the Infrastructure, HSCL is currently executing major projects in NTPC Power Plants at Sipat, and Vindhyachal and UPRVNL Power Plant at Anpara, Railway embankments with minor and bridges and workshops, School Building projects of KVS, NVS and other Building and Commercial Complexes under State Government Departments and PSUs,. HSCL has diversified its business activities in Road Sector under PMGSY and State Government Departments. The Company has also successfully ventured in to high value disaster management project of Kosi and River training project of Bagmati in Bihar under Water Resources Department.

In the construction of rural roads, the Company has a proud privilege of participating in the Bharat Nirman Programme of Govt. of India in the North Eastern State of Tripura under PMGSY. HSCL has been working as a Project Implementation Unit there with the responsibility starting from preparation of DPR to the maintenance of the roads for five years after construction. The present value of work is about ₹ 500 crore in Tripura, which is likely to go up to ₹ 750 crore in phases. The performance of the Company in Tripura has been acclaimed by the Ministry of Rural Development. In the state of Jharkhand also HSCL has been nominated as one of the PIUs for taking up construction of about 1400 km of rural roads under PMGSY. DPR for this project has so far been approved for ₹ 243 crore by NRRDA. The value is expected to go up to ₹ 500 crore. The work in Jharkhand is also progressing well.



Besides these, HSCL has a wide exposure in construction of hospital and health care projects including design and consultancy in several states of the country. The turnkey project of National Institute of Epidemiology at Chennai, implemented by the Company, earned wide acclaim from one and all. The Primate Breeding project at ICMR Mumbai is also being executed by HSCL. Two District Hospitals and fifteen Health Centers in the state of Jharkhand and three major 150 bedded and one 100 bedded District Hospitals in Tripura with allied facilities are also being implemented by the Company with total involvement from design & consultancy to construction. The award of ₹ 769 crore 500 bedded ESIC Medical and Dental College at Gulbarga, Karnataka, under Ministry of Labour and Employment, in favour of HSCL as a PIU, confirms without ambiguity the high level of confidence bestowed on the credibility of the Company by the valued customers. Three more Hospitals and one Auditorium have also been awarded to HSCL by ESIC in Karnataka based on the performance at Gulbarga.

4.9.1 Capital Structure

The authorised and paid-up share capital as on date are ₹ 150.00 crore and ₹ 117.10 crore respectively.

4.9.2 Financial Performance

Starting with a modest ₹ 5.00 crore in 1965-66, the company achieved a turnover of ₹ 800.00 crore in 2009-10.

4.10 MECON Ltd.

MECON Limited, a Miniratna PSU under Ministry of Steel, is a premier multi disciplinary design, engineering, consultancy and contracting organization in the field of Metal, Power, Oil & Gas and Infrastructure sectors. MECON's mission is to provide technical consultancy - design and engineering; design and supply of plant, equipment and systems; implementation of new industrial ventures from concept to commissioning.

The past few years have been landmark years for MECON because the company made many outstanding achievements in terms of engineering excellence. MECON has successfully turned many highly ambitious dream projects into reality. Second Launching Pad at Shriharikota, India's first indigenous launching pad at Satish Dhawan Space Centre, SHAR; Geo-Technical Centrifuge Facility at IIT Bombay, the 6th of its kind in the world, funded by DST, DRDO & Ministry of HRD; Coal Handling Facility from Ennore Berth to TNEB Power Plant, Asia's biggest Coal Handling facility from harbour to Power Plant with belt conveyor system of 11 kms. and capacity of 2 X 4000 tph; Project Seabird of Indian Navy, India's 1st Ship repair facility are to name a few recent ones.

Presently MECON is involved in almost all the mega steel projects in India both in public and private sectors. The company is also deeply entrenched in other fields of diversification being Power, Oil & Gas and Infrastructure and is involved in large number of assignments in public and private sectors. The company is continuing its endeavor to assimilate the state-of-the-art technologies in the up coming projects.

Along with India MECON has spread its wings in International market also by providing quality design, engineering & consultancy services for about 130 projects in different countries like Qatar, Saudi Arabia, Oman, UAE, Vietnam, USA, etc. MECON has an overseas office in Nigeria, and was engaged for engineering & Consultancy Services for 1.0 Mt/yr Integrated Steel Plant at Ajaokuta & Warri (Delta) Steel Company.

MECON's financial growth has been incremental and remarkable over the years. MECON's turnover during FY 2009-10 was ₹ 604.78 crores. This has increased almost three and a half times in the last six years. There has also been remarkable improvement in the net profit of the Company, which has gone up from ₹ 10.73 crores (during 2004-05) to ₹ 124.7 crores (during 2009-10), which is almost an increase of twelve times. The Company has turned its net worth positive as on 31.03.2008 and the present net worth of the Company is ₹ 113.95 crores as on 31.03.2010. More importantly the Company has successfully wiped off its accumulated loss as on 30.09.2009.



MECON's exemplary contribution to the area of Engineering & Design Consultancy Services has been recognized by esteemed Institutions and Associations at National and International level over the years. The Standing Conference of Public Enterprises (SCOPE) awarded MECON for "Excellence and Outstanding Contribution to the Public Sector Management" for the year 2008-09 and Department of Public Enterprise (DPE) felicitated MECON with "MoU Excellence Award". The honorable Prime Minister of India presented these awards to CMD, MECON on 15th December 2010. Apart from above MECON has also bagged two prestigious National Awards in 2010 namely the SAIL Gold Award-2010 and the Sir M. Visvesvaraya Gold Award-2010.

4.11 KIOCL Ltd.

KIOCL Limited (formerly Kudremukh Iron Ore Company Limited), an 100% EOU, ISO 9001-2008, ISO 14001-2004 and ISI 18001-2002 Company was established in April, 1976 to meet the long term requirements of Iran. An Iron Ore Concentrate Plant of 7.5 million tonne capacity was set up at Kudremukh. This project was to be financed in full by Iran. However, as Iran stopped further loan disbursements after paying US \$ 255 million, the project was completed as per schedule with the funds provided by Government of India.

While the project was commissioned on schedule, consequent upon the political developments in Iran, they did not lift any quantity of Concentrate. As a diversification measure, the Government approved the construction of a 3 million tonne per year capacity Pellet Plant in Mangalore in May, 1981. The capacity of the Pellet Plant was increased to 3.5 million tonne with additions/modifications. The plant went into commercial production in 1987 and is now exporting Iron Ore Pellets to China and also to domestic units such as Ispat Industries Limited and SAL Steel Limited. Consequent upon the Hon'ble Supreme Court's verdict, Mining was stopped at Kudremukh with effect from 31.12.2005 and Pellet Plant is operated with Hematite Iron Ore purchased from NMDC.

4.11.1 Production

The target set for production during the year 2010-11 is 2.78 million tonne of Pellets. Target set for production upto December 2010 was 1.995 million tonne. Actual production upto December 2010 was 1.398 million tonne which represents 70% target fulfilment. There was shortfall in production of Pellets upto December 2010. The shortfall is because of the pellet plant had intermittently stopped due to low demand either at DTA market or in the overseas market and shed full condition.

The target set for production of Pig Iron including Auxiliary during 2010-11 and upto December 2010 is 1,00,000 tonnes. Due to uneconomical reason and generating negative contribution, Blast Furnace Unit is kept under suspension w.e.f. 5.8.2009. As such, no production has made during the year.

4.11.2 Despatches

For the year 2010-11, a target of 2.78 million tonnes of Pellets has been fixed. Target set for despatch upto December 2010 is 2.00 million tonnes. Actual shipment upto December 2010 is 1.346 million tonnes of Pellets representing 67% achievement of the target. There is shortfall in export of Pellets upto December 2010 during the year 2010-11. The shortfall in export of pellets is on account due to 15% Export Duty levied on sale of pellets to overseas buyers and also lower demand.

The target set for despatch of Pig Iron including auxiliary during the year 2010-11 is 1,00,000 tonnes. Target set for sale of Pig Iron upto December 2010 is 67,000 tonnes. Actual sales upto December 2010 was 18,186 tonnes which represents 27% achievement of the target. The production activity at BFU is kept under suspension and now, the Company is selling only the closing stock available at the end of previous financial year.

Budgeted sales for the year 2010-11 are ₹ 2000.81 crores. Targeted sales upto December 2010 was ₹ 1252.25 crores. Actual sales upto December 2010 was ₹ 1191.52 crores representing 95% of the target.



The Sales revenue during the last five years and upto December 2010 during 2010-11 is as under:

Year	Concentrate ¹	Pellets	Blast Furnace Unit ²	(₹ in lakh) Total
2010-11 (Jan-March) (Estimated)	-	80117	812	80929
2010-11 (April-December)	-	114192	4960	119152
2009-10	-	79226	20046	99272
2008-09	-	99410	23488	122898
2007-08	-	117385	35626	153011
2006-07	-	26744	-	26744
2005-06	12091	111137	-	123228
<i>Note: 1. The Company had stopped producing concentrate after the closure of Kudremukh Iron Ore Mine w.e.f. 1.1.2006. 2. The erstwhile Kudremukh Iron & Steel Company Limited merged with the Company with effect from 1st April, 2007, hence information furnished from the year 2007-08 onwards.</i>				

4.11.3 Financial performance

An overview of the performance of KIOCL during the year 2010-11 upto December, 2010 and estimated Jan-March of 2010-11, together with actuals for the previous three years, is indicated below:

Particulars	2007-08	2008-09	2009-10	2010-11 (April- Dec. 2010) (Actual)	(₹ in lakhs) 2010-11 (Jan-March - Estimated)
Total value of Sales	153011	122898	99272	119152	80929
Gross Margin	21174	6767	(-)13464	8101	1395
Profit after Tax	10816	2201	17727	3083	441
<i>Note: The erstwhile Kudremukh Iron & Steel Company Limited merged with the Company with effect from 1st April, 2007, hence financial information furnished above includes financial performance of Blast Furnace unit for the year 2007-08 onwards.</i>					

4.12 Bird Group of Companies (BGC)

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 with effect from 25th October, 1980 by virtue of the Bird & Company Limited (Acquisition & Transfer of Undertakings & other Properties) Act, 1980 and are collectively called the Bird Group of Companies (BGC) :-

- i) Eastern Investments Limited (EIL)
- ii) The Orissa Minerals Development Company Limited. (OMDC)
- iii) The Bisra Stone Lime Company Limited. (BSLC)



iv) The Karanpura Development Company Limited. (KDCL)

v) Scott & Saxby Ltd.(SSL)

vi) Burrakar Coal Company Limited (Burrakar)

vii) Borrea Coal Company Limited (Borrea)

The status of these companies are as under:

- Of the above seven Companies, the first three Companies i.e. EIL, OMDC & BSLC are in operation and the other four Companies i.e. KDCL, SSL, Burrakar & Borrea are under liquidation.
- Burrakar and Borrea Coal Company become non-operational after nationalization of coal mines. The two companies are under liquidation and the official liquidator has taken over the assets and liabilities of these companies.
- KDCL and SSL are also under liquidation consequent to the Cabinet decision on restructuring of Bird Group of Companies. The official liquidator has taken over the assets and liabilities of these two companies.
- The Union Cabinet in its meeting held on 10th September, 2009 approved the restructuring plan of Bird Group of Companies. The restructuring proposal envisaged converting companies under BGC into Government Companies/ Public Sector Undertakings and vesting their strategic control to RINL in a subsidiary cum holding structure. It envisaged to make The Orissa Minerals Development Company (OMDC) and The Bisra Stone Lime Company (BSLC) subsidiary Companies of Eastern Investments Ltd (EIL), winding up of Karanpura Development Company Ltd. (KDCL) and Scott & Saxby Ltd. (SSL), waiver of outstanding Government loans and interest in respect of Companies under Bird Group, conversion of Government loan into equity of BSLC. Thereafter, EIL to be made a subsidiary of Rashtriya Ispat Nigam Limited (RINL) thus bringing EIL, OMDC and BSLC under the umbrella of RINL in order to make these companies economically viable and sustainable. The commercially unviable companies viz. KDCL & SSL were proposed to be wound up and their employees to be adjusted in other sister companies under the Group or would be offered Voluntary Retirement Scheme (VRS). The above Cabinet decisions regarding restructuring of BGC have been implemented. EIL has become the holding company of OMDC and BSLC and RINL has now become the holding company of EIL.

4.12.1 Performance of the individual operating companies

(a) Eastern Investment Limited (EIL)

EIL is an investment Company and is the holding company of OMDC and BSLC. OMDC and BSLC are mining companies. The Authorised Capital of the company is ₹ 13.50 crores and Paid up Capital is ₹ 1.44 crores.

The financial performance of the company is given below:

	2007-08	2008-09	2009-10	(₹ in crores) 2010-11 Apr-Dec (Prov.)
Income	10.51	10.19	12.18	6.46
PBT	10.17	10.04	11.93	6.28
Net Profit (PAT)	9.67	9.19	11.07	6.06

(b) The Orissa Minerals Development Company Limited (OMDC)

OMDC is operating six mining leases of Iron ore and Manganese ore in the State of Orissa. This is one of the oldest mining company of Iron ore and second to NMDC in mining of iron ore under the Central



Government. OMDC mines are located in the tribal area of Keonjhar District and are major source of employment to the tribal people. The OMDC is a major supplier of raw material to steel companies/sponge iron units in the non captive sector primarily in the states of Orissa, Jharkhand and West Bengal. The company has installed four crushing and screening plants for supply of sized and calibrated iron ore to the customers. The company has also set up a small sponge iron plant at Thakurani in 2004. The company has plan for diversification and value addition. It is planning to set up 2 million ton per annum (MTPA) beneficiation and 2 MTPA pellet plant at Barbil, Orissa. It has also plans to increase the production upto 10 million tons of Iron ore and 1 million tons of Manganese ore in next few years.

The Authorised as well as Paid up Capital of the Company is ₹ 0.60 crores.

Physical Performance (in Lakh Tons) of OMDC

Particulars	2007-08	2008-09	2009-10	2010-11 (Apr-Dec) (Prov)
PRODUCTION				
Iron Ore	17.28	16.60	5.64	0.66
MN Ore	0.82	0.32	0.17	0.13
Sponge Iron	0.11	0.03	0.08	0.02
TOTAL	18.21	16.95	5.89	0.81
DISPATCH				
Iron Ore	16.63	17.34	6.43	2.00
MN Ore	0.86	0.26	0.19	0.07
Sponge Iron	0.17	0.02	0.06	0.04
TOTAL	17.66	17.62	6.68	1.61

Financial Performance of OMDC

	2007-08	2008-09	2009-10	(₹ in Crores) 2010-11 (Apr-Dec) (Prov)
Sales	246.31	271.81	82.35	41.52
Other Income	55.46	75.08	73.55	36.42
Profit Before Tax	224.46	286.24	112.26	19.78
Profit After Tax	148.84	181.81	74.44	11.58

(c) The Bisra Stone Lime Company Limited (BSLC)

BSLC is operating one lease of limestone and dolomite in Sundargarh District of the State of Orissa. It supplies limestone and dolomite mainly to SAIL steel plants located in the eastern region. It also has plans for increasing the production capacity upto 5 million tons by modernizing mining operations and increasing the number of crushers. This is a century old company and is a major source of employment to the tribal people in the area.

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The Authorised Capital of the company is ₹ 87.50 crores and Paid up Capital is ₹ 87.29 crores.

Physical Performance (In Lakh Tonnes) of BSLC

	2007-08	2008-09	2009-10	(₹ in Crores) 2010-11 (Apr-Dec) (Prov)
PRODUCTION				
Limestone	2.83	2.06	2.09	1.12
Dolomite	8.31	8.64	9.56	6.29
TOTAL	11.14	10.70	11.65	7.41
DISPATCH				
Limestone	2.42	2.02	2.44	1.83
Dolomite	8.27	7.95	9.26	6.28
TOTAL	10.69	9.97	11.70	8.11

Financial Performance of BSLC

	2007-08	2008-09	2009-10	(₹ in Crores) 2010-11 (Apr-Dec) (Prov)
Sales	46.32	48.93	56.88	44.13
Gross Margin before depreciation & Interest on Government Loan	1.21	5.46	621.42*	(3.45)
Interest on Government Loan	82.19	96.23	NIL	NIL
Net Profit / (Loss)	(81.61)	(91.38)	620.63*	(3.89)
<p>* Note: (i) Abnormal Profit has arose during 2009-10 due to waiver of accumulated interest on Govt. Loan to the tune of ₹ 624.20 Crores as per approved Restructuring Scheme.</p> <p>(ii) Income Tax likely to arise due to waiver of interest assessed to be about ₹ 117.82 crores has not been taken into consideration as it is to be waived as per the scheme.</p>				



CHAPTER-V

PRIVATE SECTOR

5.1 Introduction

The private sector of the Steel Industry is currently playing an important role in production and growth of steel industry in the country. The private sector units consist of both major steel producers on one hand and relatively smaller and medium scale units such as Sponge iron plants, Mini Blast Furnace units, Electric Arc Furnaces, Induction Furnaces, Re-rolling Mills, Cold-rolling Mills and Coating units on the other. They not only play an important role in production of primary and secondary steel, but also contribute substantial value addition in terms of quality, innovation and cost effectiveness. A brief report on activities of some of the major steel companies is furnished below, based on the input furnished by the respective companies.

5.2 TATA Steel Ltd.

TATA Steel has an integrated steel plant, with an annual crude steel making capacity of 6.8 million tonne, located at Jamshedpur, Jharkhand. The crude steel production of TATA Steel during the period April-December 2010-11 is 5.81 million tonne. As part of the Brownfield expansion project, TATA Steel has commissioned H Blast Furnace in May 2008, as part of 1.8 million tonne growth plan to reach capacity of 6.8 million tonne. TATA Steel is continuing with its programme of expansion of hot metal and steel making capacity by 3 million tonne to reach 10 million tonne. Crude steel capacity as on March 31, 2009 was 6.8 million tonne (Jamshedpur works). Tata Steel has also envisaged massive expansion of its capacities through various greenfield projects at Saraikela (Jharkhand), Kalinganagar (Orissa) and Bastar (Chhattisgarh).

5.3 JSW Steel Ltd.

JSW Steel is today an integrated steel manufacturer and is the largest private sector steel manufacturer in terms of installed capacity.

In 1994, in order to achieve the vision of moving up the value chain and building a strong, resilient company, Jindal Vijayanagar Steel Ltd. (JVSL) was setup, with its plant 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 is well connected with both the Goa and Chennai ports.

JSW Steel is one of the lowest cost steel producers in the world. It has established a strong presence in the global value-added steel segment with the acquisition of steel mill in US and a service center in UK. JSW Steel has also formed a joint venture for setting up a steel plant in Georgia. The Company has also tied up with JFE Steel Corp, Japan for manufacturing the high grade automotive steel. JSW Steel has recently acquired a controlling stake in Ispat Industries Ltd. The Company has also acquired mining assets in Chile, USA and Mozambique.

JSW Steel offers the entire gamut of steel products - Hot Rolled, Cold Rolled, Galvanized, Galvalume, Pre-painted Galvanised, Pre-painted Galvalume, TMT Rebars, Wire Rods & Special Steel Bars, Rounds & Blooms. JSW Steel has manufacturing facilities at Toranagallu in Karnataka, Vasind & Tarapur in Maharashtra and Salem in Tamil Nadu.

5.4 Jindal Steel & Power Ltd.

Jindal Steel & Power Limited is one of the fast growing major steel units in the country. Raigarh plant of JSPL has a present capacity of 1.37 MTPA sponge iron plant, 2.40 MTPA Steel Melting Shop (SMS), 1.0 MTPA Plant Mill, 2.30 sinter plant, 0.8 MTPA coke oven and a 330 MW captive power plant.

5.4.1 Capacity addition plan at Raigarh

Enhancement of the present steel capacity from 2.4 million tonne to 6.0 MT in a phased manner by 2011 will incorporate:

- 2.0 MT gas based Direct Reduced Iron (DRI) producing gas by coal gasification



Panoramic view of JSW Steel Plant at Vijayanagar

- 4000 cubic metre blast furnace
- 3 MT steel melting shop with electric arc furnace route and thin slab caster.
- Hot strip mill (compact strip product technology).
- Cement plant to consume the blast furnace slag.
- 4X135 MW power plant increasing the capacity to 840 Mega Watt (MW).

Jindal Steel and Power Ltd. has plans for expansion of its Raigarh plant to a capacity of 6.0 MTPA. It also has plans for two Greenfield projects in Orissa and Jharkhand with proposed capacity of 6.0 MTPA each, in the first phase.

5.4.2 JSPL expanding horizons

Jindal Steel & Power Limited is setting up a 10 MTPA Pellet Plant at Barbil, Orissa based on huge stocks of iron ore fines lying with various Iron Ore Mines in Orissa. The first module of 5 MTPA is undergoing trial runs since January, 2010. This project aims to conserve precious iron ore reserves of the country by converting unused fines into pellets for usage in DRI production.

The Pellet Plant would be using producer gas derived from coal for its energy requirement to keep its production cost contained and free from fluctuations of petroleum based fuels. The Company has also commenced hot trials of its 0.6 MTPA Wire Rod Mill at Patratu, Jharkhand. Also the Company is setting up a 6 MTPA Steel Plant at Patratu.

5.5 Essar Steel Ltd. (ESL)

Recovering from the effects of the global meltdown, Essar produced 3.39 MT flat product and achieved a sales of 3.24 MT showing an improvement of 8% and 6% respectively over the last fiscal. Sales were on lower side in Q II & Q III on account of Raw Material shortage to sustain Hazira operations. Transportation by the slurry pipe line from Kirandul to Vizag was suspended from May 09 as the same was damaged at various locations. Repair work was initiated with difficulty due to inhospitable terrain, monsoon and resistance from local population.



Essar Steel Plant (Hazira Gujarat)

To maintain the sustainable production of pellets at the Company's pelletisation plant at Visakhapatnam, production of steel at its plant at Hazira and augment the shortage of slurry, the company made alternative arrangements like movement of Iron ore fines through railway rakes, purchase of iron ore fines from sources other than NMDC and procurement of products like pellets, DRI and Slabs. The production levels picked up again to plan levels in the last quarter. The company has restarted the pipeline from Nov 10. With a fluctuating raw material input, some steps taken were:

- 1st time in the history of Midrex modules that BF grade pellet was used.
- Stabilisation of pellet quality in the backdrop of a fluctuating input.
- Increase in usage of Hot DRI to 66.1% resulting in further saving power at Steel Melt Shop.
- Umbrella agreement on Quality and capability improvement with Kobe Steel, Japan was extended to encompass development of skin panels.
- Discussions initiated for joint venture in the field of further value addition in CRCA by adding Continuous Annealing in the product portfolio.

5.5.1 Project:

Essar Steel Limited is expanding its production capacity at its Hazira plant to a capacity of nearly 10 million tonnes. Moreover, Essar has plans to set up steel units in other parts of the country for 6.0 million tonnes at Paradip in Orissa, 3.0 million tonnes in Jharkhand, 3.2 million tonnes in Chhattisgarh and 6.0 million tonnes in Karnataka. The iron iron slurry pipeline work of Essar Steel, from Barbil to Paradip (Orissa) is also under execution.

5.6 Ispat Industries Ltd.

Ispat Industries Ltd. (IIL) has set up one of the largest integrated steel plants in the private sector in India at Dolvi in Raigad district, Maharashtra, with a capacity to manufacture 3 million tonnes per annum of Hot Rolled Steel Coils (HRC). The Dolvi complex also boasts of an ultra modern blast furnace (set up by a group company Ispat Metallics India Limited) capable of producing 2 million tonnes per annum of hot metal/pig iron, 2 million tonne capacity sinter plant (newly commissioned) and a DRI plant with a capacity of 1.6 MTPA.

The integrated steel plant uses the Converter cum Electric Arc Furnace Route (CONARC process) for producing steel. In this project, IIL have uniquely combined the usage of hot metal and DRI (sponge iron) in the electric arc furnace for production of liquid steel for the first time in India. For casting and rolling of liquid steel, IIL has the state-of-the art technology called compact strip production (CSP) process, which has been installed for the first time in India and produces high quality and specifically very thin gauges of Hot Rolled Coil.

5.7 Bhushan Power & Steel Ltd.

Bhushan Power & Steel Ltd., is 37 years old steel manufacturing & processing company. Presently, the company is having units in Chandigarh & Derabassi, one in Kolkata and the group owns three overseas plants in Nepal, Nigeria & Sudan. The company has successfully implemented fully integrated steel plant of 1.80 MTPA in Village Thelkoloi, tehsil Rengali, Dist Sambalpur, Orissa. Currently, the company is producing 1.80 MTPA of steel. The company is further expanding the capacity from 1.80 MTPA to 2.30 MTPA.

The current configuration of Integrated Steel Plant at Orissa is to manufacture 2.30 mtpa steel through Blast Furnace of 1008 m³ of 0.70 MTPA, with Sinter Plant of 1.0 MTPA, DRI Songe Kilns of 1.40 MTPA, one Coke Oven Plant of 0.45 MTPA, CSP plant (HR Mill) of 1.70 MTPA, Wire Rod & Bar Mill of 0.45 MTPA and Billet Caster. Presently, the company is manufacturing Sponge Iron, Billets, Pig Iron, HR Coils and CR Coils / Sheets in Orissa Plant.

Eight DRI Kilns of 500 TPD are already in production and setting up of six more Sponge Iron Kilns of 500 TPD each has been planned. The Company is also setting up Galvanising, Galvolume, Colour Coating, Precision Tube, Black Pipe & GI Pipe. The company is going one step backward and planning to set up Iron Ore Beneficiation Plant of 6.50 MTPA, Pellet Plant of 3.8 MTPA and further value added products both flat and long.

5.8 Bhushan Steel Ltd.

Bhushan Steel Limited (earlier known as Bhushan Steel and Strips Limited) - "Bhushan Steel" or "BSL", was established in 1989, and is engaged in the business of steel manufacturing, steel processing and allied activities. It is the market leader in the secondary steel sector for cold rolled (CR) products and the third largest player in the CR segment in India.

Currently, the company is implementing the integrated steel plant with a capacity of 3 MTPA at Meramandli in Orissa. The company has plans to enhance the capacity of the Orissa project from 1.90 MTPA of HR coils to 3.60 MTPA and total steel making from 3.0 MTPA to 6.0 MTPA.

5.9 Secondary Small & Medium Steel Sector

5.9.1 Electric Arc Furnace Industry

Presently, there are 38 Electric Arc Furnace based steel plants working in the country with an aggregate capacity of 18.041 million tonnes per annum. Apart from the working units, there is one unit, which is closed. Production of Ingots/Concast Billets by EAF units, which have been reporting their production to Joint Plant Committee, during 2009-10 (prov.) was 15.48 million tonnes as compared to 14.15 million tonnes during 2008-09, registering a growth of 9.4%. This sector continued to be under constraint of rising cost of inputs, increasing power tariffs, shortage of power & resource crunch.

5.9.2 Induction Furnace Industry

During 2009-10 (prov.), it is estimated that 1114 units with a capacity of 24.40 million tonnes were in operation. The total production of induction furnace units registered a growth of 10% during 2009-10, producing 19.86 million tonnes against a production of 18.05 million tonnes in 2008-09, as reported to Joint Plant Committee.



5.9.3 Performance of EAF based steel plants

- **Status (2009-10, prov)**

	Number	Capacity (<i>in million tonnes</i>)
Commissioned Units	39	18.041
Closed Units	1	0.05
Working Units	38	17.991
<i>(Source: JPC)</i>		

- **Production**

The Production of Electric Arc Furnace units as reported to Joint Plant Committee are as under: -

Category	2005-06	2006-07	2007-08	2008-09	(<i>in million tonne</i>)
					2009-10 (prov)
Mild Steel	4.31	5.06	6.13	9.03	11.91
Medium/High Carbon Steel	1.50	1.76	2.76	2.68	1.95
Alloy Steel	1.53	1.80	1.02	1.05	0.81
Stainless Steel	0.92	1.08	0.83	0.75	0.13
Others	0.04	0.05	0.06	0.64	0.68
Total Reported	8.30	9.75	10.67	14.15	15.48
Total Estimated	0.13	0.13	0.13	-	-
Grand Total	8.43	9.88	10.80	14.15	15.48
<i>(Source: JPC)</i>					



CHAPTER VI RESEARCH AND DEVELOPMENT



Research & Development work in progress in SAIL's Bhilai Steel Plant

6.1 Research & Development in Iron and Steel Sector

The work relating to Research & Development (R&D) in Iron & Steel sector is carried out mainly by the Steel Plants and Academic Institutions. Most of the R&D works in these plants, however, relate to incremental research addressing the day-to-day problems of the steel plants or the industry, and investment in large-scale R&D work for development of path-breaking innovative technologies has been limited. Naturally, R&D investment in steel sector as a whole remains very meagre and the actual investment in different steel companies as percentage of their turnover vary in the range of 0.15% to 0.3%.

Highlights of R&D initiatives by the Ministry of Steel:

In order to provide accelerated thrust on R&D, Ministry of Steel (MOS) is encouraging Research and Development activities both in public and private steel sectors. At present Ministry of Steel is implementing two schemes namely;

- (i) R&D with financial assistance from Steel Development Fund (SDF).
- (ii) R&D with financial assistance from Plan Fund.

6.1.1 R&D with financial assistance from SDF:

Government has constituted an Empowered Committee (EC) under the Chairmanship of Secretary (Steel) for approval and monitoring of R&D projects under this scheme. The EC has met 20 times and approved 64 R&D projects costing ₹ 519 crore (approx) with SDF assistance of ₹ 250 crore (approx). So far Ministry of Steel has released ₹ 139.17 crore from Steel Development Fund (SDF). Out of 64 R&D projects, 31 projects have been completed, 9 projects have been stopped after mid term review and 24 projects are in progress. The research areas covers design & development of new



technologies & production processes, reduction in raw material and energy consumption, development of Human Resources, utilization of waste materials, environment management and pollution control and development of new value added products. Results of some of the completed R&D projects have been implemented and the same are yielding benefits to the industry.

6.1.2 R&D with financial assistance from Plan Fund

Based on the recommendations of the Working Group on Steel Industry, a new scheme i.e. Scheme for Promotion of R&D in Iron and Steel Sector has taken off with an outlay of ₹ 118.00 crore for the 11th Five Year plan. Under this scheme, R&D is being pursued in three major areas namely (i) development of innovative/path breaking technologies (ii) beneficiation & utilizing Indian iron ore fines and non coking coal and (iii) improvement of quality of steels produced through induction furnace route.

There is a Project Approval and Monitoring Committee (PAMC) under the Chairmanship of Secretary (Steel) for approval and monitoring of R&D proposals/projects under this scheme. Further, for techno economic examination of proposals, there is a designated Panel of Experts (POE). Based on the comments of POE, Ministry of Steel shortlisted 9 R&D proposals which were placed before the PAMC. The PAMC has so far approved 8 R&D projects details of which are given below:

1. Improvement in sinter productivity through deep beneficiation and agglomeration technologies for rational utilization of low grade iron ores and fines: by National Metallurgical Laboratory, Jamshedpur.
2. Alternate Complementary Route of Iron/steel making with reference to Indian raw material viz. low grade iron ore and non coking coal: by National Metallurgical Laboratory, Jamshedpur.
3. Production of Low Phosphorus Steel Using DRI through Induction Furnace Route adopting innovative Fluxes and/or design (refractory) changes: by National Metallurgical Laboratory, Jamshedpur.



Testing in progress in the R&D Lab of Bhilai Steel Plant



4. Development of Futuristic Technology for carbon free iron production using alternate reductants like hydrogen with minimum or no CO₂ emission - Smelting reduction of iron ore / fines by hydrogen plasma and elimination of CO₂ emission: by Institute of Minerals and Materials Technology (IMMT), Bhubaneswar.
5. Beneficiation of iron ore slimes from Barsua and other Mines in India: by Research and Development Centre for Iron & Steel (RDCIS), SAIL, Ranchi.
6. Development of pilot scale pelletization technology for Indian Goethitic/ Hematite ores with varying degrees of fineness: by Research and Development Centre for Iron & Steel (RDCIS), SAIL, Ranchi.
7. CO₂ abatement in Iron and Steel production by process optimization: by Indian Institute of Technology (IIT), Kharagpur.
8. Production of Low Ash (10%) clean coal (coking and non coking) from high ash Indian coals including Beneficiation/ Desulphurization of North East Coal & recovery of Ultra Fine non coking coal from washery tailings: by Institute of Minerals and Materials Technology (IMMT), Bhuvneshwar.

The total cost of these projects is ₹ 143.87 crore. Out of this, Government funding will be ₹ 111.11 crore. So far Ministry of Steel has released around ₹ 24 crore for the above projects during 2009-10 and 2010-11. The projects are at initial stages of implementation.

6.2 Highlights of R&D in Iron and Steel Associate Companies :

6.2.1 Steel Authority of India Ltd. (SAIL)

Research & Development Centre for Iron & Steel (RDCIS) has undertaken 110 R&D projects in the current year 2010-2011, out of which 71 projects are scheduled for completion by March 2011. These projects provide technological inputs to SAIL plants / units with thrust on cost reduction, value addition, quality improvement and development of new products.

The Centre has filed 16 patents and 16 copyrights during April to November, 2010. As many as 58 technical papers were published and 63 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 ₹ 99.18 lakhs.

1. R&D Efforts and Achievements

Significant achievements of some of the completed projects, in different technology areas, are summarised below:

(i) Cost Competitiveness / Quality Improvement

● Development of Magnetic Plate Sinter Mix Charging System at Sinter Plant (SP) #2 at DSP

A novel system of the magnet based sinter mix charging has been designed and installed in SP#2 resulting in improvement of sinter strength, yield and also bed permeability. An increase in specific productivity of sinter machine from 1.24 to 1.38 t/m²/hr has been achieved. In addition, coke breeze consumption came down from 68 to 65 kg/t and reduction of -5mm fraction in sinter has also been observed.

● Improvement in Deoxidation and Ladle Refining Practice for Reduction in Consumption of Deoxidisers at SMS-I at RSP

To reduce the consumption of ferro-alloys, existing on-line purging system was modified and improved deoxidation practice was introduced. In all, 40 nos. of trials were carried out, which brought down the Al and Si-Mn consumption by 14% and 23% respectively for direct heats i.e. by-passing vacuum degassing units (Al: from 2.36 to 2.02 kg/t and Si-Mn: from 13.57 to 10.33 kg/t). The modified practice has now been implemented for regular production.

● Development of Auto Slow-down Function for Improvement in Productivity at Pickling Line-1, CRM at BSL

A LASER-based measurement and auto slow-down control system has been introduced at Pickling Line-1, Cold Rolling Mill, BSL. With introduction of new system the line speed of entry section has increased from 4.8 m/s to



6.2m/s and the idle time has also reduced. This has resulted in increasing in processing of coils from 4.47 to 5 coils/Hr.

- **Performance Improvement of One Wagon Tippler and Auto-Operation of Pump House 55 at RMHP at BSL**

A Variable Frequency Drive (VFD) based control system comprising of drives, VFD grade motors, encoders etc. has been commissioned in Wagon Tippler of Raw Material Handling Plant. Continuous jerkless tipping operation with accurate zero positioning of the wagon tipping platform has been established with braking almost at 5% of nominal speed. This has resulted smooth tippler movement and no electrical and mechanical breakdown.

(ii) Energy Conservation

- **Introduction of Energy Efficient Ignition System in Machine # 2, SP-1 at DSP**

The existing ignition system was replaced resulting in remarkable reduction in the specific heat consumption to the tune of 46% and the production rate also increased from 95.6 to 96.9 t/hr. Additionally, CO₂ emission has reduced by about 2,450 TPA.

- **Improving Thermal Efficiency of Ladle Heating System of BF at BSL**

An efficient heating system has been developed to achieve ladle temperature of about 1000°C in 10 hrs as against 600-650°C in 20 hrs with existing system. All three ladle heating stands have been modified with high velocity burner, air nozzle and compressed air ejector. Ladle covers and ladle burners have been insulated with ceramic fibre to protect it from over-heating.

- **Selection and Design of Combustion System for New In-House Built Normalizing Furnace of Plate Mill at BSP**

A new normalizing furnace was constructed by in-house expertise resulting in heat loss and increase in production of Normalised plates by about 25% i.e., from 18,000 t/month (average) to 23,000 t/month (average). In-house approach has led to a huge cost savings as the total cost is of the order of ₹ 32 crore as against the estimated value of ₹ 90 crore.



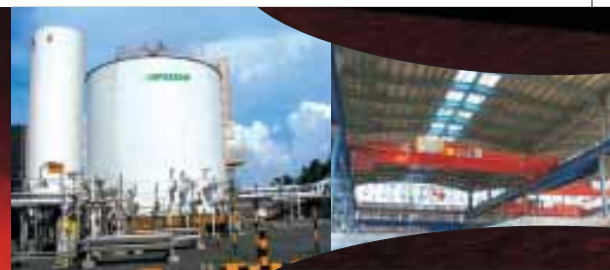
A Large Cylinder (1000 Litre Capacity) for Propane Gas made from High Strength Steel (EN 10028 P 355N).

(iii) New Products

RDCIS plays a lead role in the product development activities of SAIL. The criteria for selection of products for development are significant demand, ready market, good contribution margin and plant capability.

RDCIS, in close association with the SAIL plants, developed the following products:

- Thin gauge high strength (YS: 350 MPa min.) HR coils (thickness: <2.4mm) at BSL
- Boiler quality plates (ASTM A 387 Gr.12 Cl.II) at BSP
- Corrosion resistant TMT rebars at ISP
- High Strength Fine Grained HR Coil (YS: 500 / 550 MPa min.) for PEBM & Automobile Sectors at BSL
- High Strength Steel (EN 10028 P 355N) for Propane Gas Cylinders and EN 10149 S460 MC for Tubes at BSL
- High Strength formable Quality Steel (Ti Strengthened / IS 10748 Gr. V with Nb) at RSP
- Si-Al killed SAIL Tower Gr. 6 CC Blooms at DSP



- Al Killed SAIL Tower Gr. 6 CC Blooms at DSP
- Special Quality Roll Threaded Bolts at ISP
- SAILMA / High Tensile (Fe 410) Structurals at ISP
- High Tensile Plates with Improved Z-Ductility (includes Boiler / Structural Quality at BSP)
- Corrosion Resistant (Zn-Mg) Galvanized Sheets at RSP
- DMR 249 Gr. B (t : 30 mm and higher) at RSP
- Si-Al Killed SWR 14 / SWR 10 CC Blooms at DSP
- Al Killed SWR 14 / SWR 10 CC Blooms at DSP

Significant achievement on few products is enumerated as follows:

- Development of Special Steel Products (IS 10748 Gr. IV & V with Nb/ SAE 1541/ Ti Bearing High Strength Formable Quality) at RSP

New grades of special steel products, developed by RSP in association with RDCIS and CMO depending on market opportunity for various end-applications are listed below:

Products	Applications
IS 10748 Gr. V	Electric Poles, Tubes and Pipes
IS 5986 Fe 510 grade	High Mast Lighting Poles, Wind Poles, Camera Poles etc.
SAE 1541 grade	High Strength Straps for Jute Industry and Fork for Two Wheelers
MC 60 grade	Circlips, Spring Washers, Band Saw Blades for Wood Cutting, Circular Saws, Cross Cut Saws etc.

All the above difficult-to-cast grades have been developed successfully by optimizing the casting and hot rolling parameters. Customer's requirement has been assessed and the grades have been developed considering the plant's capability.

In all, 4865 tonnes of all these developed grades were dispatched as against a target of 4000 tonnes, facilitating an extra revenue generation in terms of 'Quality Extra'.

● Development of High Strength (YS 640 Mpa Min) Roof Bolt Quality TMT Bars at ISP

With a view to enlarge market share of special steel for ISP and to capture the niche market by value addition of the existing products, two products viz. rock bolt TMT bar of Fe 600 grade, and HCR TMT rebar were developed and IS 1786-Fe 500 D grade TMT rebar was commercialised.

About 2000t of rock bolt TMT bar of Fe 600 grade has been dispatched for different underground mines of Coal India Ltd. (CIL). This rebar can also be used for RCC building and tunnel construction. High strength corrosion resistant variety (HCR) TMT bar has also been successfully produced with Cu-Cr alloy having enhanced 'corrosion resistance index'. About 200 t of this material has been produced and marketed. As regards, IS:1786 Fe 500D grade TMT bar, more than 60,000T has been produced and marketed.

● Development of Improved Quality Corrosion Resistant Galvanized Sheets at RSP

In order to improve corrosion resistance of the conventional hot dip galvanized sheets, a new type of Zn-Mg coated galvanized sheet has been developed at Hot Dip Galvanizing Line (HDGL) of RSP. Zn-5%Mg and Zn-10%Mg alloy additions were made in the zinc pot to attain desired Mg-level. It has been found that the coils galvanized in bath composition of 0.23% Mg, 0.18% Al & 0.18% Pb resulted in the best combination of properties in terms of corrosion rate: 3.96 mpy (~1/3rd w.r.t conventional GI sheets: ~12 mpy); formability of the composite (Ev: 6.8 mm for sheet thickness of 0.50 mm) at par with substrate material; and coating adherence as per LFQ standard.



2. Expenditure on R&D during Last Three Years

(₹ in crore)					
Year	SAIL's turnover	R&D Expenditure			
		Capital	Revenue	Total	% of turnover
2008-09	48681	5.72	112.48	118.20	0.24
2009-10	43935	4.32	102.94	107.26	0.24
2010-11 (Apr-Sept)	21628	2.33	66.20	68.53	0.32

6.2.2 Rashtriya Ispat Nigam Ltd. (RINL)

At RINL, R&D initiatives are directed towards meeting the challenges and providing technical inputs to the plant. The focus for the R&D efforts is to meet the present and future requirements of the plant based on thrust areas like process improvement, waste management, cost reduction and environment protection.

Highlights of new technologies / practices brought in through R&D

- A project has been taken up to reduce break-outs in continuous casting of bloom.
- A project has been initiated for improving MgO-C brick quality to enhance the converter life
- New project has been taken up for preparation of metalized nuggets using Iron ore fines (-5mm) & metallurgical wastes
- Research projects in the area of nanotechnology have been taken up to develop protective coatings on refractories based on nanomaterials in order to improve life of refractories

Achievements in the field of R&D during the year 2010-11 are given below:

Process improvement:

- Pilot oven tests are conducted to study the suitability of usage of various coal blends in coke making.
- A project has been undertaken on Lance tip design for optimal performance of BOF and is in the final stages of completion.
- A study of coal flow problems in RMHP, TPP of VSP has been undertaken to avoid jamming of chutes / bunkers and for ensuring continuous flow of materials
- A project on mathematical modeling of sintering process has been taken up to develop an integral mathematical model of sintering and pelletisation process in order to obtain desired size distribution of sinter mix and optimum sintering parameters.

Waste Management:

- A technology has been established for briquetting of solid metallurgical wastes of Visakhapatnam Steel Plant to use them in blast furnace as a measure of waste utilisation
- A project on BOF slag granulation has been taken up in order to make useful products out of the waste generated during steel making.

Cost reduction:

- A project on revision of IS: 2879:1998 with respect to Aluminum Content in the core wire has been taken up and is under progress.
- A project has been taken up to reduce corrosion problem in BF/LD gas pipe line and also corrosion problem in the roof of benzol tank in order to increase the life and thereby reduce the cost.



Environment protection:

- Removal of CO₂ from flue gases of VSP using algae & thereby control emission of CO₂ into atmosphere & reduce global warming.
- Usage of LD slag as soil conditioner - this project is in the initial stages of discussion.

Development of new grades / products:

- Keeping in view the market demand and to meet specific customer requirement the following new grades / sections have been developed:
 - Fe500D in 20 mm rebar and 10 mm wire rod for the first time
 - 1008 DQ
 - SAE1020 in 65 mm billet section
 - IS2830Cu in 65 mm billet section
 - 27C15 in 14 mm plain section

Expenditure on R&D during last three years

Year	Turnover (₹ crores)	R&D expenditure (₹ crores)	R&D expenditure as a percentage of turnover
2008-09	10411	17.35	0.17
2009-10	10634	12.66	0.12
2010-11 * (till December)	7755	11.47	0.148
<i>*Budget for 2010-11 is ₹ 12 crore</i>			

6.2.3 NMDC Ltd.

Research & Development

From a nucleus R&D cell set up in 1970, it has grown into a highly sophisticated R&D Centre. One of the best-equipped laboratories of its kind, the Centre at Hyderabad can take up any assignment in the field of ore beneficiation and mineral processing. With its excellent research facilities, the Centre carries out technology development missions in fields like mineral processing, flow sheet development, mineralogical studies and product development. It has been recognized as a "Centre of Excellence". The major assignments taken by NMDC during the year 2010-11 are as follows:

Technology Development Projects

a) Utilization of BHJ/BHQ from Donimalai Iron Ore Project, Bellary:

The R&D Centre has taken up this project to develop the suitable process technology to use these ores like BHJ/ BHQ to steel making. Development of process flow sheet is completed. Based on process developed flow sheet, a demonstration plant is being set up at Donimalai Iron Ore Project, Bellary having capacity of crushing plant 0.36 MTPA and beneficiation plant of Iron Ore 0.118 MTPA.

b) Utilization of lean grade iron ore and BHQ from Bailadila sector:

Development of process flow sheet using beneficiation for the lean grade iron ore (<60% of Iron) and BHQ from Bailadila sector is under progress. After process development work, it is proposed to set up a commercial plant.



c) Utilization of slimes for Sinter and Pellets:

The beneficiation and pelletization studies were completed for optimization of various parameters for production of Blast furnace/DR grade pellets from slimes (which are generated during the course of sizing the ore).

d) Utilization of Blue dust

● Production of Carbon Free Sponge Iron Powder from Blue dust

A pilot plant of 300 TPA capacity for production of carbon free sponge iron powder has been created based on research work done on value addition of Blue dust.

● Nano Crystalline Powder from Blue Dust

This project has been initiated with an objective to develop high value material from blue dust. In this regard a process flow sheet has been developed and a trial quantity of powder produced and provided to industries for their evaluation and acceptance. Batch wise preparation will be continued and samples will be sent to potential customers for development of market and data will be generated for setting up a scaled up production unit.

e) Utilisation of Kimberlite Waste

Setting up of Pilot Plant for Commercialization of Precipitated Silica, Sodium Silicate and Zeolite- A:

A Memorandum of Understanding (MoU) has been signed between M/s Central Salt Marine Chemicals Research Institute (CSMCRI), M/s NMDC Ltd and M/s Kanoria Chemicals & Industries Ltd., to set up pilot plant for scaling up the process for production of value added silica based products from kimberlite tailings.

f) Apart from the works related to investigation/development/production projects of NMDC, various projects sponsored by other companies/PSUs are also being regularly taken up.

Expenditure on R&D during last three years:

Year	Turnover (₹ crores)	Expenditure on R&D (₹ crores)	R&D expenditure as percentage of turnover
2008-09	7564.09	20.61	0.18
2009-10	6239.09	13.82	0.22
2010-11 (Upto Dec'10)	7643.32	10.56	0.14

6.2.4 MOIL Limited

● Research & Development

The thrust areas for the R & D efforts are directed towards meeting the challenges of safe and cost effective mining practices in underground mines with increasing depth. The thrust is also being given in the R & D activities for the development of beneficiation and upgradation techniques in addition to exploration of the new deposits. The main areas where the R&D efforts of the company have been directed are as follows:-

- Development of safer and cost effective mining method.
- Development of new support system in underground workings and improving the existing supporting methods and practice.
- Introduction of controlled blasting practices for eco friendly mining.



- Sand stowing for filling underground voids fully with effective compactness.
- Technology development for production of manganese based value added product.
- Development of cost effective beneficiation technique for upgradation of minerals.
- Technical upgradation and automation for activities for productivity enhancement and safety improvement.
- Exploration of new deposits.

Key areas of technology upgradation undertaken in MOIL are :

i) Technologies developed in-house and fully adopted

- Pre-mining ground re-enforcement by cable bolting in underground mines replacing the earlier post mining support.
- Introduction of hydraulic sand stowing in the underground mines, replacing the earlier system of manual filling.
- Introduction of post pillar methods of mining to reduce the consumption of timber and the cost of supports in underground.
- Introduction of Side Discharge Loader (SDL) for mechanical handling of ore in stopes.
- Use of steel for construction of ore passes and manways in underground replacing the RCC ore passes and man ways.
- Online Motion Weigh Bridge at mines: MOIL presently are operating as electro-mechanical and digital. For the last few years, MOIL was observing that the weighment recorded at platform weigh bridges at Railway Sidings was not always recording factual readings since they were very old mechanical type and had over the years developed wear which led to inaccuracies in weighment. In additional to incurring financial losses on account of the same, MOIL was made to pay punitive charges. The online in motion weigh bridges have the capacity of 120 M.T.

ii) Projects for Technology Upgradation under R & D Stages

- Introduction of Open Stopping Method, signaling on an experimental basis in selected areas.
- Introduction of mechanical handling of ore with hanging type conveyer belt in SDL in working areas.
- Study for effective use of under size material generated during the process of mining.
- Optimization of the process parameters in EMD and Ferro Manganese Plant.
- Upgradation of the low grade of ore by different techniques of beneficiation.
- Instrumentation for sand & water mixing in sand stowing plant.
- Introduction of precast concrete slab for underground support.
- Mechanisation of ore loading into wagon.
- Automation of Signaling system in shaft
- Automation of Attendance Monitoring System.
- Introduction of "Energy Saving Device" in different Electrical Equipments.
- Rain Water Harvesting in selective areas.
- Exploration of Manganese Ore in the extended direction.

iii) R & D program for continuous improvement in the existing practices

- Rock Mechanics instrumentation and application of the recent advances in rock mechanics for monitoring ground behaviours in the underground mines.
- Diamond drilling to locate new deposits of manganese and to prove further reserves in the existing areas
- Pit slope stability studies in the open cast mines and optimisation of slope angles to reduce the development cost.



- Experimentation with mechanical handling of ROM in stops at Balaghat
- Blasting studies in the underground as well as open cast mines for optimization of blasting parameters for reduction in explosive consumption and blasting cost with an improvement of fragmentation of the blasted materials.
- Beneficiation studies for upgradation of Dongri Buzurg and Balaghat ROM
- Design of new roof and ground system in underground having weak and soft rock in hand wall and footwall. This will help in improving safety & productivity of mine by providing the scope of mechanization in the stop.
- Introduction of Electrical Winch, 0.5 MT capacity in underground mine.

(iv) Adoption of New Technologies under R & D for improvement in Production during 2010-11

- Optimisation of stope designs for productivity improvement.
- Studies of reclamation of waste dumps and investigations for other environmental protection measures.
- Studies for use of overburden material for filling material.
- Studies of control blasting techniques for safety.
- Studies for beneficiation of low grade ore.
- Development of alternative mining methods and support systems for underground mines.
- Introduction of Haul Dump Loaders in underground for ROM/ waste handling works.
- Modern technique of exploration - geo-physical by magnetic & gravity is adopted.
- Total Stations - High speed survey instrument with high accuracy level is introduced for maintaining accurate survey of mines.
- For the infrastructure development following projects are in operation:
- Sinking of vertical shafts at Gumgaon, Munsar, and Ukwa
- Deepening of shafts at Balaghat.

Expenditure on R&D expenditure during last three years:

Year	Turnover (₹ in Crores)	R & D Exp. (₹ in Crores)	R&D Exp. (% of turnover)
2008-09	1284.84	3.33	0.26
2009-10	965.47	2.88	0.298
2010-11 (Upto Dec' 10)	862.17	3.08	0.36

6.2.5 MECON Ltd.

R&D Projects Completed

- 3D Modeling and Numerical Simulation of Heat Transfer of Thermoelectric Cooling / Heating Helmet.
- Development for Caster Slag Detection through Imaging Technique.
- On-line Monitoring of Flue Gas(es)

On-going Projects

The project entitled "Development of thermoelectrically cooled / heated helmet for industrial applications was sanctioned by Ministry of Steel. The project started in July 2010 and is in progress as per schedule.

Patent under process :

- Patent entitled "Infrared imagery based slag detection system for basic oxygen furnace (BOF) Converter" has been filed.
- Patent entitled "Continuous NO_x Monitoring System" has been filed.
- Patent entitled "An Improved Stove for Blast Furnaces and a method of fabricating the same" has been filed.
- Patent entitled "Solid State / Thermoelectrically Heated Oil / Diesel Filter for Automobiles in cold Regions" has been filed.

6.2.6 Tata Steel Ltd.

Highlights of Research & Development undertaken by the company are given below:

- A new thin organic coating (TOC) and a novel application process for continuous application on galvanised (GI) tubes has been developed with our Tubes Division, Jamshedpur. The objective was to further improve the corrosion resistance and sustainability. The plant implementation is currently being carried out jointly with Tubes Division.
- An eco-friendly copper-free coating on electrode wires for the CO₂ gas metal arc welding process has been developed. The process has been successfully implemented in the plant and commercialisation of this product is actively being pursued.
- An improved snout atmosphere using wet HNx injection system in the continuous galvanizing line has been developed. The design and installation of the wet HNx system has shown substantial improvement in the surface quality of our automotive skin panel material by reducing the surface defects.
- In an effort to reduce the Zn consumption during hot dip galvanising of tubes, a CFD study was developed to simulate the entire process using and heat transfer models in association with surface wave model. The recommendation on the process parameters from this study has been implemented in the galvanising plant in Tubes Division and has resulted into a reduction in Zn consumption.
- A novel "Self-healing" coating has been developed on CRCA steel sheet for automotive applications. In addition to its self-healing properties, the coating has also substantially improved the corrosion resistance. The lab scale development is completed and upscaling of this process to pilot scale level is being pursued with our pilot coating line.
- A new process has been developed and being demonstrated in a pilot plant for recovering pellet grade concentrates from the ultrafine fraction of iron ore slimes. The project has received the prestigious Tata Innovista promising innovation award in July 2010.
- A new coal pretreatment technology has been developed in the laboratory and up-scaled for pilot-scale demonstration for producing 8% ash clean coal from high ash Indian coals.
- A new binder has been identified for improving the coal cake stability for improving the throughput, energy consumption and quality of coke from stamp charged coke making process.
- Quick Tap Model has been implemented at Steelmaking Shop # 2 (LD2) for prediction of phosphorus.
- A team from R&D Jamshedpur & Europe, together with colleagues from G Blast Furnace and RMIMTG successfully conducted trajectory probe measurements at G BF. The results of measurement will help to know the exact location of the material trajectory in the stock level of the blast furnace. This will generate important data to tune the mathematical model for blast furnace burden distribution.
- The new pellet chemistry for new 6 MTPA pellet plant is optimized for blast furnace applications at Jamshedpur. The optimization trials are being carried out using facilities at Tata Steel Europe R&D.
- Product validation trials were carried out for sponge chrome, a new product developed at R & D for production of ferrochrome, using Electric Arc Furnace facility at National Metallurgical Laboratory, Jamshedpur. The results have confirmed that use of sponge chrome in production of ferrochrome can reduce the specific power and increase the SAF productivity. A work is in progress to prepare and assess the opportunity of a 10,000 TPA technology demonstration plant at Ferrochrome Plant of Tata Steel at Bamnival in Orissa.



- New chromite pellets were developed for ferrochrome production in submerged arc furnace. The pellets will reduce the specific energy consumption and thereby CO₂ emission at Ferrochrome plant. Further plant trials will be carried out.
- New hydrometallurgical process is developed for production of pure MnO₂ using GCP sludge of FeMn plant.

Expenditure on R&D expenditure during last two years:

Year	R&D investment (₹ cr)	% of expenditure
2008-09	39.22	0.16
2009-10	48.76	0.21

6.2.7 ESSAR Steel Ltd.

R&D efforts were directed toward various innovative efforts for the utilization of Solid Waste:

- Brick having an excellent strength have been developed from Iron Fines.
- Technology for utilization of used Iron Fines utilized as a partial replacement of cement in concrete road to cut down the cost by 50% has been developed.
- Technology to make tiles or building blocks from the non-magnetic part of slag has been developed with the Glass and Ceramic Research Institute.

6.2.8 Jindal Steel & Power Limited

R&D carried out (project taken up/completed) & results / achievements

- In House Development of break out prediction system in collaboration with M/s Rockwell automation and IIT Kanpur at one fifth cost of imported technology: System started on full fledged basis, casting speed increased by 30%.
- Water modeling study of Near -net-shape caster for reducing tundish skull and improving steel cleanliness in collaboration with IIT: Completed. Implemented in one tundish. Tundish skull generation reduced by 2.5T/ sequence.
- Study of CSR & CRI of Coke at different carbonization time to increase the no. of pushings per day with consistent coke quality.
- Study of CSR & CRI of Coke obtained.
- Measurement of residual stress of UIC-60 rails & IRS 52 rails.
- Comparison of steels produced through VD & RH Route with respect to cleanliness & gas content.
- Study for development of weathering resistant structural steel.
- Evaluation of coking coal from Mozambique & Zimbabwe.
- Study of factors affecting fractures toughness of Gr. 880 Rails.
- The effect of usage of South African Coal with Australian Coal in BF-II.
- Reduction of moisture to less than 5% in coke. BF grade.

R&D expenditure in ₹ lakh

Year	Total
2008-09	314
2009-10	329
2010-11 (Capital)	361



6.2.9 Mukand Ltd.

Research and Development Activities Completed during the year

- 1) Chemistry design and process modeling successfully carried out and implemented for the commercial production of Stainless Steel electrode grade. This has resulted in import substitution. Further studies being carried out for implementation for other grades.
- 2) Continued research activities towards improvement of fatigue life of Chrome-Silicon automobile suspension springs by reduction in inclusion size and volume fraction through modifications in melting and refining process standards.
- 3) Enhanced efforts towards development of medium carbon high manganese microalloyed steels for applications demanding high strengths replacing hardened and tempered grades. Pilot lot test results positive. Bulk commercial production to be taken up after fatigue tests on finished product.
- 4) Coordination with outside laboratories continued for studies related to inclusion characterization and failure analysis.
- 5) All testing labs of Mukand accredited with NABL certification. Surveillance audits cleared by all the accredited labs.
- 6) Microstructure and inclusion characterization carried out for Duplex Stainless steels to achieve higher pitting potential values in Chloride containing environment. The developed steel is used in "high speed separator" systems in refining and food processing industries.
- 7) Heat resisting steel 904L containing 20% Cr, 24% Ni, 4% Mo and 1% Cu developed to meet specific requirements for high temperature applications as well as welding application. This grade is an import substitution product with good potential for use in the heavy engineering industry.
- 8) Studies related to improvement in performance / reliability of a Low carbon steel through improvement in cleanliness. Studies completed and commercial production started.
- 9) Surface quality improvement of low interstitial ferritic stainless through thermodynamic studies on precipitation of Titanium Nitrides and optimization of casting parameters/ chemical composition to improve Surface Quality of Ti stabilized ferritic stainless steel wire rods.

Projects under progress:

- Lean duplex stainless steel for the fertilizer industry tubing application.
- Resulphurised high Silicon stainless steel with defined magnetization characteristics for Solenoid Valve application.
- Medium carbon steel with high cleanliness for autocomponent steering wheel system under development.
- Studies related to widening the auto component application of Microalloyed Steels, including improved machinability through optimum addition of Lead and Sulphur.
- To continue Industry-Institute interaction for specific technical projects.
- Special duplex stainless steel with 60% ferrite content being developed to meet the welding application requirement as an import substitute.

Expenditure on R&D expenditure during last three years:

	2010-11 (Provisional) ₹ in '000	2009-10 ₹ in '000	2008 - 2009 ₹ in '000
a) Capital	4000	3130	4331
b) Recurring	6900	7179	6182
Total R&D expenditure as % of total Turnover	0.05	0.05	0.05



CHAPTER VII

ENERGY AND ENVIRONMENT MANAGEMENT

7.1 Introduction

Environment management and energy efficiency constitute an important benchmark for assessing any sector or company both globally and domestically. The Ministry of Steel through various schemes and regulations of the Government is facilitating reduction in energy consumption and emission of environmental pollution in steel plants. Some of the steps/initiatives taken by the Ministry of Steel through various forums and mechanism during the year are:

7.1.1 Charter on Corporate Responsibility for Environment Protection (CREP)

The Ministry of Environment and Forests (MoEF)/Central Pollution Control Board (CPCB) in association with the Ministry of Steel and the main/major steel plants are committed to reduce environment pollution, water consumption, energy consumption, solid waste and hazardous waste management etc. as per mutually agreed targets with the purpose to go beyond the compliance of regulatory norms for prevention and control of pollution.

A National Task Force in CPCB reviews the compliance of CREP action points and targets. During the year the areas where environmental performance were monitored are:- fugitive emissions from coke ovens; secondary emission control in steel melting shops; use of BOF slag for treatment of acidic soils; Effective operation of coke oven by product effluent treatment plants; and monitoring of ambient air quality.

Further, measures for reduction of energy consumption in respect of the following areas:-Injection of coal/tar in blast furnaces; and water consumption (in respect of which the primary target was achieved by most integrated plants) were reviewed;

In order to maintain emission levels within norms, CPCB has issued directions to several coal based sponge iron plants. Members of the task force are making visits to the integrated steel plants to monitor their performance.

7.1.2 Clean Development Mechanism (CDM) under Kyoto Protocol

Under this scheme, the Ministry of Steel is facilitating, through the National CDM Authority in the MoEF, adoption of energy efficient clean technologies in iron and steel plants. A large number of iron and steel plants have obtained host country approvals for availing carbon credit by adopting energy efficient clean technologies. So far, 158 such projects amounting to reduction of 103 million tonnes of carbon dioxide equivalent have been approved by the National Clean Development Mechanism (CDM) Authority.

7.1.3 UNDP-Global Environment Facility (GEF) Steel Project

Under this project, a scheme has been developed with contribution from the United Nations Development Programme (UNDP) and the Ministry of Steel to facilitate diffusion of energy efficient low carbon technologies in steel re-rolling mills in the country to bring down energy consumption, improve productivity and cost competitiveness together with a reduction in Green House Gas (GHG) emission and related pollution levels. Towards this objective, 47 model units have been identified and so far, technology packages have been commissioned in 25 units.

7.1.4 NEDO Model Projects

Ministry of Steel has been facilitating setting up of energy efficient, environment friendly projects known as Model Projects in different steel plants with financial assistance from Japan. These projects are implemented by New Energy and Industrial Technology Development Organisation (NEDO), Japan. So far, one project has been commissioned at TATA Steel and one more project is under advanced stage of commissioning there. One model project for sinter cooler waste heat recovery at Visakhapatnam Steel Plant of RINL is under progress.

7.1.5 National Mission for Enhanced Energy Efficiency (NMEEE)

In the year 2006, the Prime Minister had unveiled the National Action Plan for Climate Change. Out of the eight Missions under this Action Plan, NMEEE has dealt with measures for improving Energy Efficiency of the industrial



sectors, including steel. Following the recommendations of NMEEE, Government has made suitable amendments in the Energy Conservation Act, 1961. By virtue of this, steel producing units consuming 30000 MTOE (Million Tonnes Oil Equivalent) or more will be designated consumers, in respect of whom a benchmark will be applicable. Steel manufacturing units operating at a level better than the benchmark will be eligible to obtain an Energy Saving Certificate (ESC) that can be traded in the market. Units will be given a lead-time to improve their energy consumption levels. Any designated consumer operating at a level inferior to the benchmark have to either pay penalty or purchase ESCs. Bureau of Energy Efficiency (BEE) has been entrusted with this task of recommending benchmark levels to Ministry of Power. BEE is working closely with Ministry of Steel for evolving the benchmark in energy consumption in various technological routes of steel making using a wide variety of raw materials.

7.2 Steel Authority of India Ltd. (SAIL)

7.2.1 Environment Management

SAIL is committed to conduct operations in an environmentally responsible manner to comply with applicable legal and other requirements related to its environmental aspects and strive to go beyond. The environmental vision of the company is drawn from the tenets of the policy which not only stresses on the need to remain in compliance but also to go beyond compliance, address stakeholder concerns, and communicate the company's environmental philosophy to all.

The action plans drawn by SAIL for Corporate Responsibility for Environment Protection (CREP) implementation points reflect the aspirations to voluntarily go beyond indicators in key areas covering resource optimization, pollution reduction and waste minimization.

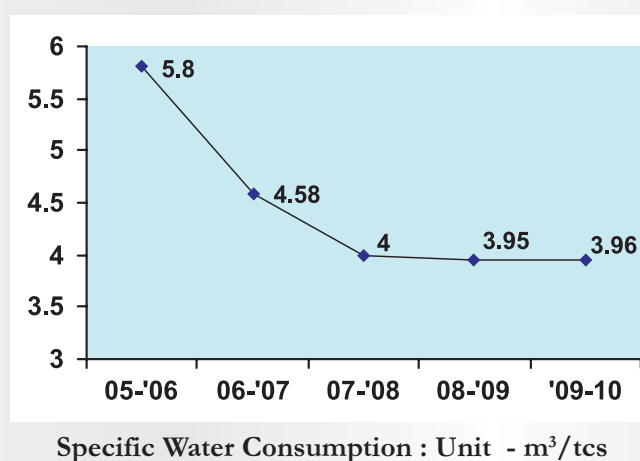
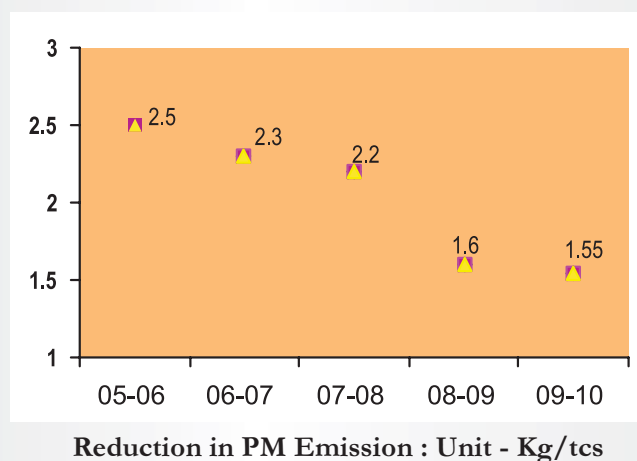
SAIL plants have continued their efforts for further improving their environmental performance which can be evidenced by comparing the following indicators :

Indicators	2008-09	2009-10	2010-11* (April-November '10)
Particulate Matter (PM) emission (Kg/tcs)	1.6	1.55	1.3
Specific water consumption (m ³ /tcs)	3.95	3.96	4.08
Solid waste utilization (%)	79	80	75
* Provisional data			

The improvement in the environmental performance indicators are detailed below :

7.2.2 Emission and consumption levels

Particulate Matter (PM) emissions from stacks in SAIL have been reduced from a level of 2.5 kg/tcs in 2005-06 to 1.55 kg/tcs in 2009-10 showing an improvement of 38% and the water consumption in SAIL steel works has been brought down from 5.8 m³/tcs in 2005-06 to 3.96 m³/tcs in 2009-10 with an improvement of 32% over a span of 5 years.





All the SAIL plants are broadly meeting the environmental quality norms with respect to effluent discharge and ambient air quality. With regard to Particulate Matter (PM) emission from the major stack of the steel plants, ~ 97% are complying with the norms laid down by the statutory bodies. For the non-complying stacks, respective plants have initiated actions.

7.2.3 Solid Waste Management

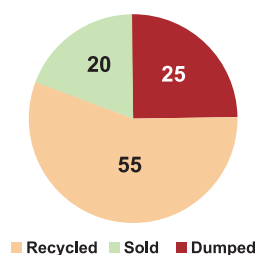
SAIL has effectively adopted waste minimization strategies including conservation at source, recovery and recycling. Major thrust has been given on the reduction of waste generation which has been lowered by taking care of reduction in silica and alumina content in iron ore through effective washing process and use of low ash imported coal in coal blend.

Some of the initiatives that were undertaken for increasing the recycling of solid wastes are:

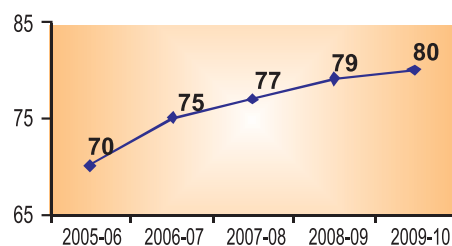
- Sale of granulated slag and internal use of air cooled slag.
- Recycling of flue dust, LD slag, lime and dolomite dust, mill scale and sludge.
- To further utilize the BF slag generated at BSP, SAIL has signed MoU with M/s Jai Prakash Associates for the joint venture cement plant with a capacity of 2.2 Million Tonnes Per Annum. Similar kind of project has been taken up at BSL also.
- Si-Mn granulated slag from Maharashtra Elektros melt ltd., Chandrapur is being stowed in place of sand in various panels of Durgapur Rayatri Colliery of Western Coalfields.

4.6 Million Tonnes of granulated slag had been sold to cement manufacturers during 2009-10 which has resulted in saving of energy for clinker production at cement plant by replacing clinker with granulated slag thus reducing CO₂ emissions. 1.1 Million Tonnes of LD slag has been recycled which replaces similar amount of dolomite/limestone for iron making.

Solid Waste Utilisation in SAIL



% Utilisation of Solid Wastes

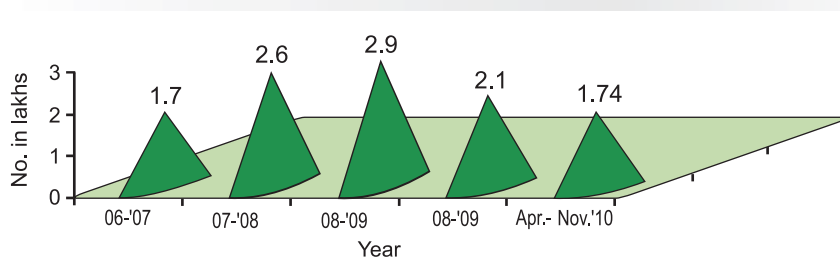


7.2.4 Environmental Plantation

Extensive afforestation programme are being followed in all the plants and mines. The basis of choosing the species of plants mainly depends on local soil characteristics and prevailing meteorological conditions. Since inception over 20 million trees have been planted in SAIL.

During 2009 - 10, a total no. of 2.1 lakh saplings have been planted at SAIL plants and mines. Plantation done during the period April-Nov. '10 in SAIL units was 1.74 lakhs .

The year wise plantation done in SAIL is depicted below :





7.2.5 Eco restoration of De-graded Lands

Under the eco-restoration project, 28,389 saplings have been planted during April-Nov.2010 covering an area of 5.10 acre (2.06 ha) at Purnapani Limestone & Dolomite Quarry (PLDQ), Purnapani. It includes massive casualty replacement plantation.

7.2.6 Implementation of Environment Management System (EMS) Linked to ISO 14001

- EMS has been implemented at Kuteswar Limestone Mines.
- Implementation of ISO 14001:2004 for the total works at VISL, Bhadravati is in progress.
- An EMS awareness programme for the employees of Barsua Iron Ore Mine was organised at Barsua for implementation of EMS ISO: 14001 in Sep.2010.
- Surveillance Audit of EMS linked to ISO 14001 w.r.t. legal requirements during Aug. 2010 was carried out at Dalli (Mech.) Mines.

7.2.7 Initiatives for Preservation of Global Environment

CTC Phase out Project in SAIL

- SAIL along with UNDP took up an umbrella project for the replacement of Carbon Tetrachloride (CTC), an Ozone Depleting Substance (ODS), used as cleaning solvent by Trichloroethylene at the six production units of SAIL, viz. Bhilai Steel Plant, Durgapur Steel Plant, Rourkela Steel Plant, Bokaro Steel Plant, IISCO Steel Plant and Salem Steel Plant. Usage of CTC has totally been stopped at all these six plants.
- Commissioning activities in various stages are in progress in all the 6 beneficiary plants.

Clean Development Mechanism

- CDM project cycle for 6 VER projects have been completed and these have been validated by the DOEs (Designated Operational Entities). These projects have accrued potential of 1.9 Million VERs from the retrospective dates. Auction document for selling of accrued carbon credits (Verified Emission Reduction) has been finalized. Processing has been initiated for finalising the registry for keeping the VERs before taking action for auctioning.
- Host Country Approval for 17 CER projects has been accorded. Out of these, 4 projects are in advanced stage of CDM cycle and are expected to be submitted to the United Nations Framework Convention for Climate Change (UNFCCC) for registration within this financial year.
- SAIL participated in the 9th Steel Task Force (STF) meeting of Asia Pacific Partnership for Clean Development and Climate (APPCDC) held in Kobe, Japan during May 25-27, 2010.

Environmental awareness programmes

- Various awareness programmes like celebration of World Environment Day, Earth Day, Ozone Day, Environment Month, Mines and Mineral Conservation week were organized for spreading environmental awareness.
- Besides, other activities like mass tree plantation, eco-quiz and painting; essay competitions on environmental topics have been conducted involving employees, students and general public on these occasions for bringing awareness amongst them.

Environmental Recognitions

- CII-ITC Sustainability Awards 2010 has been awarded to BSP.
- The following SAIL plants have been selected for Greentech Environment Excellence Award 2010 in the Mining & Metal sector :
 - ❖ BSP in PLATINUM Category
 - ❖ DSP and BSL in GOLD Category
- BSP received Golden Peacock Eco-innovation Award for the year 2010.



7.2.8 Energy Management

Energy Conservation and Environment Management

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

Plant	2009-10	2010-11 (April - December'10)
BSP	6.56	6.66
DSP	6.55	6.78
RSP	6.97	6.89
BSL	6.74	6.88
ISP	8.18	8.23
SAIL	6.72	6.82

Few important energy conservation schemes implemented in SAIL during 2009-10 are listed below:

Bhilai Steel Plant (BSP)

- Commissioning of VVVF drive in belt feeders of Wagon Tippler in CO and CCD area done for multiple speed operation of motor, controlled withdrawal of material from hopper
- At Sintering Plant-2, magnetic water feeding started to PMD and SMD for better dispersion and reduction of moisture addition in sinter mix and preheating of sinter charge by steam at intermediate bunker
- At SP -3, stopping of idle running of Product Line-3 and reduction in idle running of flux route equipment during route starting and running of two hammer crushers (HT Motors) in place of three for Flux Crushing.
- Installation and commissioning of BF-2 Tar Injection System through in-house resources
- At SMS-II, LF-2 ID fan 1and2 damper opening closing circuit modified for energy saving.
- At R and S Mill, substitution of DC motor of Rolling Field Roll Table no. 1 of Plate Mill by AC motor along with VVVF drive and commissioning of 16 nos. of VVVF drives in place of conventional contactor scheme
- At Plate Mill, (i) Provision of low voltage (145 VDC) system for armature supply of single and double rack pusher (ii) Provision of low voltage (145 VDC) system in field supply of roll tables motor under spray cooling devices (iii) Installation of VVVF drives in Transfer Bed 2 and Inspection Bed 3 and (iv) Hot charging of slabs of caster-6 to Plate Mill
- Installation of 7 nos. of new energy efficient pumps sets for different pump houses of CCS secondary cooling, Plate Mill Scale Pits and 2.5 MT Rolling Mills area
- Improvement in area illumination of ETP tunnels by replacing ordinary bulbs with energy efficient HPSV lamps
- Replacement of (i) 2200 mm dia BF gas line for supply of BF gas to coke oven batteries-1 to 8 and (ii) modification of 1200 mm dia mixed gas line to 1600 mm dia pipeline

Durgapur Steel Plant (DSP)

- Introduction of Multi Slit burner in machine -1 of SP- I (RDCIS)
- Stabilization of CDI in BF-3 and BF-4 (RDCIS)
- On-line sealing of steam and blast leakages
- Insulation of steam line and other hot surfaces

Rourkela Steel Plant (RSP)

- Commissioning of coke oven battery-4

- Commissioning activities for new 1,00,000 m³ CO gas holder is going on, which is likely to be put on operation in 3rd week of April' 10.
- Replacement of 1000 sq. meter damaged insulation
- Inter plant energy audit of SMS - II, CCM-II and RMP - II

Bokaro Steel Plant (BSL)

- Introduction of high temperature ladle heating system in SMS-II
- Dry gunniting of ovens @ 17 ovens /month
- Operation of steam exhauster in by product plant for 250 days/annum
- Up-gradation of stoves of BF- 3 during capital repair
- Increase in Tar injection in BF- 1
- Increase in Oxygen enrichment in all Blast Furnaces
- Reduction in process steam consumption by operation of BOO oxygen plant
- Capital repair of 5 recuperators of soaking pits
- Replacement of 16 km water line and 17000 m² of damaged steam line
- Provision of 45 nos. steam traps
- Increase in CO Gas supply to RMP kilns

7.2.9 Few Important energy conservation schemes under implementation in the year 2010-11 are listed below:

Bhilai Steel Plant (BSP)

- Waste heat recovery from sinter cooler for hot water generation at SP- 1 and SP-2I (RDCIS)
- BF-4 stove modernisation
- Installation of new LD gas holder
- Commissioning of new Normalising Furnace at Plate Mill with in- house resources
- Modification of BF gas burner in Boiler-1 of PBS to utilize surplus BF gas (RDCIS)

Durgapur Steel Plant (DSP)

- Introduction of Multi Slit burner in machine-2 of SP- I and SP-2 (RDCIS)
- Modification of combustion system in reheating furnace-1 and 2 of Section Mill (RDCIS)
- On-line sealing of steam and blast leakages
- Insulation of steam line and other hot surfaces

Rourkela Steel Plant (RSP)

- CDI in BF-4
- Tar injection in BF-1
- Modification of multi-slit burner for mixed gas firing in SP-I
- Introduction of mixed gas firing in MP boilers for partial replacement of oil/coal firing

Bokaro Steel Plant (BSL)

- Commissioning of battery-1 and 2 after rebuilding in December'2010 and January'2011 respectively; wall repair of



coke oven battery-4; revamping of door and door frame cleaner of battery-5; change of all pusher side doors of battery -7; change of 50 nos. leveller windows of battery -6 and -8

- Running of steam exhauster in BPP for maximum no. of days
- Dry gunniting of ovens @ 25 nos. oven per month
- Integration of 24 nos. of old weigh feeders with new system for proper blending of coal.
- Commissioning of CDI system for BF -2 and 3
- Up-gradation of BF -2 along with GCP
- Up-gradation of stoves of BF -5 during capital repair of BF -5
- Introduction of soft starters for 2 nos. exhausters at SMS-1
- Modernisation of soaking pit no. 8 and 23 with castable lining
- Change of metallic recuperator of RHF -3 at HSM and repair of roof top of RHF -4 during capital repairs
- Repair of 15 nos. base fans in annealing -1 of CRM
- Change of 10 km damaged pipe line of different diameter
- Change of 18000 m2 damaged insulation over process steam line
- Installation of 50 nos. steam traps
- Commissioning of additional B.F.Gas line for BPSCL(Power plant) to supply surplus B.F.gas
- On-line ladle heating system for hot metal transfer ladle and ladle heating system in LRS - I and II. (RDCIS)

7.3 Rashtriya Ispat Nigam Ltd. (RINL)

7.3.1 Energy Management:

Energy Consumption (Gcal/tCS) & CO₂ Emissions(Tons/tCS):

Year	Specific Energy Consumption (Gcal/tCS)	CO ₂ Emissions (Tons/tCS)
2009-10	6.09*	2.548*
2010-11 (till Dec)	6.18*	2.558*
* As per PM trophy methodology		

7.3.2 Measures taken for reduction in Energy Consumption for the year 2009-10

- Reducing heat loss in LMMM walking beam furnace -2 by repairing furnace roof.
- Auto operation of Charging door at MMSM WBF-1
- Improving furnace pressure by replacing of vacuum chamber gates below the Sinter Plant furnace.
- Improving suction pressure by 80MMWC at feed air compressor by replacing suction silencer at ASP.
- Installing energy efficient pump at chilled water plant-3.
- Improving blast furnace gas intake at Thermal Power Plant by replacing Tubular air heater of Boiler-1
- Reducing low speed diesel consumption by replacing conventional IFM with High Arc igniters.
- Commissioning of chillers in Chilled Water Plant-1.
- Provision of PLC for temperature control in Heat Treatment furnaces of Central Machine Shop (2 nos.) & Forge shop (2 nos).
- Change over of Bat-4 from CO gas firing to mixed gas (BF gas+ CO Gas) firing.

- Rashtriya Ispat Nigam Limited, Ministry of Steel, Ministry of Finance signed MOU with New Energy and Industrial Technology Development Organization (NEDO) of Japan for installation of 20.6MW waste heat recovery system on sinter straight line cooler at sinter Machine-1&2. This project is first of its kind in Indian steel industry. This project is being implemented under Japan green aid plan. This project will reduce Carbon dioxide emissions by 116585 tons annually.

7.3.3 Measures Taken/being taken for reduction in Energy Consumption (2010-11):

- Replacement of Tubular air heater in Boiler-2 in thermal power plant.
- Improving condenser vacuum in Turbo Blowers -1, 2 & 3 and Turbo Generators -2 & 3 by chemical cleaning.
- Replacement of 3nos of existing chillers (1, 3.and 7) with eco friendly and energy efficient chillers in chilled water plant-3.
- Replacement of 2nos of energy efficient chillers at Chilled Water plant no 2
- Replacement of Air and Gas Recuperator in F/C-2 of MMSM.
- Providing interlock for stopping of stelmore conveyor drives when pinch roll & laying head drives are stopped.
- Change over of Battery -3 from Coke Oven gas firing to mixed gas (CO Gas+BF gas) firing for optimization of fuel distribution
- Relining of stove no 3 and 6 at Blast furnaces for improving thermal regime
- Installation of VVVF drives in Electrical Systems
- Replaced existing Fluorescent Tube lights with Energy Efficient Tube lights(T5)
- Replaced old air conditioners with 2 star rated Air conditioners (200 nos)
- Installed 1760 Translucent sheets to utilize natural lighting
- RINL adopted BS EN: 16001 Energy Management System in 37 departments in VSP and certified by M/s BVCI. It is the first PSU and First Integrated Steel Plant in India to be certified for Energy Management Systems.



7.3.4 Energy conservation plans under progress:

- Installation of Pulverized coal injection in Blast Furnace 1 & 2
- Installation of 20.6 MW waste heat recovery system on sinter straight-line cooler of sinter machine 1 & 2.
- Installing Energy Conservation facilities in expansion such as Pulverized coal injection in BF 3, Waste Heat Recovery system in stoves of BF-3, Energy Efficient furnace with multi slit burners in Sinter Plant-3, Heat recovery from circular cooler of SP-3, Energy Efficient Air separation unit-4 & 5 etc.



7.3.5 Environmental Management System

Environment Management Systems Implementation

Vizag Steel is the first integrated steel plant in the country to be certified to all the 3 international standards viz. ISO 9001, 14001 and 18001.

Vizag Steel has made full utilisation of the benefits offered by implementing an Environmental Management System and has utilised this tool to:

- Develop a way to continuously review environmental issues
- Devise a way to capture environmental incidents for necessary corrective action
- Providing information to all on latest legislations for necessary action in this regard
- Spreading awareness amongst employees, contract workers, suppliers, surrounding residents
- Propagate the spirit of 'Continual Improvement' by taking up a number of Environmental Management Programs(EMPs) that are focused in the areas of reduction of resource consumption, reduction in use of ODS, usages of waste, environment monitoring, elimination of Hazardous material use etc.

The details of the EMP's taken up at VSP are given below :

Sl.	Area of Environmental Improvement	No. of EMPs (2007-08)	No. of EMPs (2008-09)	No. of EMPs (2009-10)
1	Reduction of Ozone depleting substances	5	4	8
2	Air Pollution Control	6	1	6
3	Water Conservation and Quality	2	1	4
4	Hazardous Waste Management	13	10	11
5	Resource Conservation	21	18	19
6	Energy Conservation	7	9	5
7	Environmental Monitoring	3	1	1
8	Management of Waste	1	1	2
9	Afforestation & Garden development	2	1	0
10	Training on Environment	1	1	1
Total		61	47	57

7.3.6 Highlights of Environment Management at VSP

- Continuous monitoring of Ambient Air Quality & Continuous Stack Emissions Monitoring through on line environmental monitoring systems.
- VSP has initiated and invested in many environment management projects to control pollution. In the last 5 years environmental projects worth ₹ 92.52 Crores are implemented and projects worth ₹ 499.36 crores are under implementation and expected to be completed by 2011-12.
- VSP is scientifically disposing its hazardous waste and in addition to the above, it is the only steel plant in India which has provided a miscellaneous waste yard for taking care of e-waste.
- Ambient Air Quality at the three directions of the plant are well within norms.
- Stack emission concentrations are well within norms.
- Effluent quality except for Amm.N2 is within norm.

- 91.53 % of Solid wastes are utilized for the year 2009-10 and 86.38% of Solid wastes are utilized for the year 2010-11 (Up to Dec).
- 100% of Hazardous wastes are disposed as per statutory requirement.

7.4 NMDC Ltd.

7.4.1 Actual energy consumption from the Projects at Karnataka and Chhattisgarh :

Energy Consumption for the year 2008-09	: 1.79 KWH Per Tonne of iron ore excavated
Energy Consumption for the year 2009-10	: 1.72 KWH Per Tonne of iron ore excavated
Energy Consumption during 2010-11 (April-December)	: 1.83 KWH Per Tonne of iron ore excavated
Energy Consumption during 2010-11 (Jan-March Estimated)	: 1.78 KWH Per Tonne of iron ore excavated

NMDC' projects of Bailadila Iron Ore Mine, Kirandul Complex (Deposit 14/11C) and Bacheli Complex (Deposit-5), Donimalai Iron Ore Project and Diamond Mining Project, Majhagawan, Panna were certified with ISO 14001:2004 Environmental Management Systems.

7.4.2 Environment and Pollution Control measures :

NMDC is carrying out post project environmental monitoring studies at all projects through laboratories recognized by Ministry of Environment & Forests (MoEF). The studies include collection of meteorological data, Ambient air quality monitoring for PM₁₀, SO₂, NO_x and CO, Water quality monitoring, ambient & work zone noise level monitoring and soil quality analysis. The studies show that the environmental parameters were well within the norms prescribed by Chhattisgarh Pollution Control Board (CPCB) for air pollutants, conforming water quality discharge to GSR: 422E norms, noise levels within the permissible levels in ambient air and at work zone.



Tree plantation initiatives by NMDC

7.4.3 Environmental pollution control measures

The activities taken up at projects in brief are given below :

- Operation of Pollution control devices such as Effluent Treatment Plants (ETP) for removal of oil & grease and suspended solids, etc. from workshop effluents.
- Use of classifiers, hydro cyclones, thickeners for recovery of iron ore along with water for re-use in plant.
- Monitoring of Tailing dams during monsoon season for discharge of clear water into downstream nallas.
- De-silting of all check dams for removal of accumulated silt material during monsoon season.
- Regular use of water sprinklers in mine haul roads, service roads, feeder roads to check the generation of fugitive dust.



- Spray of mist water at dumper platform, transfer points for controlling fugitive dust generation.
- Construction of sound proof cabins at noise prone areas for effective operations by MCO.
- Plantation and its maintenance.

7.4.5 Quality Management

The company is accredited with ISO 9001-2008 certification for Bailadila Iron Ore Mine, Kirandul Complex, Bailadila Iron Ore Mine, Bachel Complex, Donimalai Iron Ore Mine and Research & Development Centre, Hyderabad.

Measures taken/being taken for reduction in energy consumption are:

- a) Power factor is being maintained around 0.95 with proper demand management with static capacitor on HT and LT.
- b) NMDC is undertaking energy audit studies through a consultant and the recommendations are being implemented.
- c) Fluorescent lamps have been installed with electronic ballasts in the residential quarters in the townships.
- d) Electronic fan regulators are installed as against conventional wire-wound regulators.
- e) Timers are provided for automatic switching off of the street lights, lights in public buildings, mine haul road lighting and equipment lighting, plant illumination etc.
- f) Overall energy consumption of township is being reduced progressively by better counseling on wastage of energy in residential as well as public buildings.
- g) Eddy current control motors are being replaced with energy efficient motors, run through VF drives.
- h) Transparent sheets are provided on the plant buildings to have natural lighting.
- i) Optimum feed rate is maintained in the downhill conveyor system to generate power and feed back into the system to reduce overall energy consumption.
- j) Solar water heaters are installed for hostel/hospital applications.
- k) Induction magnetic coupled street light fixture (which are more energy efficient than the conventional HPS/HPMV fixtures) are installed.

7.5 MOIL Ltd.

The Company's strategy towards eco-friendly mining encompasses the following:

- Scientific Mine Planning
- Effective Pollution Control Measures.
- Optimization of resources utilization.
- Regular monitoring of Air, water, Noise and vibration quality.
- Biological reclamation of degraded land.
- Rehabilitation of reclaimed areas.
- Rural and community development.

The current level of emission/pollution for Air, Water, Noise and Hazardous waste is prescribed by State Pollution Control Board (SPCB). Regular monitoring of these components is carried out inhouse as well by the SPCB officials. The emissions/pollutants are reported to be below the standards prescribed by the competent agencies. Various measures are undertaken for control of pollutants which are briefly described below:

7.5.1 Air Pollution Control

The points of dust generation are : i) Blast hole drilling ii) Blasting iii) Loading of muck iv) Haulage of ore, waste rock

and soil v) crushers and ore processing plant vi) Dispatch of ore in trucks. Dust suppression of these points are ensured by:

- Wet drilling of blast holes.
- Muck piles are be wetted before loading.
- Haulage roads are frequently sprinkled with water for which truck mounted water tankers with sprinkler arrangement have been provided.
- Maintaining the drilling speed as recommended by the manufacturers control dust produced during deep large blast hole drilling.

Regular maintenance of vehicles and machineries is carried out in order to control emissions; a fully equipped workshop is operating in the mining area for timely and proper maintenance of all machinery. This proper maintenance ensure that gaseous exhaust from these are minimum. Green belt development have been taken up all along the haul roads and overburden dumps; The dust respirators are provided to all the workers in dusty atmosphere; and a good house keeping and proper maintenance is practiced which help in controlling the pollution.

7.5.2 Water Pollution

- The water pumped during underground mining operation is fully utilized for plantation and sand stowing operations.
- The rain water collected in open pit is a source of water for dust suppression and plantation activity, which is carried out every year.
- There is no discharge of water from any of the mine in the nearby water sources.

7.5.3 Noise Pollution

Mitigation measures for noise and ground vibrations are of following types:

- Noise is best abated at source by choosing machinery and equipment suitably, by proper mounting of equipment and ventilation systems and by providing noise insulating enclosures or padding where practicable.
- The equipment to be procured is new and as such the noise emission is optimal for their design/operation. Proper maintenance/working is done which keeps the noise level within limits.
- Planting of bushy trees of rich canopy in and around the mine area to intercept noise transmission. A 50 m wide belt of trees of different heights are useful to act as noise attenuater in the mining areas.

7.5.4 Solid Waste Management

- On an average 3.0 million cubic meter of solid waste is produced during the period of report. MOIL has adopted a system to segregate these waste in two categories namely (i) 'white waste and' (ii) 'black waste'. Both the waste are dumped separately and systematically. White waste is totally a waste rock and black waste is mostly magniferous rocks or 'sub-grade mineral' which can be utilized in future.
- White dumps, once stabilized, are covered with plantation. MOIL in consultation with National Environmental Engineering Research Institute (NEERI) have successfully carried out plantation over these white dumps.
- Fresh and active dumps are being protected by benching and trench cutting/stone pitching wall of 1m height all along the periphery at the ground level.

7.5.5 Plantation Efforts

Massive plantation is carried out with local tree species. MOIL has planted more than 14 lakh trees in all the mines over the last recorded 20 years.

7.5.6 Expenditure incurred on Pollution Control Measures

The expenditure on account of dust control, noise control, vibration control and solid waste management are included



in the mining cost in the Company. The expenditure incurred on account of plantation and monitoring is as follows:

Year	₹ in lakh
2008-09	53.05
2009-10	77.32
2010-11(April- December- Provisional)	40.54
2010-11 (Jan-March-Estimated)	15

7.5.7 Measures taken for reduction in energy consumption and the future plans to this effect

- 15.2 MW Wind Energy Farm has been installed at Dewas in M.P. for selling to Madhya Pradesh Power Trading Corporation Ltd and the same has been connected to the Grid and till December 2009, 36.41 Million KWH have been generated since its commissioning in June 2008. The 4.8 MW Wind farm for captive use at Nagda Hills, District Dewas has generated 30.62 Million KWH since its inception in June 2006. It conserves the energy and is a step towards non-conventional source of energy for pollution free environment.



MOIL's Wind Farm At Nagda, Dewas, MP

- The underground mines are being planned to develop level at 45 meter level interval . This will save tremendous amount of energy as earlier levels were designed and operated at 30 meter level. This will also conserve ore.
- Two new shafts at Ukwa and Mansar mines are coming up. Presently the ore is being hauled through haulages having limited capacity. The efficient winders will reduce the energy required per Ton to haul ROM from Mines.
- Hydraulic drill machine is under procurement for roof bolting. This equipment utilizes hydraulic power in place of pneumatic power. This will save at least 40 % energy in roof bolting and rock bolting by using hydraulic drill machines.



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- Considering the depth of the mine it has been decided to store water in underground at upper level to utilize for sand stowing and drilling purposes. Earlier all the seepage water from mine were pumped out on the surface. By storing seepage water in mine at convenient place and reusing the same through siphons system, lot of energy is being saved. This is a very simple process and hardly requires any investment. Use of siphons for drilling water has been successfully implemented at Balaghat Mine.
- Power Factor of the system is being monitored meticulously. To improve the power factor, L.T. & H.T. Capacitors are being utilized. Use of Transformers is optimized to improve power factor as well as to reduce power losses.
- Energy efficient motors are being used and old motors are being replaced in phased manner.
- Fuel Efficient Engines with turbo chargers are being used with Electronic governors.
- Electrically operated site discharge loaders are being used in mine to replace pneumatically operated Hopper loader.
- Variable frequency A.C. Drives is being used for operation of Winders & for other equipment. This reduces energy consumption by 40% & power factor is improved to 0.99.
- Automation of Pumps is under study to optimize operation of dewatering hours as well as conserve water and energy.
- Order has been placed for automation of signaling system to reduce operation of men winder at Balaghat Mine and Chikla Mine to reduce energy consumption. The proposals for other mines are also under consideration for implementation.
- Study is being conducted for use of reusable electronic timer for blasting at opencast and in underground mine to precisely, decide the delay time so that blasting can be made effective for better yield of muck.
- Where-ever possible load is being staggered during the peak load hours.
- PLC based digital/ Analog Thyristor drives are being used for smooth speed control of winders to reduce losses due to liquid resistance control system.
- Use of condensate water in boiler feed at EMD Plant to save the energy.
- Replacement of conventional type of starting system of Compressors by Micro-Processor based starting system, with VFD drive in a phased manner for all the mines.
- Appropriate ratings of Prime Movers are being used for the operation of Mining Machineries.
- Conversion of Ventilation Fan blades by FRP blades for conservation of energy.
- VFD for AC drive 250 HP Screw compressor being implemented in phased manner for all the mines. .
- Use of Ceramic lined bends and reducers for sand stowing plant
- Conversion of Rheostat controller to VFD
- Installation of pipeline for dust separation and to supply pit water to EMD plant
- Incentive Scheme has been introduced for employees of mine for energy conservations.
- Automation of Ventilation Fan has been carried out satisfactorily at Balaghat Mine, which saves energy consumption by approximately 20% and same is also proposed for other Mines.
- Conventional type luminaries are being replaced by Efficient Energy Saving Luminaries in a phased matter.
- Solar water heating system are being used in official buildings at Head Quarters and at mines to save energy.
- Energy Saver Air Conditioners with BEE latest ratings are being used in mine as well as corporate office for conservation of energy.
- Energy Audit is being carried out every month at unit level. External agencies are also being deployed periodically to carry out Energy Audit of all the Mines and Plants. Report is being monitored and reviewed quarterly for achievement.



- LED based cap lamps, chains and racks
- FRV Header Bar for anodes and cathodes
- MOIL Bhawan, Corporate office of MOIL has been constructed and designed to achieve maximum possible energy conservation. MOIL Bhawan has been designed to take care of water harvesting so that borewell in office premises can be recharged during monsoon season. Proper drainage system has been provided so that waste water from office can be used for plantation in office premises.
- Use of polyimide lubricant bushes for pumps and SDL
- Tipper mounted belt conveyor system for wagon loading at railway siding
- Strengthening of old - X-cut
- QUEST Award has been introduced for unique ideas through brainstorming for energy saving, improvement in efficiency, productivity, Quality improvement, Safety, Training & Development.
- Our Kandri Mine has got certificate of merit in mining sector for National Energy Conservation Award 2010 sponsored by Bureau of Energy Efficiency.

Initiative taken by the Organisation regarding Energy Conservation and Efficiency

Sl.	Item	<i>(Energy Consumption in KWH/tonnes)</i>			
		2007-08	2008-09	2009-10	2010-11 (Apr-Dec.' 10 - Pro.)
1.	Manganese Ore	12.25	15.90	17.64	19.04
2.	EMD	2268	2300	2387	2728
3.	Ferro Manganese	2862	3016	2983	3032

7.6 MECON Ltd.

7.6.1 Energy conservation, pollution control and solid waste management

MECON Limited, being a consultancy organisation, does not operate/ manufacture any large scale plant or machinery themselves which call for exclusive efforts on Energy Conservation, Environment and Waste Management. However, the efforts made by MECON for its clients that address these important issues are highlighted in the following paragraphs:

7.6.2 Energy Conservation

Reduction of Green House Gases (GHGs) by technological innovations including Energy Conservation to reduce global warming is a new sector of business in India as per the Kyoto Protocol ratified by India. MECON has developed its expertise in this new field through training of its experts in Clean Development Mechanism (CDM). To keep up with the challenge, a Climate Change Cell has been formed in the Environmental Engineering Section. In the field of CDM, MECON is carrying out CDM assignment from Bhushan Steel Ltd. (BSL) for preparation of Project Idea Note (PIN) and Project Design Document (PDD) for their Sponge Iron Project at Meramandali in association with M/s Steel Plantech Co. (SPCO), Japan for energy conservation through utilization of heat of kiln waste gases in waste heat recovery boilers and producing electrical power from that and distributing it to the grid. M/s SPCO Japan has decided to purchase the Certified Emission Reductions (CERs) from BSL if the project is approved by the United Nations Framework Convention of Climate Change (UNFCCC). The funding to MECON is being made by M/s SPCO. MECON will also have a share of CERs throughout the life of the CDM entitlement.

In the field of Clean Development Mechanism, MECON has completed order from M/s SPCO, Japan for making PDD for Energy Saving Plan for Re-heating Furnace with regenerative burners for Bokaro Steel Plant and Coke Dry Quenching in Durgapur Steel Plant of SAIL.

MECON also is presently executing the NEDO model project as detail engineering consultant for the 20.6 MW Sinter Cooler Waste Heat Recovery System for the 2 nos. Straight line sinter cooler at RINL, Vizag. M/s SPCO, Japan is the main Technology & Equipment supplier. Successful completion of this project will open a new avenue for power generation in a bid to utilize the waste heat emanating from the sinter machines and thus reduce GHGs emission.

7.6.3 Pollution Control and Solid Waste Management

In the field of protection of Ecology, the Afforestation and Reforestation efforts have now been approved by UNFCCC as CDM project as it absorbs Carbon Dioxide and reduces GHGs. In the field of sequestering of GHGs by forest sector, a scientist of MECON has been selected by the UNFCCC Secretariat, Germany and has been placed in the Afforestation & Reforestation Working Group.

MECON has put forward significant engineering efforts to achieve zero discharge from production plants being engineered by MECON.

MECON has received orders, from both public and private sectors, for preparation of EIA/EMP reports for their new plants / expansion of plants for Raw Material Division, SAIL Plants, UCIL, HPGCL, CESC Ltd., IGCAR, BPSL, Bhushan Steel Ltd. etc. MECON is also expecting a large work order for EIA preparation and Environment mine plan job from Orissa Mining Corporation Ltd. for their various mines spread all over Orissa.

MECON's Environmental Engg. Laboratory which is recognized under Environment Protection Act, 1986 also renders its services for sampling, testing & analysis of air, water, noise, sewage and soil quality to various Plants in Steel and other Sectors both in private and public.

MECON has prepared Environmental Norms and Standards for Sponge Iron Plants in the country in association with Central Pollution Control Board (CPCB) and has been asked to prepare environmental and energy saving standards for Sinter Plants by CPCB Project on Development of Comprehensive Industry Document (COINDS) and Environmental Standards for Re-rolling Mills ; Development of Guidelines for Management of Solid & Hazardous Waste generated in Integrated Iron & Steel Industry etc.

MECON has received a prestigious assignment for providing consultancy services for implementing ISO 9001 & ISO 14001 in five model unit each in Steel Re-rolling Mills in India from UNDP/GEF, Ministry of Steel, Govt. of India.

Yet another prestigious assignment received by MECON is for preparation EIA/EMP report for 4 x 700 MW Haryana Atomic Power Project which is under Nuclear Power Corporation Ltd.

Environmental Engg. Section in MECON is under process to obtain accreditation from National Accreditation Board for Education and Training under Quality Council of India, for preparation of EIA/EMP reports and environmental engineering activities in various sectors.

MECON has procured 6 nos. PM 2.5 Ambient Fine Dust Sampler for its Environmental Engg. Laboratory, which is latest in its design and is as per the norms & guidelines put up by Ministry of Environment & Forests.

MECON is executing rebuilding job of Coke Oven Battery no. 10 at ISP, Burnpur as Consultant with Biological Oxidation and Dephenolisation (BOD) plant for degradation of Coke Oven effluents, BOD Plant and sewage treatment plants along with sewage lift pump houses for 2.5 MT expansion of ISP, Burnpur. In addition, MECON is carrying out detail engineering work of sewage treatment plant, sewerage facilities & other effluent treatment facilities for NALCO, Angul ; SAIL Projects of Bokaro, Bhilai, Durgapur, Burnpur, as well as for different private sector companies like Bhushan group, Jindal Group etc. MECON is also providing consultancy services for Effluent Treatment Plants for JSPL, Angul and for Renovation and Augmentation of BOD Plant for expansion of Bhilai Steel Plant-SAIL. MECON has prepared Technical Specification for Continuous Ambient Air Quality Monitoring System and Green Belt Development for ISP-SAIL. For Orissa Mining Corp'n. Ltd., MECON is carrying out consultancy services for Tailing Pond and Effluent Treatment Plant for their two Chrome Ore Beneficiation Plants at South Kaliapani.



7.7 KIOCL Ltd.

7.7.1 Energy and Environment Management

(i) Energy Conservation

At Kudremukh

- a) Power factor improvement Capacitor banks have been installed and commissioned during December 2009 in place of existing ball mill motor system. Due to this energy saved and other details are given below:

Energy consumed during 1.1.2009 to 31.12.2009 is - 9088800 kwh

Energy consumed during 01.01.2010 to 01.12.2010 is - 8558500 kwh

Energy saved in the year due to capacitor bank erection - 530300 kwh

Cost saved in the year due to capacitor bank erection : ₹ 2561349/-

(Energy at the rate of ₹ 7.01/kwh).

- b) No other energy conservation measures have been taken up as there is no production activity at Kudremukh site.

At Mangalore

Pellet plant, port facilities & captive power plant

- a) Total energy consumed -

- 62.982 GWH for the year 2009-10.
- 99.521 GWH for the year 2010-11 (upto 10th December, 2010)

- b) Energy consumed for the last 2 years & April to December, 2010 is as under:-

Year	2008-09	2009-10	2010-11 upto (Apr-Dec, 2010)
Power consumption per tonne of Pellets	86.91 kwh / Tonne	66.92 kwh / Tonne	72.6 kwh / Tonne
Heat Consumption per tonne of pellets in '000 K Calories	241.0	223.0	234.24 234

Electrical energy is inclusive of grinding, filtration and Pelletisation.

Energy Audit is carried out through (PCRA) Petroleum Conservation & Research Association.

Energy saving measures taken up during 2010-11 in pp unit

- Installed Fan less cooling tower for meeting the requirement of cold water for indurating machine, thereby reducing power consumption. Approximate amount of saving in power:
@ 37 x 24 kwh/ day and 888 x 300 = 2,66,400 units per year.
- Installed 315 KW, AC-VFD for driving slurry pump PS-01 in place of constant speed AC drive, thereby reducing power consumption. Approximate amount of saving in power:
@ 630kwh/day and 630 x 300 = 1,89,000 units per year.
- Conveyor Belt 86 F, G H in PF is downsized from 11kw motor to 7.5 kw motor thereby saving @ 20kwh/day and 20 x 300 = 6000 units per year.
- 2 x 7.5 kw Booster pump motors in PF is removed from the circuit by modifying the gland water. Thus 2 Nos. of



7.5 kw motors are eliminated thereby saving @ 360 kwh / day and $360 \times 300 = 1,08,000$ units per year.

- Conventional light fittings are being replaced with CFL light fittings in phased manner.
- All the motors purchased hence forth will be high energy efficient class I motors. More measures of energy conservation are being planned as suggested by PCRA in a phased manner.

(ii) Environment management

Pollution Control & Solid Waste Management

- **Stoppage Of Mining And Related Activities:** In view of Hon'ble Supreme Court, verdict, the mining operation has been stopped w.e.f. 01.01.2006 at Kudremukh Iron Ore Mines. The execution of pollution control jobs such as desilting, construction of check bunds etc requires authorization from the Forest Department as 3203.55 Hectares of Forest land out of total lease area of 4605 Hectares has been attached to the Kudremukh National Park.
- Operation of Sewage treatment plants at Warehouse, Concentrator and Township is being carried out on regular basis.
- The water quality of Bhadra River at up-stream and down-stream stations and sewage effluents from three STPs is being monitored by KSPCB on monthly basis.
- Municipal Solid waste at 2 tonnes per day is collected from the residential and public areas is disposed at the landfill area about 3 KM from the residential area.
- The Sewage sludge generated at the Township STP is being used for gardening at the Town park and is also used by the local villagers as manure.



World Environment Daycelebrations at KIOCL, Bangalore



At Mangalore

Pellet Plant, Port Facilities & Captive Power Plant

- a) The drains in the plant area are provided with catch bunds to arrest the silt. The silt thus collected is recirculated into the process for resource conservation/pollution control.
- b) Water sprinkling is being done in the industrial area to suppress the dust.
- c) 250 Nos. of saplings have been planted in the plant premises.
- d) Dust generated at bentonite grinding, Limestone and Coke grinding units is controlled by introducing reverse jet bag filters. The emission from the stack attached to this unit is within norms stipulated in the air content.
- e) Pellet plant is provided with multiclones, wet scrubbers for combating dust generated during production. The dust collected through multiclones is recycled/disposed as Pellet fines.
- f) The outlet from the scrubber is thickened in a thickener and the underflow of the thickener is fed to the slurry tanks at filter plant for further filtration/processing.
- g) Flu Gas De-sulphurisation (FGD) units at Captive Power Plant (CPP) scrub the SO_2 gases in the exhaust of DG sets with NaOH . This reduces the SO_2 emission by more than 90%.
- h) A pit for collection of spillages in Ball Mill area has been constructed. The spilled material is being re-circulated back into the process.

At Blast Furnace Unit

- a) Water sprinkling is being done in the industrial area to suppress the dust.
- b) Blast Furnace is provided with dust catcher, gas cleaning plant and effluent treatment plant
- c) Treatment plant (Thickeners): The solid separated in thickeners in the form of slurry is being sent to Pellet plant in tankers for recirculation to conserve the resources.
- d) Rain harvesting/water conservation: The system of collecting the monsoon water and storing in the reservoir was developed in 2006. Harvesting of monsoon water is being done successfully from 2007 monsoon onwards.
- e) Afforestation is being done on regular basis by planting at least 200-250 saplings every year.

Compliance of Statutory Requirement (in all locations)

- a) The standard norms prescribed by KSPCB in respect of Air and water quality monitoring are being adhered to in all area of work.
- b) The consents/authorizations are being renewed on schedule.
- c) The compliance status with respect to the conditions stipulated in the consents are being reported regularly to the concerned authorities. The compliance to consent conditions is satisfactory.
- d) The Company has fully implemented the requirement of-
 - i. Battery Rules 2001,
 - ii. Hazardous Waste (M & H) Rules 2008.
 - iii. Bio Medical Waste Rules 1998.
 - iv. Water Act 1974,
 - v. Air Act 1981.
 - vi. EP Act 1986,



- e) The Company is having valid ISO 14001, ISO-9001 & ISO -18001 Certification for Mangalore establishment.

7.8 TATA Steel Ltd.

7.8.1 Environment Highlights 2010-11 (Apr.-Nov. 2010)

- Enhanced solid waste utilization from 91.1% in 2009-10 to 95.7% in 2010-11 by
- Focussed campaign to increase utilization of slag & sludge from steel making,
- Effective operation of on-line cast house slag granulation facilities in operating Blast Furnaces and
- Utilising solid wastes in construction activities inside steel works.
- Treated effluent discharge from steel works reduced by 18.5% from 13.8 in 2009-10 to current trend @ 11.2 Million m³ in 2010-11 (based on figures till Nov 2010) due to:
 - ❖ Optimal operations of effluent (wastewater) treatment plants in process units.
 - ❖ Constant watch for maximizing recirculation of treated effluents from drains and
 - ❖ Ensuring effective utilization of recirculated water.

As a result, it was possible to achieve significant reduction of specific water pollutants discharges for second consecutive year by 39% from 0.09 kg/tcs in 2009-10 to 0.05 kg/tcs in 2010-11 (based on figures till Oct. 2010).

- There has been 60.7% less rainfall in steel works compared to same period last year. Specific water consumption of steel works increased by 8.6% from 5.58 m³/tcs in 2009-10 to 6.06 m³/tcs in 2010-11.
- Environment, Health and Safety Management System of steel works recertified as per OHSAS-18001:2007 and ISO-14001:2004 standards by M/s.Indian Register Quality Systems (IRQS).
- Sustained actions for mitigating Climate change through energy conservation and afforestation / reforestation activities.
- Top gas pressure Recovery Turbine commissioned in 'G' Blast Furnace - this is the first registered project under Clean Development Mechanism of Kyoto Protocol.

7.9 Jindal Steel & Power Ltd. (JSPL)

7.9.1 Energy& Environment Management

Highlights of energy consumption and low Carbon usage technologies/facilities and measures adopted & results thereof are given below:

(a) Energy consumption & Specific achievements in Energy Conservation

Financial Year	SEC (Gcal/tcs)
2008-2009	7.48
2009-2010	7.14
2010-Dec2010	6.98

(b) CO₂ emission / tcs

2008-09	2.7 T/T
2009-10	2.6 T/T



(c) Achievements of Energy Savings per year basis

Year of Commissioning of the projects	Project description	Achievement of energy savings per year basis					
		Electricity	Fuels				Total savings in (₹ Lakhs)
		(Lakhs kWh)	Coal (tonnes)	F. Oil (kl)	Gas (lakh Nm³)	Total (fuel) in (MTOE)	
2010	Reducing FO consumption by rationalizing use of FO with good housekeeping			390.63		396.63	97.6
	Installation VFD drive in ID fan	23.18					46.36
	Installation of energy saver lighting transformer	0.42					1.05
	Stopping ideal running of motors	89.2					178.57
	Use of iron ore pellets in DRI kiln		72525			21736	290
	Installation of hot stove heat recovery system				90.64	679.6	27.2

Hot Stove Heat Recovery System in Blast Furnace - 1



Hot stove heat recovery system in BF-1 has been installed to utilize waste heat from stove. This is the equipment, which improves combustion heat efficiency & saves energy by preheating combustion air and fuel gas for blast-furnace hot stove by utilizing the sensible heat of combustion waste gas exhausted from the hot stove.

Efficiency of stove (on-gas mode) before heat recovery = 77.5%

Efficiency of stove (on-gas mode) after heat recovery = 91.0%

Due to hot stove heat recovery, 6,796 Gcal (0.025Gcal/tHM) of thermal energy is saved, equivalent BF gas saving of 9064 kNm³ is achieved.



Use of Iron Ore Pellets in DRI Kilns

The use of iron ore pellets over lumps in kiln resulted in the following advantages -

- The productivity of kiln increased without any change in the design.
- Specific consumption of coal came down.
- Kiln campaign life increased
- There is hardly 5 % of fines in the finished products against 30-35% when produced with lump ore.
- There is no loss of handling iron ore as pellets do not break during transport or handling.
- Better working environment
- Specific energy consumption of DRI reduced by 0.166 Gcal per ton of DRI. Overall coal consumption of DRI got reduced by 0.058 ton per ton of DRI.



7.10 JSW Steel Ltd.

7.10.1 Highlights Of Energy Consumption & Low Carbon Usage Technologies, Facilities & Measures

JSW (Steel) Ltd is continuously working in the field of energy conservation and has been improving specific energy consumption and CO₂ emission, this has been shown in following table

	Unit	2009-10	2010-11 (Till Dec. 2010)
Specific Energy Consumption	Gcal/Tcs	6.495	6.319
CO ₂ Emission	T/Tcs	2.90	2.81

This has been possible by adopting process control measures and projects based on technologies.

7.10.2 Environment Management 2010-11(Highlights)

a) New installations : During the year, following new and retrofit environmental control systems were introduced;

- Coke pushing emission control (Coke-4) (new)
- Sy. Fume extraction system for convertor-3 in SMS-2 (New)
- Electrostatic precipitator at SP-3 (2 nos) - (New)
- Reverse Osmosis plant of 125 m³/h to recycle water (Retrofit)
- Recycle of water from Coke - 3 for water conservation, 400 m³/h (Retrofit)
- Introduction of 14 nos of bag filter to reduce dust emission (Retrofit)
- Briquetting of coal fines to reduce waste (0.6 MTPA)
- Planned installation of CDQ in Coke 3&4.

b) New initiatives :

The following research related activities have been initiated which are expected to give major boost to the environmental conditions in the area.



- Online communication of data on air pollution to KSPCB office at Bangalore from 6 stations
- Use of granulated BOF Slag as replacement of river sand, shot blasting beads & filtration media.
- Use of ultra filtration / reverse osmosis technology for recovery of water from coke oven waste water.

7.11 ESSAR Steel Ltd.

7.11.1 Energy & Environment Management:

a) Various measures taken towards energy conservation include:

- Increment in Hot Direct Reduced Iron charging at Steel Melting Plant (SMP). Total energy saved 313.42 lakh unit.
- Replacement of Conventional light with Compact Fluorescent Lamp. Total energy saved 3.53 lakh unit.
- Timer introduction in TPS circuit at SMP. Total Energy saved 0.48 lakh unit.
- Hot Strip Mill (HSM)-Reheating Furnace performance Improvement by minimizing heat losses due to repairing of skid cooling pipe, Lintel replacement at discharge side, refractory repairing resulted in saving of NG 7.85 Kcal/Kg.
- Material Handling-Energy saving in lighting network by Programmable Logic Controller control, Auto sensor and timer. Energy saved 0.34 lakh unit
- Material Handling -Optimization in Idle running of conveyor has saved 0.9 lakh units
- Cold Rolling Mill (CRM) -Modification in Pump of Sump Tank making it Auto Start and Stop with help of Level Switch resulted in saving of 0.48 lakh unit
- Utilities-Making Cooling Tower Fan Auto Start and Stop resulted in saving of 0.32 lakh Unit at CRM.
CRM-Modification in High Bay lighting operation by Timer resulted in saving 0.87 lakh
- Improvement in availability of the Compressor and minimizing of Energy consumption resulted in saving 6.13 lakh Unit at CRM/DSC (Down Stream Complex).
- Installation of Drives in cranes 16 & 17 resulted in saving 0.247 lakh Unit at CRM.
- Utilities-Power Factor panel installed on motor Load Switchgear at Electric Arc Furnace (EAF)- 3 Pump House.
- SVC's (Static Var Compensator) were switched off during planned shutdown and standby operation of EAF's by Mains Receiving Sub- Station (MRSS). Energy Saved 73.73 lakh Unit
- Material Handling - Energy Saving by installing smaller conveyor for feeding of raw material. Energy saved 2.16 lakh unit
- Hot Briquetted Iron (HBI)-Energy savings in Main Air Fan Motor at Module-5 Motors. Energy saved 8.0 lakh unit
- HBI-Energy saving by reducing the Water Consumption at M-1/3 Pump House. Energy saved 0.37 lakh unit
- Energy saving by stopping Auxiliary air blower motor at Module-5. Energy saved 25.9 lakh unit
- Energy saving by Automation of Roll Drive Power Circuit Breakers. Energy saved 0.63 lakh unit
- Energy saved in utilities by removing orifice plates from Indirect System in HSM pump House. Energy saved is 0.43 lakh unit
- Utilizing the Operation of Return Hot Water Pump resulted in saving of 2.34 lakh unit.

b) Environment Management System (ISO 14001)

Essar steel is the first Indian Steel Company to be ISO 14001 certified Company in the year 1999. As a robust implementation of EMS, we encourage each plant to have their own Environmental Improvement Programs for conservation of Environment. In the year 2009-10 various departments have taken up following EMPs for resource conservation, which is having net saving potential worth of ₹ 97crores.



7.12 MUKAND LTD.

7.12.1 Energy management report

[A] Power & Fuel consumption:

Electricity kwh/ton	2009 - 2010	2010-11 (upto Sept. 2010)
SMS	860.76	835.98
Wire Rod Mill	158.99	162.36
Bar Mill	86.62	84.64
Blooming Mill	65.42	64.33
Furnace Oil ltr/ton	2009 - 2010	2010-11 (upto Sept. 2010)
Wire Rod Mill	33.31	33.59
Bar Mill	35.45	34.94
Blooming Mill	45.87	49.72

[B] Energy Conservation Measures taken:

Steel Plant:

To reduce electrical energy consumption:

- Energy Efficient AC Motors along with energy efficient pumps were installed.
- Installed LT Capacitor 3.6 Mvar at load end to improve power factor and reduce losses.
- Automatic switching off of street lights as well as shed lights.
- Air circuit audit done for air leakage of all the plants & these leakages were arrested to reduce the compressor consumption.
- Awareness created all over the plant people to use electrical blowers instead of compressed air for cleaning & general purposes.
- Awareness created to switch off non required electrical equipments as well as unwanted office lightings.
- Air conditioners temperature settings fixed at 25 deg at many places.
- Automation at various locations incorporated to switch off various machines, blowers, etc. during non required duration.
- Installed Automatic Temperature controller for cooling towers.
- Installation of LED type office fixtures for task lighting.

To reduce fuel oil consumption:

- Installation of micro valves in burners of Ladle Pre-heating station to optimize oil flow.
- Installation of new re-generative burners for Bloom Reheating Furnaces.
- Ceramic coating on inner side of Billet Reheating Furnaces for Bar mill, Blooming mill & wire rod mill.
- Auto temperature controller in soaking zones of Billet Reheating Furnaces.
- Installation of low pressure burners at soaking zones.
- Use of Alfa solution for equipment cleaning instead of Diesel.



Measures during current Year

In Wire Rod Mill

- To control the Excess Combustion Air, Higher capacity ratio control valve installed.
- Combustion Air Temperature after the Recuperator, set Limit increased.
- Weak designed dampers of combustion Air Line, at Burners were replaced by New Designed S.S. Dampers for better A/F ratio controlled.
- Air fuel ratio set point Range reset in the system to get oxygen control during section change and delays.
- High Pressure and low pressure system introduced for the control of Atomizing Air during continues running and during section changes & Delays.
- The trough water flow between the fixed and moving hearth reduced, to reduce the heat carried out by flowing water.
- High & low firing system in Heating zone for controlling the excess oxygen. In Bar Mill
- Auto Temperature Control System in Heating Zone.
- Installation of Low pressure Burners in Heating zone. In Blooming Mill
- High Capacity Modulating Motors installed..

[C] Additional Investments & Proposals being implemented for reduction in Consumption of Energy.

To reduce electrical energy consumption:

- Procuring 175KW screw compressor to switch off existing 235KW reciprocating compressor with out affecting .
- Installed 158 numbers of energy efficient shed light fittings instead of 210 no. of conventional fittings keeping same lux level as per the IS standards.

To reduce fuel oil consumption:

- Installation of vertical burner system to reduce heat loss during transfer of Ladles.
- Installation of air fuel control system in Billet Reheating Furnace Preheat Zone in Bar mill.
- Use of Bio-Diesel in forklifts.
- To use the Natural Gas in the all three reheating furnace by using duel fire burners.

7.12.2 Environment Management

Current level of Emissions / Pollution are well within prescribed limits.

Actions taken for controlling Environmental Pollution are given below:

Sl No.	Environmental Attributes	Environmental Pollution Control Measures
1.	Air Environment	<ul style="list-style-type: none"> ● Necessary air pollution control measures such as installation of bag filters, scrubbers and adequate stack height for proper dispersion of pollutants. ● Regular monitoring to ensure that the efficiency of the air pollution control systems envisaged at the design stage is actually achieved during the operation stage. ● Regular check up and efficient maintenance of all the pollution control arrangements.



- | | |
|----------------------|---|
| | <ul style="list-style-type: none"> • Ensuring smooth and controlled process operations so that gaseous load should not exceed the load permitted by MPCB at any point of time. • Proper care to minimize dust raising to prevent fugitive emissions at raw material yards, conveyors, silos & all other transfer points. • Water sprinkling on the roads where there is regular heavy truck movement to prevent the dust raising. • Water sprinkling at the slag storage & cooling area to minimize the dust. • Green belt development in and around plant area. |
| 2. Water Environment | <ul style="list-style-type: none"> • Water recovery plant provided where water is treated & treated water is recycled back to the plant for reuse. • Well designed effluent treatment plant provided to treat the process effluent generated from the plant. The treated effluent is reused to the maximum extent for the auxiliary operations. • Membership of Common Effluent Treatment Plant (CETP) is taken for ensuring proper treatment & disposal of excess process water. • Implementation of water conservation scheme in different sections /operations so as to reduce strain on fresh water requirements • Provision of flow measuring devices at various water intake points to have exact quantitative assessment of water consumption pattern • Periodic maintenance of effluent treatment plant so as to ensure proper operation of water treatment. • Regular qualitative analysis of the treated effluent for checking efficiency of the effluent treatment plant. |

7.13 Sunflag Iron & Steel Co. Ltd.

7.13.1 Energy & Environment Management

Usage of Blast Furnace gas, which was getting flared, was done in reheating furnaces of rolling mill which resulted reduction of furnace oil consumption per tone of product by 8.5 ltr. Equivalent CO₂ emission to atmosphere is reduced.

Some of the major activities undertaken by the company for Energy & Environment Management are as under :

- The company have prepared the on-site disaster management plan and submitted to all the concern authorities.
- The company is complying all statutory requirements for safe transportation of raw materials/finished products.
- The company has adopted the approved technology for the manufacturing of the products mentioned as above and restricting the generation of liquid effluents and gaseous waste within the limit.
- The company has well designed effluent treatment plant. The treated effluent is meeting the MPCB standards.



- Necessary air pollution control systems have been provided to all the susceptible sources.
- The process emission are meeting the norms prescribed by MPCB, in general.
- The Hazardous/Non-hazardous solid waste generated due to manufacturing activity is discharged as per the conditions laid down by MPCB.
- All necessary precautions have been taken to control the noise level within process house and factory area.
- Tree plantation programme have been undertaken. Numbers of trees planted are more than 2500 trees per hectare.
- Strictly adhering with the stipulation made by MPCB.
- The treated effluent is used for afforestation. A greenbelt has been developed around the factory
- As per Environmental Clearance, the gaseous emissions are controlled by installing dust extraction system, bag filter, two stage ventury system, ESP at appropriate places and all transfer points.
- The total water consumption is well within the allowable limits of Environmental Clearance.
- The non-hazardous solid waste generated from different sources are either recycled, sale or disposed for land fill. The hazardous solid waste are sold to authorized reprocessor etc.

CHAPTER VIII

DEVELOPMENT OF INFORMATION TECHNOLOGY

8.1 Introduction

The Ministry of Steel and the PSUs under it constantly endeavour to be updated on matters relating to IT infrastructure, development and applications.

- The Computer Centre in the Ministry is equipped with Windows servers; Pentium based client systems, a Scanner for document imaging operations and a heavy duty laser printer. In addition to these, the centre is also equipped with Local Area Network (LAN) equipment 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 160 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 160 nodes is operational in the Ministry and is being extensively used for:
 - ❖ Electronic Dak and Diary
 - ❖ Sharing of files/documents
 - ❖ information/material on Annual Reports, Parliament Questions, Pendency, Tracking and Monitoring Applications (VIP References, Public Grievances, Parliament Assurances, Position of Vacant Posts, ACC approvals, Review/ Appeal cases, Draft Audit Paras) from Sections/Desks
 - ❖ 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;
- Internet Connectivity for accessing the sectoral information has been provided to all officials/Desks/Sections in the Ministry.

8.1.1 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 is operational for sharing and disseminating information through a Bulletin Board services for Notices/Circulars/Office Orders among the users of the Ministry;
- The portal facilitates Electronic Dak/Diary movement of documents and other pendency monitoring applications.
- The facility for downloading of forms for sanction of leave and advances, medical re-imbursement; Annual Confidential Report forms; Identity Card, staff car booking; Income Tax; telephone directory of officials/Sections / Desks in the Ministry, organization chart etc., are also provided on the Intranet portal for the Officials/Staff of the Ministry.
- Personal Corner for employee's salary statement, GPF statement. Bulletin Board Services for Office Memoranda, Office Orders and Office Circulars etc. are available on the intranet portal.
- The Internet portal also provides interface for accessing computer based systems in the area of tracking and monitoring of important references, parliament assurances, position of vacant posts and their status in the Ministry and it's PSUs, Pending Review/appeal cases, court cases, Audit Paras etc. to minimise pendency and improve delays in decision making
- As a part of E-Governance plan, the following Web Based systems have been implemented in the Ministry :
 - ❖ Right to Information Act - Management Information System (RTI-MIS) - facilitates monitoring of Requests and Appeals received under RTI Act 2005. The system is fully implemented in the Ministry and it's PSUs. The system has been developed by Central Information Commission (CIC) as Central facility to all Govt. Ministries/ Departments/Sub-ordinate and attached offices/PSUs etc.



- ❖ Centralized Public Grievance Redressal And Monitoring System (CPGRAMS) has been implemented for facilitating Public Grievances in the Ministry and its PSUs. The system has been developed by Department of Administrative Reforms and Public Grievances.
- ❖ Centralized Pensioners Grievance Redressal and Monitoring System (CPENGRAMS) has also been implemented for facilitating Pensioners Grievances in the Ministry and its PSUs. The system has been implemented by Department of Pension & Pensioners' Welfare in all the Ministries/Depts of Government of India and developed by National Informatics Centre.
- ❖ ACC Vacancy Monitoring System (AVMS) has been implemented for monitoring of vacancies in PSUs. The system has been developed by Department of Personnel and Training.
- ❖ E-Service Book Electronic E-Service Book is being implemented in the Ministry as desired by Department of Personnel and Training(DoPT).

8.1.2 Ministry Official Website

The Ministry's web-site (<http://steel.gov.in>) in bilingual format on Internet has been re-designed. It provides information about the Ministry, its Policies, Acts etc. Administrative Setup, Indian Iron and Steel Producers and Processors, Right to Information Act-2005, Annual Reports, Outcome Budget, Promotion of Research and Development, Tenders and Links to Ministry's PSUs has also been provided to give a wide coverage of information on the Steel Sector.

8.1.3 Video Conferencing Facility

- A Video Conferencing facility has been setup between the Ministry and it's PSUs to conduct important meetings, speed up decision making, improve use of executive time and to reduce travel cost.
- An Executive Video Conferencing System (EVCS) has been installed in the chamber of Secretary, Steel. The EVCS based on NICNET has been set up on the desks of all Secretaries to Government of India and Chief Secretaries of State Governments and Union Territories for inter-departmental consultations as an effective mode of communication in order to carry forward e-governance as practical and efficient tool.

8.2 Steel Authority Of India Ltd. (SAIL)

In order to maintain its position and achieve its business goals and objectives, SAIL has embarked upon various project initiatives within the organization for enabling SAIL's competitiveness in the market place. Information Technology (IT) is one of the key initiatives that SAIL has undertaken in this direction. Highlights of major jobs in IT during the period April, 2010 to December, 2010 are as follows:-



A view of the ERP MES center at one of the Plants of SAIL



8.2.1 Enterprise Resource Planning (ERP)

SAIL started process of implementing ERP with Bhilai Steel Plant (BSP) taking lead in SAP-ERP implementation.

- In line with its vision, BSP has reshaped its business processes and systems through the implementation of mySAP™ ERP on 01/04/2009. Greater process and system integration has provided information visibility that can help the company adapt to business and market changes more quickly. Project provides BSP with an integrated system for better revenue management and for exploring future business opportunities by ensuring end-to end, on-time information visibility.
- Subsequently Durgapur Steel Plant (DSP) and Bokaro Steel Plant (BSL) have gone live on ERP on 01/10/2009 and 01/04/2010 respectively and stabilized since go-live.
- All the above three Integrated Steel Plants (BSP, DSP and BSL) have uniformly implemented following modules of SAP:
 - Finance and Controlling
 - Materials Management
 - Sales and Distribution
 - Advanced Planner and Optimizer
 - Production Planning
 - Quality Management
 - Plant Maintenance
 - Business Information Warehouse
- ERP implementation is in progress at Central Marketing Organization (CMO) and Rourkela Steel Plant (RSP). Go-live date of CMO and RSP is 01/04/2011.
- Unified Codification System is being implemented in SAIL in the areas of Material, Party, Product and Services.

8.2.2 Manufacturing Execution Systems (MES)

- BSP has also started its implementation of 'Manufacturing Execution Systems in SMS-2', Plate Mill and Rail Mill. M/s POSDATA has been selected as the Implementation Partner. In association with M/s POSDATA implementation has already been started with a commissioning schedule of 20 months from date of signing of contract i.e. 10/11/2009.

8.2.3 Networking and Video Conferencing

● Wide Area Network (WAN)

- ❖ Initiative has been taken to install layer 3 MPLS VPN based WAN for all locations of SAIL. The plants/units and other offices will be connected to each other through a secure and reliable fibre optics based MPLS - VPN with bandwidth ranging from 512 Kbps to 8 Mbps.
- ❖ Video Conferencing system at all 33 locations in SAIL was earlier running on ISDN BRI and PRI. Now Video Conferences are conducted using the IP protocol through MPLS-VPN network. The performance, clarity and quality of the Video Conference have improved tremendously. Video Conferences are now conducted for longer durations without any disturbance or breakdown.
- ❖ Initiative has been taken to further install High definition Video Conferencing system at 18 locations in SAIL.



Blast Furnace control room of Rourkela Steel Plant

8.2.4 E-commerce

● E-procurement System (EPS)

E-procurement System (EPS) was implemented initially at BSP and RSP in 2006-07 and subsequently at all other



plants to facilitate reduction in lead time of acceptance of tender and expedite exchange of information between SAIL and vendors in a secure and transparent manner.

- **E-Buying (e-procurement through Reverse Auction)**

With the benefit of transparency in negotiation and purchasing at best available market price, SAIL was the first PSU to implement E-Buying in 2001-02. The transaction has grown steadily from ₹ 19 crores in 2001-02 to ₹ 2073 crores in 2009-10. In the current financial year, e-procurement worth ₹ 2066 crores has been transacted.

- **E-Selling (sale through Forward Auction)**

E-selling started in SAIL in 2002-03 and has increased from 53 crores in 2002-03 to ₹ 2512 crores in 2009-10. In the current financial year, e-selling worth ₹ 1764 crores has been transacted.

8.2.5 Tender Website

Tenders and related information are being published on website for easy access and download by interested vendors for wider advertisement and increased competition.

8.2.6 E-payment

- Payment of salaries to SAIL employees and bill payment to suppliers are being done e-payment.

8.3 Rashtriya Ispat Nigam Ltd. (RINL)

IT-services for internal and external customers of RINL-VSP include Software Development, Support to Servers and other IT infrastructure and Support to Process Control. Business systems have been developed for different functional areas. RINL-VSP is the first Indian steel plant to get CMMI -level 3 certification for implementation of IT systems in VSP. In addition to the ongoing activities a number of initiatives have been taken in the year 2010-11.

8.3.1 E-initiatives

VSP is maintaining departmental portals and web applications over intranet and internet. Tenders and related information are being published on the website for easy access and are downloaded by interested vendors for wider advertisement and increased competition.

With transparency in negotiation and purchasing at best available market price, E-auction engines were developed for Project Contracts Department. E-auctions are being conducted using this engine for tenders of Project Contracts. Auto bidding was accomplished for marketing e-auctions system. Reverse e-auction for awarding Stores Transport Contracts and Reverse e-auction for purchase cases in Mixed Currency were implemented. Web tendering system for internet was developed.

Web site for RINMOIL was developed. For ensuring smooth recruitment process, online web registration system for recruitment for Management Trainees and Junior Trainee was implemented. For ensuring smooth online transactions by employees and customers, touch screen based Information kiosks were provided. Customer Information System was launched. Supplier Information System was developed and being implemented. Web based Quality Complaint System was implemented.

As a part of drive towards user satisfaction, Mobile Short Messaging Service is used for communicating different activities like Project Billing, Production, Sales data etc. A personal productive tool v-Space was launched, using latest web technologies. With a view to give access to multiple applications, Single sign on was implemented for all business applications of VSP. OASIS (Oracle Applications Secure user-access Interface Suite) was implemented for online user access management.

8.3.2 Security initiatives

To have security assurance related to IT activities in VSP, implementation of Information Security Management System is taken up.

8.3.3 Business applications implemented

BMHS (Bulk Material Handling System) for SMS was implemented. Coke Ovens Weigh Bridge System and Gate Pass Monitoring System were developed and being implemented. Inventory Management System was developed and being deployed across the plant to take care of Departmental Stores activities. Excise Reconciliation System was developed and implemented. E-filing of excise returns (RG23D) was implemented in XML format in the Internet at stockyards.

8.3.4 Infrastructure initiatives

With a view to increase the speed of internet access, Plant network was upgraded to 10Gbps.

8.3.5 Process control initiatives

In MMSM, alternate breaking of flap was implemented in the cooling bed area to improve the cooling of the products which in turn improves the productivity/ reduction in maintenance over saw cutting area.

8.3.6 Special initiatives

Business Intelligence Dashboards were developed. Implementation of Enterprise Project Management solution (EPM-2010) and Document Management Solution is in progress. Digitization of Documents was completed in identified areas. Workflow application for ISO-14001 was developed and being implemented. Portal for Enterprise Risk Management System was developed. Enterprise Email Archival Solution, MES for the plant and Yard Networking Project are taken up. Other projects like upgradation of process control systems, payment gateway, automation systems etc. are in pipeline.

8.4 NMDC Ltd.

- Web based HRMS &FAS has been implemented.
- On-line employee self service for leave module has been commenced.
- On-line web based Inventory Management System (IMS) has been implemented.
- On-line Annual Property Return is facilitated on regular basis.
- Video conferencing facility between HO & Units is established and is being used on regular basis.
- Backup VSAT connectivity between HO & Units.

8.5 MOIL Ltd.

The Company has set-up a full fledged Systems Cell in order to ensure an effective Computerization of all the functional areas of the Company. At present the System Dept. has seven Executives and eleven Non-Executives members. The Department is headed by Director (Commercial). In order to ensure an adequate IT infrastructure, steps taken by the System Department are as under:

- Installation of 310 Nos. of Computers, out of which 170 Computers are at the Head Quarters and 140 Computers are distributed in Maharashtra and Madhya Pradesh Mines.
- Designed, Developed & Implemented Computer based applications to meet Computing & Data Processing needs of the various Departments viz, Sales & Marketing, Purchase & Stores, HR, Production & Quality and Cost & Finance of the Company.
- Local Area Networks (LAN) on windows-2003 platform in place at Head Office, Nagpur. LAN has also been designed and developed at all the nine mines of the Company.
- Design, Develop & Hoisted a dynamic internet website on NIC Server.
- Design, Develop & Hoisted a dynamic intranet website on in-house MOILNET Server. As a security measure CISCO Firewall has been installed in the System.
- For effective sharing of databases/information and other resources on regular basis all the remotely located production units and Headquarters are connected through VSAT.



- Conversion of legacy systems to a client server environment is in progress.
- For continuous knowledge acquisition, e-mailing and for data transfer facilities all the concerned officials have been provided with internet connection through a shared 2 mbps broadband line.

8.6 MSTC Ltd.

The developments at MSTC Ltd as far as IT infrastructure is concerned can be summarized below:

- Continuation of ISO 27001 certification.
- Leased line has been enhanced from 20 Mbps to 30 Mbps.
- Email secure solution from Tata Communications.
- MDDOS service taken from Tata Communications.
- ISTMS (Integrated Scrap Trade Management System) has now been made web enabled.
- New centralized Payroll Application has been introduced and is web enabled.
- Link to 'Citizens in Administration' has been provided in corporate web site.
- New module introduced in e-auction for serving Tea Serve.

8.7 Ferro Scrap Nigam Ltd. (FSNL)

- The various departments of corporate office and units have been provided with computers. The areas related to payroll, financial accounting, materials management have been computerised.
- MIS is being generated out of application packages.
- Units are linked up through internet connections.
- The installation of Wide Area Network (WAN) and implementation of SAP Enterprise Resource Planning (ERP) is under progress.
- Fulfilment of statutory compliance of the company such as PF, income tax, tendering, e-filing, etc.
- Posting of information regarding implementation of Right to Information Act on company's website.

8.8 Joint Plant Committee (JPC)

8.8.1 Phase I of Integrated Software system

In order to meet the growing demand for data, JPC has successfully implemented the Phase I of an online integrated system, which has enabled it to generate reports related to import/export within 10-15 days of the reference month. The present system incorporates daily input and brings forth daily reports. Numerous benefits have been recorded post implementation of this system:

- A remarkable saving in time thereby mitigating the delay in the compilation and publication of the data
- Monitoring of import/export is possible on a daily basis
- The reports may be taken in WORD, HTML and EXCEL format

The system will further enable generating additional reports like Month - Category wise import/export by quantity, Month-Grade wise import/export by quantity, Month-Section size wise import/export by quantity, Country- category wise unit price, Country- ITC wise unit price of imported category, etc. JPC's leased line BSNL connectivity is used to download EDI data every day from NIC server in New Delhi using FTP connection. Non-EDI data are collected through from ports/customs manually. Each month, a total of nearly 15,000 Bill of Entry and 15,000 shipping bill (including EDI and non-EDI system) are processed by JPC.



8.8.2 Phase II of the Integrated Software system

The 2nd phase comprises of production, price, stock and consumption. The system study, requirement, analysis and design phase is completed and trial runs are in progress. A multi-tier software, the system will enable faster data preparation and reporting system, with fast checking, status updates on receipt position, and a total of 35 different reports can be generated for month-wise, period-wise, region-wise, state-wise, unit-wise and segment-wise production data.

8.9 Hindustan Steelworks Construction Ltd. (HSCL)

The Company has its own web site at www.hscl.co.in through which it conducts its business activities in a transparent manner and complies with all statutory guidelines on Right to Information Act.

8.10 MECON Ltd.

MECON's offices at Ranchi, Bangalore and Delhi are equipped with state-of-the-art hardware, network and various Engineering software tools like AUTOCAD, AUTOPLANT, PDS, ETAP, CEASER, PVLITE etc. that facilitate quality design and timely completion of various projects.

MECON is using different project management software like Primavera, MS Projects and in-house developed project management software for planning and monitoring of different ongoing projects.

In-house developed web based modules like HR, Corporate Finance, Project Finance, MIS, Knowledge Management, e-Archive are in use for day to day activities.

MECON is also using Video conferencing system extensively for discussions and review meetings with both among various offices of MECON and with clients/vendors.

8.11 KIOCL Ltd.

8.11.1 Information and Communication Technology (ICT) usage in KIOCL

KIOCL has been fully computerized operations organization. The main areas of computerization are:

- 1) Inventory and materials management: KIOCL has been the pioneer in Inventory and materials management computerization. The design was adopted from the Canadian mining companies and had unique item codification with check digits and well laid procedures and forms for each and every aspect of Inventory and project Management. The system has been constantly upgraded and is currently run on state of art web based application which is completely online and accessible via wide area network at our corporate and all plant location.
- 2) The Finance and payroll management including computerized printing of pay slips was incorporated since its inception. Subsequently keep in tune with the change in technology and improvements in networking and Internet Bandwidth, most of the companies payments are now done through RTGS. This has made payments to vendors and suppliers transparent and fast. All procurements above a sum of ₹ 5 lakhs are done through E-Procurement thus giving the company access to the large supplier base and increasing transparency in procurement process.
- 3) Marketing: Monthly e-tender is being conducted for sale of pellets.
- 4) Process management: Sensor technology holds exciting potential for improving productivity. Sensors placed in the fields can monitor measure and relay conditions like temperature, humidity, flow, pressure, water levels, etc, which then enables the engineers to take swift corrective or remedial action as needed. All plants of KIOCL are fully automated and can be controlled from the central Control room. KIOCL was one of the first plants to invest in Distributed control systems for process automation. This has reduced the manpower requirement and increased productivity. Our fully automated loading system can load upto 3500 MT/Hour. We are augmenting the materials division with a fully automated bulk material handling system which will have a captive railway siding with wagon tripling unit and covered conveying system.
- 5) KIOCL's website comprehensively covers all the current activities undertaken by the company and is updated on a regular basis. All tenders, appointments, status of registrations, departmental manuals and employee service rules as updated from time to time are available on the website.



- 6) Secured networks are essential to the mission of public-sector organizations. These organizations face security threats to their infrastructure, both from internal and external sources. KIOCL has focused both on protecting their critical network infrastructure from the myriad of intrusion, virus, spam, and other externally originated risks as well as internal exposures. In addition to network security, Access Control and Identity Management has been an area of focus and growing technology investment. Biometric and smart-card based technologies are being employed for both secure and authorized access to government facilities.

8.11.2 Improvements in efficiency:

Monthly e-tender, being conducted for sale of pellets has reduced the price discovery process time from two weeks to around 4 days. Overseas customers are particularly happy with the changeover to E-tendering as they do not have to rely on courier or other postal means for delivery of necessary bid documents on time. The entire process being online, the results of the e-tender is known immediately on opening of the bids.

E-procurement has helped to develop the vendor base and helped to break cartels formed by certain manufacturers and suppliers. Lead time for procurement has been reduced drastically. RTGS payments have reduced paper work like payment vouchers & cheque preparations and improved departmental efficiency.

Regular condition monitoring of the equipments have improved plant efficient, availability and throughput in addition to centralized monitoring and manpower reduction.

8.11.3 Service delivery - Business/ Client centricity:

As already mentioned above, KIOCL's initiative in ensuring transparency has been widely welcomed by our clients, suppliers and importers. All details of payments released are made available on the company website thus making transaction tracking easy and reliable. Service manuals explaining the working of key departments are posted on the website along with details of the grievance procedure, grievance escalation matrix, and contact numbers of important offices and general terms and conditions of the contract. Presently ICT has enabled KIOCL to make its business client centric.



CHAPTER-IX

SAFETY

9.1 Introduction

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 the nation. Iron and Steel production being a complex and hazardous activity, needs to prevent injuries and accidents, provide a healthy working environment and guard against all possible hazards and risks to be adequately recognised and taken care of. This chapter highlights the emphasis on safety by the PSUs under the Ministry.

9.2 Steel Authority of India Ltd. (SAIL)

Averting accidents in any manufacturing industry has been a constant concern area. However, in case of SAIL, the concern assumes a far greater significance because of existence of a large workforce that is engaged in the task of producing steel- a task that has inherent occupational hazards. The issue of safety in workplace therefore is naturally a priority in our operational ethos.

A number of steps have been taken by company to lay thrust on systematic approach to safety management and promote safety awareness amongst all levels of employees including contractor workers.

Essential ingredients of Safety Management System and Practices in SAIL include the followings:

9.2.1 Top most priority

SAIL strongly believes in maintaining ethical and social standards while serving its Corporate Social Responsibility. It gives adequate emphasis on safety of human resources and assets of the company along with production, productivity, cost reduction and quality.

9.2.2 Visible Management Commitment:

Ensuring accident free working in steel plants has been one of the prime priorities of the SAIL Management, which is committed to achieve the target of 'Zero Accident'.

Safety is monitored at the highest level of management i.e. Chairman and Directors' level as well as by the Chief Executives of respective plants/units to provide impetus on inculcating safety awareness and improving human behavior towards safety. Safety is discussed as first item in all appropriate forums, and directions are issued for adoption of all requisite measures to bring continuous improvement in safety standards. This demonstrates the concern of the management towards this vital issue.

SAIL has a well defined safety policy, which establishes organizational commitments towards safety of not only employees but also of those associated with the company. In addition, Plants implementing OHSAS-18001, an advanced Safety Management system, also have an 'Occupational Health and Safety Policy'. All efforts are directed in consonance with the policy and are perused in a consistent and sustained manner by all plants/units.

9.2.3 Safety set up in SAIL:

Each Plant/unit of SAIL has a full-fledged Safety Engineering Department to look after safety management of the respective plant and unit under the respective Head of Works. In addition, a Corporate Safety Unit named SAIL Safety Organization (SSO) also exists to coordinate and monitor the operational/fire safety activities undertaken at the different plants/units and to provide appropriate corporate thrust on safety management in the Company.

9.2.4 Systems and Procedures

- Standard Operating Procedures (SOPs) and Standard Maintenance Procedures (SMPs) are made, incorporating safety aspects.



- Safety aspects incorporated in Work permit/ Protocol.
- Identification of unsafe acts and conditions during preventive inspection.
- Specific Medical examination made mandatory for 'Working at Height' and for operating 'Mobile Equipment'.

9.2.5 Safety Audit

- Three-tier Safety Audits are conducted at Plants and units
 - ❖ By Safety Engineering Deptt. of Plants and Units.
 - ❖ By SAIL Safety Organisation in association with representatives of other Plants/Units
 - ❖ By external agencies viz. National Safety Council, OHSAS auditors, RLI
- In addition, in view of rising fatal accidents during project activities, SSO has started auditing the project sites.
- Also SSO is conducting Compliance Audits for evaluating the implementation status of the recommendations of the past audits conducted in Plants.

9.2.6 Monitoring

- Meeting of 'Heads of Safety' and 'Heads of Fire Services' of Plants/ Units are organised at specified interval.
- APP for Safety and Fire Services are formulated for each steel plant and SSO.
- All major Capital repairs / Shutdown are closely monitored round the clock to ensure safe working.
- Accident enquiry committee's findings are monitored at different levels for compliance.



A workman wearing various safety equipment working tirelessly at a Steel Plant



9.2.7 Awareness and Training

- HRD interventions in the area of Safety cover HoD, Line managers and Deptt. Safety Officers (DSOs).
- Area specific workshops are conducted.
- Skill oriented job specific safety training is imparted.
- Safety films are used during training programmes..
- Safety related information is telecast through local TV network of Plants.

9.2.8 Usage of Personnel Protective Equipment and Safety Devices

- User friendly, convenient-to-use Personnel Protective Equipment (PPE) are used.
- Bamboo scaffolding is replaced by pipe scaffolding.
- Safety belt is replaced by Full -body harness with life lines.
- Advanced PPEs and Safety devices are introduced regularly.

9.2.9 Analysis and Investigation

- All accidents are investigated and remedial actions taken to prevent recurrence.
- Recommendations of 'On- the- spot study' of fatal accidents are implemented in all Plants and Units.
- **Contractor workers' Safety:** This area has been accorded high priority among the thrust areas identified for implementation of Corporate Plan 2012 in view of plethora of projects that would involve participation of a large number of contract workers. While mobilizing and equipping the large workforce necessary for these projects, concerted efforts are being made to train and educate them so that these activities are carried out without any accidents.

Following guidelines are in vogue in the above area:

- ❖ Induction and on-the-job safety training
- ❖ Safety induction and medical fitness for height jobs
- ❖ Site inspection and safety clearance
- ❖ Inclusion of safety and penalty clause in contracts
- ❖ Planned Job supervision by contractor and executing authority
- ❖ Ensuring availability and use of PPEs
- ❖ Regular follow up with major contractors

9.3 Rashtriya Ispat Nigam Ltd. (RINL)

Safety is given due importance and the implementation of OHSAS 18001 has ensured a safe work culture in the organization. Continuous efforts on the implementation of safety standards, monitoring of risk control and other proactive measures have resulted in reduction / elimination of potential hazards.

Surveillance and recertification audits were conducted for OHSAS 18001:2007 by M/s BVCI and re-certification is under process. A demo on 'Fire Fighting and Rescue' was organized and also aspects like extinguishing Petrol, Gas and Chimney fire and rescuing persons from smoke trapped buildings etc. were displayed. A lecture on Fire Safety by the Joint Chief Inspector of Factories was arranged covering officers of VSP and personnel from CISF Fire wing.

Safety Audit, HAZOP/HAZAN studies, Consequent Analysis and On-Site Emergency Plan afresh for the existing and expansion units of VSP were conducted by M/s Det Norske Veritas (DNV). Contract workers were also involved in the preparation of Hazard Identification and Risk Assessment for various activities.



In addition to regular safety training programmes, the following proactive measures were also undertaken to inculcate safety awareness:

- A lecture on 'Behavior Based Safety Management' (BBSM) was organized with the faculty from M/s DNV
- Safety training programmes on "Electrical safety" & "Structural Maintenance & Painting, Working at Heights" were organised
- Awareness session on "Hazards of Chlorine Gas" was conducted
- Safety awareness program on 'road safety & home safety for women employees' by Safety expert and Ex Official of Loss Prevention Association was conducted
- A training program on 'RIDE SAFE' was conducted in collaboration with Safety experts of 'Hero Honda' covering employees of VSP, Housewives & Students in township.
- To save power, Solar power run Traffic Signal lights were installed at some locations
- Monthly meetings are conducted with contractors, who are involved in project expansion works & the best practices followed by agencies in construction safety are implemented in all zones.

9.4 NMDC Ltd.

NMDC has its training centers in all its projects and they are equipped with infrastructure as required under Mines Vocational Training Rules. These centers cater to the needs of basic training, refresher training, and training for skilled workers and also for those injured on duty. In each mining project of NMDC sufficient number of workmen inspectors are nominated / appointed for mining operations, Mechanical and Electrical installations as per statutory requirements. Mine Level Tripartite Safety Committee meetings 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. Tripartite Safety Committee meetings are being held regularly once in a year at Head Office.

Safety committees have been constituted in every operating mine and pit safety meetings are held every month for discussing the safety matters and corrective actions related to work atmosphere.

Man days lost per 1000 man days worked for the year 2010-11 upto November 2010 is 0.60 and 3.01 for the year 2009-10.

9.4.1 OHSAS 18001:2007 Certification:

NMDC Projects - BIOM, Kirandul Complex, BIOM, Bachel Complex and Donimalai Iron Ore Mine are accredited with OHSAS 18001:2007 Certification.

9.4.2 OHS Activities:

Occupational Health Services have been provided with adequate manpower and infrastructure and are functioning in full-fledged manner at all the projects, headed by qualified Doctors trained in OHS at Central Labour Institute, Mumbai.

Periodical medical examination under statute is carried out regularly in all the projects, with a planned programme. All the results are computerized and individual files are being maintained.

9.5 MOIL Ltd.

All the Mine working is being regularly supervised by Competent Supervisors like Mine Mate, Mine Foremen & qualified Mining Engineers. Safety Inspections are also being carried out during the working shift by Workmen Inspector, Safety Officer, Mine Manager & Agents. Internal Safety organization headed by General Manager (Safety) at Headquarters Level is co-ordinating with Directorate General of Mines Safety (DGMS) & inspecting the mine from time to time.

Regular Safety Committee meetings are held at mines where day to day Safety aspects are discussed with the participation of workers. Unsafe Practices and Mine Accidents are analyzed in details to avoid any recurrence.



Sbri K. J. Singh, CMD, MOIL receiving National Safety Award from H.E. Vice President of India, Mohd. Hamid Ansari

Regular occupational health check ups are being done as per the guide line of DGMS. The number of persons examined & tested for Initial Medical Examination, Periodical Medical Exam, Eudiometry, Lung Function test for the calendar year 2010 (upto the month of November) is as under :-

IME	Cummu.		PME Cummu.		Audiometry Test Cummu.		PET Test Cummu.	
	Dept	Cont	Dept	Cont	Target	Actual	Target	Actual
Total	168	597	6588	5047	6722	5034	6824	4311

Safety policy for the Company has been crafted as per recommendation of 9th Safety Conference to further improve the safety standard of the mine. The Company has introduced study of Health Safety Management through Risk Assessment for Dongri Buzurg Mine & Balaghat Mine of the Company. Recommendations of the study are being implemented. Regular training is imparted to Workmen Inspector & Workers in the Training Centre, Munsar regularly. All this concerted efforts have reduced the frequency of mine injury.

9.6 MSTC Ltd.

MSTC being a trading organisation does not have any plant/workshops. However, necessary measures are there in all MSTC's offices including attendance of a doctor during office hours.

9.7 Ferro Scrap Nigam Ltd. (FSNL)

In order to create awareness about Safety & Safe working practices among the employees, special programmes on Safety & related topics, are incorporated in the training calendar prepared for the whole year.



The institutions like National Safety Council & other such reputed agencies are approached for evolving such programmes on Safety & allied matters in their training schedules, for the benefit of the employees.

Besides arranging training programmes, Safety Day celebrations are also held in the company consisting of safety debate competitions etc., wherein the employees participate with great zeal, as the Winners of such competitions are given away suitable attractive prizes.

Special training programme on prevention of Fire & fire accidents are also organized, through the Fire Service station of concerned Steel Plants for the employees, especially all the Operators, as a measure of creating awareness among them with regard to self-protection and protection of the equipment from fire hazards.

9.8 Hindustan Steelworks Construction Ltd. (HSCL)

HSCL has formulated safety code and adequate steps have been taken for its implementation. In addition, HSCL complies with all safety norms connected with construction activities. The Company has full-fledged Safety Departments in Steel Plant Units where about 98% of its workmen are posted.

9.9 MECON Ltd.

MECON has design and consultancy offices and does not have an industrial unit. However, at project sites all necessary safety related precautions are being taken and as a result no accident has been reported during the year.

9.10 KIOCL Ltd.

Safety Departments are functioning effectively in all the locations. KIOCL gives utmost importance to the occupational Safety and Health of the persons working in the Company. Although the mining activity at Kudremukh iron ore mines has been stopped with effect from 01-01-2006, as per the Hon'ble Supreme Court verdict, regular safety inspections are being carried out to ensure safety and health of employees engaged in upkeep and maintenance of mining equipments, essential services like water pumping watch and ward etc.

Training programme are being conducted for contractual workers who are coming for dismantling structures and other related works to inculcate safety conscious among them. Refresher training, covering the area of working, first aid training, fire fighting and safety awareness training programme are conducted on need basis.

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 workmen's Safety Committee Members. Safety points are discussed in the Safety Meetings held every month. Suitable action is taken for implementation of the shortfall, if any, and for improvement.

9.11 Bird Group of Companies (BGC)

Mining companies under the Bird Group of Companies take safety measures according to provision of Mines Act, Rules, Regulations and Guidelines towards safety of the employees engaged in mining and allied activities. Necessary safety devices, tools and implements have been provided to the concerned employees. Safe practices pertaining to different activities in mining operations are implemented and also best practices are followed by visiting neighboring mines and by participation of workers in safety exhibitions. The employees have been awarded prizes by the Annual Mines Safety Week Celebration Committee of the region every year in safety competitions. Basic and refresher training is imparted to all the workers working in the vocational training center functioning in the mines.



CHAPTER-X SHIP BREAKING

10.1 Introduction

- Like many industries, the ship breaking industry has grown and expanded, in the past three to four decades, all over the world. The ship breaking industry supplies substantial quantity of re-rollable and scrap steel for the iron and steel industry. It increases the availability of semi-finished material, which otherwise would have to be produced by using the ore. Thus, it helps in conservation of natural resources.
- Ship breaking, as a regular commercial activity, started in some of the industrially advanced countries like the U.K., U.S.A. and Germany during the post World War II period. By 1960, the activity shifted from the industrialised countries to other areas in Europe and Far East. However, more than 90% of shipbreaking in the world during the last 10 years has taken place in India, Bangladesh, Pakistan and China.
- Private entrepreneurs handle the task of ship breaking in India. It is labour-intensive job and India having abundant human resource, finds it a cost efficient activity. Till the sixties, ship breaking in India was confined mainly to dismantling of small barges and coastal wrecks. This activity grew into a full-fledged industry by 1979.



A half cut ship in the bay

10.1.1 Location of present ship breaking activities

- Alang and Sosiya yards in Gujarat
- Sachana in Gujarat
- Mumbai



● **Kolkata**

Alang and Sosiya are two villages situated on the coast of the Arabian Sea in the district of Bhavnagar in Gujarat where 90 % of the shipbreaking activity in the country is concentrated. The Ship Breaking statistics# during the last three years and current year 2010-11 (upto December 2010) are as under:

Year	No. of ships beached	(in million tonne)
		Light Displacement Tonnage (LDT)*
2007-08	140	0.60
2008-09	267	2.00
2009-10	379	3.1
2010-11(upto December 2010)	277	2.06
2010-11 (Jan-March - Estimated)	-	0.2
* LDT is unit of physical weight of a ship		
# Statistics as furnished by the Iron Steel Scrap & Ship Breakers Association of India.		

10.1.2 Contribution of ship breaking

Ship breaking process is an industrial activity, which not only generates re-rollable steel but also helps create direct and indirect employment. Steel produced through the ship breaking route saves natural resources like iron ore, coal, etc. which are used for production of steel through integrated steel plants. The steel generated from ship recycling contributes to around 1% to 2% of the domestic steel demand. Some of the key points related with the ship breaking industry are:

- A population, both direct and indirect, of more than 1 lakh depends on the ship breaking industry.
- As ship plates need to be reheated only upto 1000°C for re-rolling, the scale formation at this is minimal for re-rollers.
- Occurrence of physical defects like seams, internal cracks, porosity, slag inclusion and furnace burns are less frequent in shapes and sections re-rolled from ship plates.
- Improved ductility due to slightly lower carbon and freedom from inclusions allow more intensive cold twisting of rebars from steel obtained out of ship breaking.
- Fine grains of ship steel ensure greater resistance to corrosion especially surface pitting.

10.1.3 Inter Ministerial Committee (IMC) on ship breaking

- The Ministry of Steel is concerned with ship breaking as per allocation of work (please refer Annexure-I). Ship breaking is mainly carried out at Alang, Gujarat. More than one lakh people are employed in ship breaking industry. Ship breaking industry also contributes to the availability of steel scrap in the country and also heavy revenues are received in the form of duty tax by the nation.
- The general issue of control and management of hazardous waste has been under consideration in the Hon'ble Supreme Court following the writ petition no. 657 of year 1995 filed by Research Foundation for Science Technology National Resource Policy. The applicant sought the implementation and other remedial measures in respect of Hazardous Waste (Management and Handling) Rules 1989 framed by the Ministry of Environment and Forests; and the general issue of control and management of industrial waste. The various State Governments/Central Ministries were affected in this case and Ministry of Environment and Forests (MoEF) was the nodal Ministry.
- During the course of deliberation, the Hon'ble Supreme Court issued various orders, the first important order being on October 14, 2003. The order mentions that an Inter-Ministerial Committee will be set up for shipbreaking activities. The Ministry of Steel set up an Inter-Ministerial Committee (IMC) vide an order of January 12, 2004 under the chairmanship of Additional Secretary and Financial Advisor with members of Ministry of Shipping,



Ministry of Environment and Forests (MoEF), Ministry of Labour, Gujarat Maritime Board, Gujarat State Pollution Control Board, Central Pollution Control Board, Labour Association, Steel Scrap and Ship breakers Association etc. for the implementation of the Hon'ble Supreme Court Orders and other related functions. So far, IMC has held 12 meetings; co opted members of other organizations; discussed various issues pertaining to ship breaking industries and issued a large number of directions to implement Supreme Court Orders.

- The last meeting of IMC was held in Bhavnagar on 17th September, 2010. Most of the issues discussed in the meeting relate to the safety and welfare of workers (viz. medical assistance, protection equipment, X-Rays from pollution environment, disease, housing facility etc.). The matters regarding health of workers and housing facility for them have since also been taken up with the Government of Gujarat.

10.1.4 Finalisation of the Code on shipbreaking activity

- The Hon'ble Supreme Court vide its order dated 17.2.06 directed to set up a Committee of Technical Experts on ship-breaking. Ministry of Environment and Forests (MoEF) set up the committee on 24.3.06 to be headed by the Secretary, MoEF, and experts from various other organisations/pollution control boards. The Committee made various recommendations which have been accepted by the Supreme Court vide its judgment dated 06.9.07.
- The Supreme Court vide its order dated 06.09.07 stated that the Government of India shall formulate a comprehensive code incorporating the recommendations and the same has to be operative until the concerned status are amended to be made in line with the recommendations. Until the Code comes into play, the recommendations shall be operative by virtue of the order dated 06.9.07. The code is under formulation in the Ministry of Steel.
- A draft code has been prepared after extensive discussions with the stakeholders. The code is proposed to be circulated for comments/views of the concerned Ministries/Departments.



CHAPTER-XI

WELFARE OF WEAKER SECTIONS OF SOCIETY

11.1 Introduction

The Ministry of Steel and the public sector undertakings under it, comply with the Government guidelines with regard to welfare of weaker sections of the society. A statement showing the number of SC/ST/OBC/Ex-Servicemen/ Employees as on December 31, 2010 in respect of Ministry of Steel is given below:

Representation of SCs, STs and OBCs in the Ministry

Group	No. of employees*				No. of appointments made during the year									
					By direct recruitment				By promotion			By other methods		
	Total	SCs	STs	OBCs	Total	SCs	STs	OBCs	Total	SCs	STs	Total	SCs	STs
Group A	42	5	1	0	-	-	-	-	2	1	1	-	-	-
Group B	105	15	5	3	-	-	-	-	4	2	2	-	-	-
Group C	103	38	5	10	3	3	-	-	-	-	-	-	-	-
Total	250	58	11	13										

* Includes Personnel Staff of Hon'ble Minister of State for Steel.

11.2 Steel Authority of India Ltd. (SAIL)

Steel Authority of India Limited consists of five integrated steel plants at Bhilai, Durgapur, Rourkela, Bokaro and Burnpur and three special steel plants at Durgapur, Salem & Bhadravati. SAIL Refractory Unit, Raw Materials Division with mines at Jharkhand, Orissa, Chhattisgarh & West Bengal; Central Marketing Organisation with network spread all over India and Ranchi based Research & Development Centre for Iron & Steel, Centre for Engineering & Technology and Management Training Institute are also part of SAIL.

SAIL plants and units including mines are situated in economically backward regions of the country with predominant SC/ST population. Therefore, SAIL has contributed to the overall development of civic, medical, educational and other facilities in these regions. Some of the contributions are:

- As on 31.12.2010, the total manpower of SAIL was, 113403 comprising of 17592 SCs, 14662 STs and 9758 OBCs.
- Since non-executives (which comprise around 86% of the total employees) recruitments are carried out mainly on regional level, a large number of SCs/STs and other weaker section of the society get the benefit of employment in SAIL.
- For jobs of temporary & intermittent nature, generally contractors deploy workmen from the local areas, which again provide an opportunity for employment of local candidates of economically weaker section.
- Establishment of SAIL steel plants in economically backward areas has given a fillip to the economic activities thus benefiting the support population providing different types of services.
- Over the years, a large group of ancillary industries has also developed in the vicinity of Steel Plants. This has created opportunities for local unemployed persons for jobs and development of entrepreneurship.
- Steel Townships developed by SAIL have the best of medical, education and civic facilities and are like an oasis for the local Scheduled Castes, Scheduled Tribes and other population who share the fruits of prosperity along with SAIL employees.

Besides, SAIL has undertaken several initiatives for the socio-economic development of SCs/STs and other weaker sections of the society, such as:

- Special School started exclusively for poor, underprivileged children at five integrated steel plant locations. The facilities provided include free education, mid-day meals, uniform including shoes, text books, stationery items,



school bag, water bottles and transportation in some cases. The schools now provide education to around 1400 children.

- SAIL plants have adopted over 245 SC/ST students belonging to BPL families/ primitive tribes. They are being provided free education, boarding, lodging and medical facilities for their overall growth.
- Fifty one tribal students are taught free of cost in company sponsored DAV school at Chiria
- No tuition fee is being charged from SC/ST students studying in the Company run schools, whether they are SAIL employees' wards or non-employees' wards.
- An ITI has been opened at Gua Mines on 13/09/07. As the local population comprises of mainly SC/ST and economically weaker section, this initiative will benefit them in acquiring the employment oriented essential technical skills.
- Free medical health centres for poor have been set up at Bhilai, Durgapur, Rourkela, Bokaro, Burnpur (Gutgutpara) providing free medical consultation, medicines, etc. to the peripheral population mainly comprising of SC/ST and weaker sections of society.
- Villagers are given free treatment- outdoor and indoor -in the mines hospitals of Kiriburu, Gua & Chiria when recommended by Manki / Munda (Local Tribal Village Heads) of the peripheral villages which mainly helps the ST community people and other weaker sections of society.



Child with her books provided by SAIL's Rourkela Steel Plant under its L2R project

11.2.1 Special recruitment drive for SC/ST

Special Recruitment drives are being conducted on regular basis to clear the backlog vacancies reserved for SCs and STs. Out of 11 backlog posts, 8 vacancies were filled up in the year 2010.

11.2.2 Other Important Information

Internal workshops for Liaison Officers for SC/ST and other dealing officers of SAIL plants/units are conducted at regular intervals through an external expert to keep them updated on the reservation policy for SC/ST and other related matters.

A separate grievance register is maintained for SC/ST employees at plants/units.

On the directions of National Commission for Scheduled Castes, SAIL SC/ST employees have taken initiative to form one representative body at each plant/unit by amalgamation of different outfits. SAIL SC/ST Employees Federation, an identified body of Scheduled Caste and Scheduled Tribe employees of SAIL and its Plants/Units for discussion on grievances and issues, if any, of such employees with Management of SAIL, has also been formed at Central level. Regular meetings are held with these representative bodies.

At Corporate level, SAIL management has been meeting with the SAIL SC/ST Employees Federation periodically. Last meeting with the Federation was held on May 5, 2010.



11.3 Rashtriya Ispat Nigam Ltd. (RINL)

As on 31.12.2010, the total manpower with RINL was 17900 comprising of 3037 SCs, 1235 STs and 1386 OBCs.

11.3.1 Welfare of SC/ST and OBCs

Death Fund Scheme for the employees belonging to SC & ST category was introduced in Jan, 2009 wherein ₹ 50/- will be deducted from the salary of the members (approx. 4000) of the Association in the event of death of any member and the amount so collected would be given to the dependent of the deceased member. 21 families have been benefited under the scheme so far where on an average each such family has received a sum of little more than ₹ 2 Lakhs.

11.3.2 Scholarships for SC/ST Category:

The following Scholarships are meant exclusively for the children of employees belonging to Scheduled Castes and Scheduled Tribe category:

Group	Qualifying Examination	Course in which admission is sought	Amount of Scholarships	No. of Scholarships	
				SC	ST
I	12th Class / Intermediate Exam. in Science stream	Degree courses in Engineering / Architecture / Medical / Veterinary / Agricultural Sciences.	₹ 1500/- per month for the full duration of the course	4 (Four)	2 (Two)
II	12th Class / Intermediate Exam in Arts / Science / Commerce / Humanities.	Diploma courses in the areas of Group-I above or Degree or Diploma courses in Pure Sciences of the course/ Social Sciences / Commerce / Business / Personnel Administration / Humanities.	₹ 750/- per month For the full duration	4 (Four)	2 (Two)
III	S.S.C or Equivalent	Higher Secondary course (i.e., plus two stage in General or Vocational stream).	₹ 400/- per month for the full duration of the Course	4 (Four)	2 (Two)

Note: 50% of the scholarships for 2 categories in each group are awarded on the basis of merit irrespective of the cadre to which the employee belongs i.e Executive or Non-Executive and the balance 50% of scholarship is earmarked exclusively for the children of Non- Executive Employees.

As a part of Birth Centenary Celebrations of Dr. B R. Ambedkar in the year 1991, Annual Merit Cash Awards scheme was introduced in VSP. As per the scheme, Annual Merit Cash Awards of ₹ 500/- for 1st Rank Holder and ₹ 250/- for 2nd Rank Holder for each school under each stream of 12 VSP Schools (10 Schools at Ukkunagaram and 2 schools at Mines) are given annually to the 10th Class passed students. 28 (twenty-eight) no. of Merit Cash Awards are given under General category and 28 (twenty-eight) no. of Merit Cash Awards are given under SC / STs.

11.3.3 District Level Dealerships(DLD) to SC/ST/OBC

Preference is given to SC/ST/OBC applicants in appointment of District Level Dealers for distribution of steel products. At present about 40% of DLDs appointed belong to SC/ST/OBC. No security deposit is required for registration in case of SC/ST/ OBC applicants.

11.3.4 Sensitization of employees on upliftment of SC/STs:

In order to sensitize VSP employees including those belonging to SC and ST categories on their service related matters, constitutional provisions, presidential directives and other safeguards provided to protect their rights, two half a day seminars - one for approx 450 non-executive employees and another for approx. 250 senior level executives were conducted by the company in Jun '10.

Also to bring general awareness among employees about socio-economic development of deprived classes, the company



extended full support including financial support to VSP SC/ST Employees Welfare Association in organizing full day seminar on a grand scale on the theme "Ambedkar's Ideology, Liberation of Deprived Classes" in Dec. 2010 where approx. 800 employees attended.

11.4 NMDC Ltd.

The total number of employees in NMDC as on 31.12.2010 was 5902 out of which 1051 belonged to Scheduled Castes (17.81%), 1346 to Scheduled Tribes (22.81%) and 795 to Other Backward Castes (13.47%):

As a policy, efforts are made to fill any backlog vacancy in the next year on a continuous basis and the Company has been able to fill the reserved vacancies so far.

11.5 MOIL Ltd.

MOIL Ltd. is a Labour Intensive Organization with 6676 employees on its rolls as on 31.12.2010. Out of this 1311 belonged to SCs, 1624 STs and 1927 OBCs. This way, total strength belongs to SC/ST/OBC out of which approx. 43.96% belongs to SC/ST. MOIL is also taking keen interest in development of the down trodden people living in the vicinity of the mines situated in remote areas as detailed below:

- Adoption of Tribal villages for upliftment of SC/ST and providing drinking water, medical facilities, approach roads etc.
- Providing financial aid, stationery, books etc. to the schools adjacent to the mining areas.
- Providing sewing machines to women for their development and self-employment.
- Organising training classes for self employment scheme.
- Providing tri-cycles to the physically challenged persons to be independent.
- Other welfare measures for the development and upliftment of tribal women such as conducting sewing classes, adult literacy classes, AIDS Awareness programmes, propagating such other programmes by display of posters, notices and banners, leprosy awareness programme etc.
- Providing training to the physically challenged persons under Apprenticeship Act.

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

11.6 MSTC Ltd.

MSTC Limited has complied 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/PH candidates.

The directives in matters concerning recruitment and promotion regarding the weaker sections have been duly complied with. Provision for adequate representation of SC/ST/OBC members in both Departmental Promotion Committees as well as Selection Committees (in case of recruitment) has been made. The welfare of the weaker sections has been kept in view while taking action/decision on any matter laid down therein.

In order to improve the efficiency of the employees belonging to the reserved categories and to prepare them to take up higher positions in the future, special attention was paid to their training and development in their respective fields of function. During the year 2009-10 (till 31.12.2010), 8 SC, 2 ST and 2 OBC and 1 PH employee of the Company were sponsored for training programmes, both In-House and Institutional. In addition, all possible cooperation and assistance was provided to the MSTC SC/ST Employees' Council, which function primarily to safeguard the interest of the reserved section of employees of the Company.

11.7 Ferro Scrap Nigam Ltd. (FSNL)

For the upliftment of the weaker sections of society, the Company ensures suitable reservation of posts for the Scheduled Caste, Scheduled Tribe and other backward class communities, as per the Government directives in this regard. As regards promotions and welfare of the weaker sections, the Company has evolved a promotion policy and implemented various welfare schemes for its employees as a whole, which adequately cover the employees belonging to SC/ST/OBC



communities also. Out of the total manpower with the company i.e. 1099 as on 31.12.2010, 198 belonged to SCs, 122 STs and 130 OBCs.

11.8 Hindustan Steelworks Construction Ltd. (HSCL)

- HSCL had been assisting in providing schools in areas where SC/ST/OBC & Physically Handicapped employees mostly reside.
- Assistance is given for supply of drinking water.
- Plots were allotted to workers for making hutment in the land allotted at sites of client with electricity, water supply and sanitation arrangement etc.
- Children of SC/ST, OBC & Physically Handicapped employees get due preference in the matter of schooling at Projects.
- Directives of the Central Govt. with regard to recruitment and promotion in respect of SC/ST/OBC & Physically Handicapped employees are implemented.
- All along the above points had been followed in HSCL, but due to prevailing critical ways and means situation, austerity measures are being followed and avoidable expenditure is being curtailed.

11.9 MECON Ltd.

The Company is fully aware of its social responsibilities for development and welfare of weaker Section of the Society. The Company has adopted adequate measures for safeguarding their interests and welfare such as Community education scheme, resource generation scheme, vocational training programme in Shyamali Colony, Ranchi, Community Health Programme, assistance to disabled persons at Cheshire Home, Village based programmes, Safe drinking water projects etc. As on 31.12.2010, out of 1851 employees on the strength of the company, 313 belonged to SCs, 185 STs and 233 OBCs.

11.10 KIOCL Ltd.

The total number of employees in KIOCL as on 31.12.2010 is 1349 out of which 194 persons belong to Scheduled Caste (14.38%), 59 persons belong to Scheduled Tribe (4.37%) and 300 persons belong to Other Backward Classes (22.23%). Besides, there are 54 women (4.00%), 19 Physically Handicapped (1.40%) and 10 Ex-servicemen (0.74%).

11.10.1 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" & "D" type quarters are reserved for SC/ST employees.
- (b) During the financial year 2010-11 (upto December 2010), 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 to be reserved for the children of SC/ST employees. During the year, 11 numbers of scholarships have been sanctioned to SC/ST employees. 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.

11.10.2 Periodical Meetings with SC/ST Representatives:

There is a regular interaction with the Management and SC/ST Welfare Association at Kudremukh, Mangalore and Bangalore. The grievances of SC/ST employees are discussed and appropriate action is taken to redress their grievances. Dr. Ambedkar Jayanthi was celebrated at all locations on 14th April 2010.

11.10.3 Training Programme :

2248 Employees have been nominated for various programmes, Seminars and Conferences. Out of whom 245 (10.89%) belongs to SC/ST category.

CHAPTER-XII

VIGILANCE

12.1 Activities of Vigilance Division of the Ministry Of Steel

The Vigilance Section in 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, 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:

- Identification of sensitive areas prone to malpractices/temptation and taking preventive measures to ensure integrity/efficiency in Government functioning;
- Scrutiny of complaints and initiation of appropriate investigation measures;
- Inspections and follow-up action on the same;
- Furnishing the comments of the Ministry to the Central Vigilance Commission (CVC) on the investigation reports of the Central Bureau of Investigation (CBI);
- Taking appropriate action in respect of departmental proceedings on the advice of the CVC or otherwise;
- Obtaining first and second stage advice of the CVC, wherever necessary
- Appointment of CVOs in the PSUs in consultation with CVC and DoPT
- Examination of complaints regarding allegations against the officials/officers of the PSUs under this Ministry for appropriate action;
- Maintenance and scrutiny of immovable property returns of officers and staff working in this Ministry.
- Ten PSUs are functioning under the administrative control of the Ministry. The Vigilance Unit in all PSUs is headed by a CVO appointed by this Ministry in consultation with the CVC and the DoPT.

The Ministry reviews the vigilance activities in the PSUs through individual meetings and through monthly checklist, periodic returns and statements sent by the CVOs. Other than this, depending on the backlog of pending references, the Ministry also held discussions with the CVOs of concerned PSUs on need basis. In the meeting of the CVOs of the PSUs under the administrative control of this Ministry, the overall performance of the PSUs was reviewed. A special emphasis was laid on preventive vigilance and system improvement processes in the PSUs. All circulars containing instructions and guidelines on different aspects of vigilance management received from the CVC, were also circulated to the CVOs of the PSUs for compliance. Progress thereon, in the form of follow up action taken, was monitored.

During the year 2010-11, the CVOs of the PSUs were directed to:

- Actively participate and co-ordinate and monitor the process of implementation of the Integrity Pact in their respective PSUs and also to review its effectiveness as a preventive measure;
- Duly comply with CVC's guidelines relating to leveraging of technology and
- Provide inputs from vigilance perspective to achieve adoption of e-Commerce including e-procurement and e-payments to the extent possible in their respective PSUs.

12.1.1 ISO certification

In pursuance of the directions given by the Ministry, the Vigilance Departments of all the PSUs have obtained ISO Certification.

12.1.2 Integrity pact

Inspired by the concerted efforts initiated by the Ministry of Steel, all the PSUs under the Ministry of Steel have signed Memorandum of Understanding (MoU) with the Transparency International India (TII) on 24.9.2007 with the



commitment to implement the Integrity Pact in all such transactions in their respective organisations in letter and spirit. The progress of implementation of the Integrity Pact in the PSUs was closely followed up during 2010-11.

12.2 Steel Authority of India Ltd. (SAIL)

SAIL Vigilance Unit is laying emphasis on aligning Vigilance function with the business objectives of the company in such a manner that upholding of ethical standards and increase in organizational efficiencies go hand in hand. Accordingly, following activities were undertaken during the period April' 2010 - December' 2010 :

1. Review meetings relating to implementation of Integrity Pact with three IEMs have been conducted on 7th April 2010 and 4th September 2010. On the recommendation of IEMs, threshold value for implementation of Integrity Pact has been reduced to ₹ 20 crores w.e.f 29.07.2010 to cover 90-95% of the total orders placed as suggested by the Central Vigilance Commission.
2. On advice of Central Vigilance Commission, SAIL, as co-organizer along with United Nation Organization on Drugs and Crime (UNODC) had organized Seminar on 'Empowering Citizens to Combat Corruption' on 9th December 2010 at Vigyan Bhawan, New Delhi.
3. As part of maintaining regular interaction with the ACVOs, CVO conducted regular quarterly meetings. During the meetings, performance of SAIL Vigilance was reviewed. Presentations on case studies / other vigilance related matters were made by different plants/units which would ensure adoption of good practices / procedures by all.
4. Entire SAIL Vigilance was certified for ISO 9001:2000 QMS in the year 2006. For transition to the latest ISO 9001:2008 QMS, the Quality Manual and Procedures of SAIL Vigilance were modified. After conduct of surveillance audit of SAIL Vigilance under ISO 9001:2008 QMS, the certificate dated 23.06.2010 has been issued by M/s TUV - the external auditor for SAIL Vigilance.
5. In order to monitor the efficacy of Vigilance function and QMS parameters and as integral part of continuance of ISO certification for SAIL Vigilance, regular audit of Vigilance departments of all Plants / Units of SAIL is being conducted. Subsequently, Management Review Committee Meetings are conducted to address opportunities of improvement for continual improvement.



Booklet on Vigilance being released by SAIL Chairman, Shri C. S. Verma flanked on the left by Chief Vigilance Officer Shri C. B. Paliwal and on the right by Director (Personnel) Shri B. B. Singh.



6. Vigilance Awareness Period for the year 2010 has been observed across all plants/ units of SAIL. Various events including quiz, debate & essay competition, Vendors meet and workshops on RTI Act, PCP-09, CDA Rules. etc. were organized across all plants/ units.
7. Vigilance Awareness sessions and workshops were regularly held at the various plants and units. Over 91 workshops involving 2172 participants were held for enhancing Vigilance Awareness on Purchase/Contract procedures, RTI Act, Conduct & Discipline Rules, system and procedures followed in SAIL, etc. A special training programme designed in consultation with Director (Technical) & Management Training Institute (MTI) for enhancing commercial acumen of executives working in the shops was conducted during 29th March 2010 to 2nd April 2010 at MTI, Ranchi.
8. Periodic surprise checks including joint checks were conducted regularly in vulnerable areas of the company. A total of 2674 periodic checks including 273 Joint Checks were conducted at different Plants / Units. Saving of approx. ₹ 15 Crore accrued from the preventive vigilance activities mainly on account of these Surprise Checks.
9. Vigilance Department published its regular half yearly in-house publication named 'Inspiration'. Case studies, experiences etc. were published to help in spreading awareness amongst the employees. Fifth issue of 'Inspiration' has been issued in the month of November 2010.
10. 12 cases were taken up for Intensive Examination at different plants / units. During Intensive examination, high value procurement / contracts are scrutinized comprehensively and necessary recommendations are forwarded to concerned departments for implementing suggestions for improvement in future.

12.3 Rashtriya Ispat Nigam Ltd. (RINL)

Vigilance Wing of RINL took various measures to promote transparency and integrity in RINL through preventive vigilance. In this direction, system studies were conducted on the procedures being followed in procurements, sales and award of contracts of all departments including expansion area to bring in improvements in the systems and procedures. Intensive examination of contracts / purchase orders were conducted and audit paras / internal audit reports were scrutinised. Identification of sensitive posts, surveillance, conducting surprise/quality checks, and rail/road weighments and re-weighments, scrutiny of bills were also undertaken to create awareness amongst the employees and other stake holders on relevant aspects of vigilance. The vigilance observations were brought to the notice of the concerned for taking corrective actions/improvement in existing procedure and systems wherever required.

Leveraging the information technology, e-initiatives like e-auction, e-reverse auction and e-payment etc. were implemented at RINL for bringing about greater transparency. Observations / suggestions are brought to the notice of the concerned for taking corrective actions/improvements in the existing procedures / systems wherever required.

Vigilance awareness drives are also undertaken to create awareness amongst the employees and other stake holders by conducting awareness sessions, seminars, interactive sessions, etc. During Vigilance Awareness Week, painting competition was organised among the differently-abled students. The other competitions include essay writing, elocution, inter-school skits etc. were conducted for the students of the schools in and around Steel Plant. Also, a booklet titled "The Fight against Corruption in Public Life" containing articles on ill effects of corruption and tools available to fight, was released.

A talk on "Corruption in Public Service" by Shri R.R. Girish Kumar, former Director General of Police and Anti Corruption Bureau Chief, Andhra Pradesh was organised during October 2010 and officers of the level of Assistant General Manager and above numbering 360 attended the session.

The Quarterly Internal News Letter of Vigilance department "SPANDANA" covering case study of RINL and other companies is circulated to all officers to take preventive actions/ corrective measures.

12.4 NMDC Ltd.

Vigilance Wing in NMDC has laid lot of emphasis during the year 2010 on preventive vigilance. Accordingly, Vigilance Department is playing a pro-active role for continuous improvement and simplification of systems and procedures to facilitate faster and effective decision making in a transparent manner. As part of this, the Vigilance Department took initiative to take up the following works:



- 1) Various Manuals like Personnel, Works and Contracts Manuals are under finalisation and Materials Manual are updated at regular intervals.
- 2) The vendors list is updated by inviting applications on a continuous basis.
- 3) NMDC Recruitment and Promotion Rules have been revised in line with CVC circulars.
- 4) The Vigilance Department studies various tenders on a continuous basis and has improved the tender procedures. Because of continuous monitoring, the award of works on single tender basis have been brought down from 7.3% in 2008-09 to 5.2% in 2009-10. Similarly, award of works on nomination basis has been drastically reduced to less than 1% during 2009-10. The process of awarding rate contracts has been regularised.
- 5) The NMDC Limited is leveraging technology to bring in transparency in all its transactions. The following information are provided in the Company's website on continuous basis :
 - a) All the NITs and limited tender enquiries above ₹ 30 lakhs.
 - b) Details of the Contracts concluded above ₹ 10 lakhs.
 - c) Details of all works awarded on nomination basis.
 - d) Details of all the single tenders awarded where the value is more than ₹ 1.00 lakh.
 - e) The details of bill payments to contractors.
 - f) Provision for online application for registration of vendors/ contractors.
 - 6) The Vigilance Department has provided facility for online submission of complaints on its website.
 - 7) Facility is provided for submission of Annual Property Returns online.

In addition, NMDC has already taken steps for e-procurement through reverse auction. In more than 90% of the cases, the payments are made through e-payments and all the auctions for sale of diamonds and scrap are done through electronic mode.

NMDC has implemented Integrity Pact since November, 2007 in order to maintain transparency in all its dealings with contractors and vendors. NMDC has recently reduced the threshold limit to ₹ 20 crores in case of civil works and contracts and to ₹ 10 crores in case of procurement. Till date, the Integrity Pact has been adopted in 39 contracts with a value of ₹ 9,270 crores. During the year 2010-11, 93% of the contracts have been brought under the ambit of Integrity Pact. As the tenure of earlier Independent External Monitors (IEMs) has expired, NMDC has appointed Mr.S. Anwar, IAS (Retd) and Dr. J.S. Juneja as IEMs after getting the approval from CVC.

Vigilance Department in NMDC is certified under ISO 9001:2008 conforming to the Quality Management System. It has been certified as per ISO standards since October, 2006 by Integrated Quality Certification Private Limited, Bangalore. Ever since the certification, the systems and procedures including the document handling etc. have improved considerably.

In order to ensure compliance of laid down systems and procedures, the Vigilance Department conducts surprise checks, regular inspections, CTE type inspections and file studies of high value procurement and works. All these studies are made as per the Annual Action Plan which is prepared in the beginning of the year. During the last four years, the Vigilance Department conducted the following studies and inspections :

1) Surprise Checks	643
2) Regular Inspections	404
3) CTE type Inspections	138
4) File Studies	1070

Based on the outcome of the studies, Vigilance Department suggested various system improvements and also initiated various administrative and punitive actions wherever necessary. The Vigilance Department started quantification of savings made for the company because of the intervention of Vigilance Department and accordingly NMDC made a gain of ₹ 34 lakhs in the first half of 2010.



In addition, during the Vigilance Awareness Period from 25.10.2010 to 1.11.2010, the Vigilance Department organized talks by eminent personalities on topics such as "Generation of Awareness and Publicity against Corruption" "Vigilance in Personal Life" etc. The Vigilance Department also installed a toll free telephone line with no.18004250211 to receive complaints from various sources.

12.5 MOIL Ltd.

The functioning of the Vigilance Department includes both preventive as well as punitive, for all the establishments / mines / plants of the company including corporate office at Nagpur.

Various activities of the Vigilance Department during the year under review are as under:

- A full time Chief Vigilance Officer (CVO) has been appointed for the first time in the company.
- The Vigilance department of the company has obtained a certificate of compliance of Quality Management Systems of various functions of Vigilance Department conforming to ISO 9001:2008 standards.
- Vigilance Awareness Week - 2010 was observed in various Establishments / Mines of MOIL during the period from 25th Oct, 2010 to 1st Nov, 2010. Various competitions and Group discussions involving eminent personalities from the different groups of the societies were organized.
- Towards capacity building of the Vigilance personnel working in the department 26 intra & inter department programmes were organized, in addition to 3 external training programmes organized by the eminent institutions in the field.
- As Preventive Vigilance 13 works contracts scrutinized and 20 inspections were carried out during the period.
- Six numbers of circulars were issued by the CVO to streamline the procedure and bring transparency of works at different level of operations.
- The tender enquiries in respect of all the open tenders have been uploaded to our website to bring maximum transparency. The finalized tenders above the threshold limit of ₹ 30 lakh are also uploaded on the website in the prescribed format provided by the Ministry.
- Extensive use of website as tool for communication with the stakeholders & also for curbing corruption and also in bring transparency in maximum possible areas of working, has been implemented by MOIL.



Vigilance seminar organised by MOIL Ltd.

E-sales: MOIL has implemented E-sales for Ferro Manganese (Fe.Mn.), Fe.Mn slag and the oxide and dioxide grade of ore from Dongri Buzurg mine. During the year 2010-11, till December, 10; 13 events of e-sales have been conducted.

E-procurement: MOIL has fixed threshold limit of ₹1 crore & above for the purpose of e-procurement. Accordingly MOIL has identified & earmarked HSD, Lubricants, Explosives (reverse auction), Coke & Coal for e-procurement which constitutes almost 76% of annual purchases. In addition, 34% of annual value of purchase is exclusively done from PSUs.

E-Payments: The Company is ensuring to make on line payments where ever it is possible. In other cases payments are made through RTGS or A/c Payee Cheques. Income Tax, Service Tax payment is made through e-payment.



12.6 MSTC Ltd.

Vigilance activities/events during the year 2010-11 are given below in nut shell:

1. ISO Certificate: ISO Certificate 9001-2000 of Vigilance Department has been obtained from URS Certification Limited, UK in July 2008. Subsequently surveillance audit has also been completed in June, 2009. This Certificate is valid till June, 2011. Upgradation of ISO Certificate to 9001-2008 compliant for Vigilance Department has also been obtained after due completion of formalities in June, 2010.
2. Integrity Pact: Integrity Pact is under implementation from the year 2007-08 and is applicable in all the contracts exceeding ₹ 2.00 crores in case of Marketing Deptt. and ₹ 50.00 lakhs in case of Selling Agency business. Both buyers and vendors are signing the pact. EIM has been appointed as per advice of Ministry and he is holding meetings with the Sr. Officers from time to time. The tenure of EIM has to be extended by 2 years more for which initial discussions has been done. This matter is under process.
3. Leveraging of Technology: In this area the Company has made much progress. For disposal of all types of materials company has started e Auction/e-Tendering and the payments are being processed through e -payments. All other jobs relating to closing of accounts, salary disbursements, refund of Security Deposit etc. are being done through Computers.
4. Meeting with Chief Executive: As per advice of the Ministry, Vigilance Deptt. is organizing regular monthly meeting with the CMD and the minutes are also forwarded to Ministry for information.
5. Agreed and Doubtful List: For the year 2010 Agreed List was prepared in consultation with CBI, ACB, Kolkata, New Delhi and Vizag.

12.7 Ferro Scrap Nigam Ltd. (FSNL)

Vigilance activities during the year continued with special emphasis on preventive vigilance and analysis of existing system improvement. It was the endeavor of the Vigilance department to aid and assist the management in improving systems and procedures so as to ensure transparency in decision making. Various guidelines issued by CVC and Ministry were widely circulated. Co-ordination meeting with CBI was held and random scrutiny of property returns of the officers was carried out.



Vigilance awareness program at FSNL Ltd.

ISO 9001:2000 certification for Vigilance department was obtained. Action has also been taken for leveraging of technology for improving Vigilance administration which includes uploading of application forms on company's website in downloadable form for registration of contractors for pre-qualification tenders and suppliers for different categories of stores items, updation of vendors list, introduction of e-payment to vendors, etc.

Vigilance Awareness Week was observed from 3rd to 7th November 2010 during which various activities were conducted in order to create vigilance awareness among employees.

12.8 Hindustan Steelworks Construction Ltd. (HSCL)

The Vigilance Department of the Company is headed by CVO.

Registered cases during April to December 10	:	NIL
No of vigilance cases reviewed	:	NIL



Vigilance Management:

- Routine monthly and quarterly reports on vigilance activities & others have been sent to MOS / CVC as per directive of CVC.
- Circulars have been issued for systematic improvement in the organization.

Vigilance awareness week for 2010 was observed from 25.10.10 to 1.11.10.

12.9 MECON Ltd.

Vigilance set-up of MECON is presently functioning under CVO who is stationed at Delhi and is also the CVO of SAIL. He has taken charge w.e.f. 20.07.2010. ED (Electrical & Power) has been given the additional charge of Executive Director (Vigilance) from 26.07.2010. Executive Director (Vigilance) is reporting to CVO regarding all vigilance matters of MECON. ED (Vigilance) is assisted by Section Incharge (Vigilance) and the Vigilance Department. All employees working in the department are posted on full-time basis. Vigilance activities at Regional/Site Offices are being looked after by Part-time Vigilance Officers who are looking after vigilance matters in addition to the normal duties allotted to them.

In compliance to the above functions, following actions have been initiated and implemented:

- The company follows a pro-active approach to bring vigilance awareness among employees. On preventive vigilance front, greater thrust was laid on the commercial aspects of projects. Proactive vigilance work was done in the areas of award and execution of contracts. Relevant circulars and guidelines from CVC and statutory authorities are put in inhouse intranet "meconinfo" as and when issued for wider circulation of the same among the employees. Purchase
- Procedure is readily available for reference to all the concerned officials of MECON. Vigilance Department of MECON conducts scrutiny of files of different sections involved in commercial activities viz. Purchase & Stores, TACD, Ispat Hospital, Contracts, Administration, Finance, Personnel, etc. Based on the observations/study, corrective actions are suggested resulting improvement in the system. Scrutiny of Property Returns is regularly done in MECON. All efforts are made to complete investigations and submit reports within in prescribed timeframe. Structured meetings are held with MECON Management to highlight various vigilance issues and actions are taken thereupon within prescribed timeframe.



Vigilance Awareness Week in MECON : Pledge Ceremony : From Left to Right : Shri S.K. Bose, ED; Shri J. Mathew, Director (Projects); Shri A.K. Ghosh, CMD; Shri K.K. Mukherjee, ED and Shri J.S. Sahay, ED



- Vigilance Awareness Week was observed from 25th October to 1st November 2010 at Head Office, Ranchi along with Town Admn. & Construction Deptt. and Ispat Hospital Office and at all Regional/Site offices of MECON. This year the main focus of observing Vigilance Awareness Period was 'Generation of Awareness and Publicity against Corruption'.
- Till date MECON has signed Integrity Pact (IP) with 29 suppliers/ contractors for order value more than ₹ 5 crores. The IP is part of the NIT document which is uploaded on the MECON Website with each NIT in downloadable form and all bidders are required to submit signed IP along with their bids.
- EIM (External Independent Monitor) has been functional in MECON since a couple of years now and Quarterly Review Meetings between MECON Management and EIM are being held on a regular basis and so far no complaint has been received under IP. The last Review Meeting with EIM was held in 1st week of November 2010. No representation/ complaints/ disputes have been received in the matters of contracts and tenders after implementation of IP.
- E-payment to vendors through electronic fund transfer (NEFT/RTGS mode) has been introduced in MECON. Tender documents can now be downloaded by the vendors from MECON website by registering themselves. This gives equal opportunity to all the eligible bidders and brings transparency in the tendering system. However, e-procurement in totality is under implementation in MECON.
- TUV India has awarded their certificate for Surveillance and Upgradation from ISO 9001:2000 to ISO 9001:2008 to Vigilance Department, MECON, Ranchi. This certification reposes confidence on the QMS followed by Vigilance Department. MECON Management gives lot of importance on the Quality Management System and is committed to improve Quality Management System in the organization.

12.10 KIOCL Ltd.

12.10.1 ISO 9001-2008:

Vigilance Department of KIOCL obtained ISO-9001:2008 Certificate : First surveillance audit was conducted during Nov-2010 and no non-conformities were issued during this audit. Due to ISO certification of Vigilance Department following benefits and improvements have been resulted in vigilance functioning:

- After collection/capturing data the trend analysis to demonstrate continuous improvement was not in practice.
- Monitoring of complaints has been made systematic and will be monitored on monthly basis.
- Monitoring and measurement parameters for the focus area "investigation Process Effectiveness" have been defined, which does not exist earlier.
- To capture the perception of vigilance from other stock holders namely suppliers, CMD, employees, Customer satisfaction survey was conducted, and feedback received. After analyzing the feedback necessary action has been taken.
- To measure the preventive vigilance effectiveness, goal setting and bench marking has been made to demonstrate continual improvement.
- Objectives and targets for the every year is defined and planned to achieve the same.

12.10.2 Integrity Pact Programme:

Integrity Pact Programme has been introduced in KIOCL from 01.01.2008. After obtaining approval from CVC/MoS, two IEMs, namely Sri SS. Meenakshisundaram, IAS (Retd) and Sri KVM Pai, IRS (Rtd), were appointed w.e.f. 01.01.2008. The tenure of IEMs is 3 years. The threshold value was fixed at ₹ 50 lakhs when IP was implemented on 01.01.2008. After conducting ABC Analysis, the same was brought down to ₹ 30 Lakhs with effect from 01.01.2010 to cover 90-95% of total procurements of the organization in monetary terms, as stipulated by CVC. After implementation of IP in KIOCL, as on date IP clause was incorporated 220 contracts. Till date, no complaints have been received under IP either by IEMs or by CVO. As the tenure of present IEMs will be completed by 31.12.2010, two eminent persons have been identified, obtained their consent and collected their bio-data. After taking the approval of CMD, bio-data were sent to CVC for approval.



12.10.3 Inspections:

6 CTE type inspections, 20 surprise checks, 23 general inspections and 38 scrutinies of files were carried out during the period under review. i.e. April-2010 to December-2010.

12.10.4 Leveraging technology:

With reference to Commission's circular, emphasizing the effective use of website and leveraging technology in discharge of regulatory, enforcement activities and dealing with complaints. KIOCL has been using website in a various areas from 2001. The main areas concerning KIOCL are Contracts & Procurements, Applications for Registration of Contractors/ suppliers/ consultants / vendors etc. and status of bill payments to contractors / suppliers. All Tender documents, Notices and other proformas are posted on the websites. In order to encourage flow of genuine complaints, the procedure for making complaints is outlined in the website. Status of individual applications on website is updated every month. A summary of works/contracts/ purchases awarded above a predetermined threshold value are posted on website, every month.

12.10.5 E-governance:

Disposal of scrap/ surplus items is being done by e-auction, since September 2004. Regularly e-auctions are being held at Mangalore and Kudremukh. E-sales are in practice since two years. Commercial Department is conducting sales of pellets by calling e-tenders. E-procurement auction by web tendering-cum-reverse auction has been commenced from Sep-2010. The threshold value for e-procurement is fixed at ₹ 5 lakhs and above. All the payments above the threshold value are being made through electronic mode.

12.11 Bird Group of Companies (BGC)

BGC observes its vigilance awareness week in the month of November every year.

System improvement has been achieved / improved in the following areas :

1. Disbursement of all payments through electronic medium.
2. MIS system has been introduced at Head Quarter to collect information on Production, Sales, Fund position etc on daily basis.
3. Sale of material through E-auction.
4. For maintaining more transparency in movement of minerals "Custodian" of stock in each mine has been introduced.
5. Installation of weighbridges at the all the vital exit points and such weighbridge to be connected with computer in order to ensure automatic recording of minerals received at the various plots/stockyards to be reconciled on day to day basis. It is being implemented in phased manner.



CHAPTER-XIII

GRIEVANCE REDRESSAL MECHANISM

13.1 Centralised Public Grievances Redressal and Monitoring System

Centralised Public Grievance Redressal and Monitoring System (CPGRAMS) has been implemented for facilitating public grievances in the Ministry and its PSUs. The CPGRAMS, is an online web-enabled system over NICNET developed by NIC in association with the Department of Administrative Reforms and Public Grievances (DARPG) with an objective of speedy redressal and effective monitoring of grievances by Ministries/Departments/Organisations of Government of India. The entire life cycle of the grievance redressal operation is (i) Lodging of the grievance by a citizen. (ii) Acknowledgement of acceptance of grievance by organisation. (iii) Assessment of grievance regarding follow up action. (iv) Forwarding and transfer. (v) Reminders and clarification. (vi) Disposal of the case. The details of grievances dealt with in the CPGRAMS are as under:

Brought Forward	Received during the period	Total Receipts	Disposed	Pending	Pending less than 3 Months	3-6 Months	6 - 12 Months	More than One year	Disposals in %
109	52	161	105	56	16	5	8	27	65.22

Sevottam Compliant Citizen's Charter has been prepared and made a part of the Result Framework Document of the Ministry.

13.2 Steel Authority of India Ltd. (SAIL)

Effective internal grievances redressal machinery exists in SAIL plants and units, separately for executives and non-executives. The grievance procedure in SAIL has evolved after sustained deliberations and consent of employees, trade unions and associations.

The grievances in SAIL plants/units are dealt in 3 stages and employees are given an opportunity at every stage to raise grievances relating to wage 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 of grievances are redressed informally in view of the participative nature of 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 Staff grievances for the period 1.4.2010 to 31.12.2010 is as under:

Grievances outstanding as on 1.4.2010	No. of grievances received during the period	No. of grievances disposed of	No. of grievances pending as on 31.12.2010
30	2551	2416	165

13.3 Rashtriya Ispat Nigam Ltd. (RINL)

Staff Grievances

In RINL/VSP, there are separate structured and Formal Grievances Handling Systems for redressal of grievance of employees. In the formal Grievance Procedure for non-executives, a member from workers' representative is present in the committee. Further, both executives and non-executives grievances handling systems have a fixed time frame to redress the grievances.

Public Grievances

A senior officer at the level of General Manager is designated as Officer on Special Duty (Public Grievances) to deal the public grievances. In addition, a full fledged RTI Cell is functioning in RINL-VSP which also takes care of public grievances in a time bound manner.

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The information regarding the public and staff grievances for the year 2010-11 (up to Dec. '10) is furnished below:

Type of Grievance	Outstanding as on 1.4.2010	Received during Apr-Dec'10	Disposed of during Apr-Dec'10	Pending as on 01.01.2011
Public Grievance (nos.)	—	—	—	—
Employee Grievance (nos.)	-	48*	48*	NIL
* Only informal grievances and no formal grievances received				

13.4 NMDC Ltd.

The grievance redressal machinery in NMDC is headed by a Joint General Manager in the Head Office and by Head of Projects in each of the four production Projects. The CVO has been nominated as the nodal officer for monitoring the grievance redressal machinery. The machinery is working satisfactorily. The volume of grievances handled is however, very low. A link to the Government of India's portal for Public Grievances has been provided in the home page of NMDC's website for registering grievances. Public dealing in the organization being minimal, no time norms etc. have been fixed. However, as and when any public grievances (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/Staff Grievances:

Sl. No.	Name of Organization	Grievances outstanding at the beginning of the year	No. of Grievances received during the year	No. of cases disposed off	No. of cases pending at the end of the year
1	NMDC Staff	Nil	Nil	Nil	Nil
2	Public Grievances	Nil	2	1	1

13.5 MOIL Ltd.

- Employees grievances - 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 the 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 Head Office co-ordinates with the Grievance Officers at the units for their effective performance.
- Public Grievance - All Grievance officials have been apprised of the manner in which the Public Grievance received in the company 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.
- This is monitored at Head Office on the basis of assessment of data received from unit, Grievance Officer through the monthly report as well as through inspection by Head Office authorities.

Status of Public/Staff Grievances for the period 01/04/2010 to 31/12/2010.

Sl. No.	Name of Grievance	Grievances outstanding as on 01/04/2010	No. of Grievances as received during the period	No. of cases disposed off	No. of cases pending on 31/12/2010
1	Public Grievances	-	-	-	-
2.	Staff Grievances	Nil	643	628	15
Total :		Nil	643	628	15



13.6 MSTC Ltd.

The company has made an exclusive portal integrated into the corporate website www.mstcindia.co.in to register and monitor the grievances online. The portal provides for a unique system generated code for the complainants to lodge and view the progress of the grievances registered online. Some of the grievances are also received at the Central Grievance Cell by post.

Grievance cells are constituted at the Regional and Branch Offices as well. Normally the grievances are settled/ resolved within a fortnight where the action required to be taken lies within the company.

Regular follow up with the Regions/Branches is carried out for expeditious settlement of grievance. Three meetings were held with the principal along with the complainant for resolving issues relating to delivery of material.

No grievance has been registered in CPGRMS of the Ministry relating to MSTC in the website: <http://darpg-grievances.nic.in> or <http://pgportal.gov.in>.

The development of sevottam compliant Citizen's Charter has been put in place in our corporate website: <http://.mstcindia.co.in>.

Grievances received from the employees are attended to by the HOD's and respective Regional/Branch Managers. The size of the organization's departments being small, the employees have easy access to the HODs and CMD as well. Besides the Personnel Department addresses formal/informal grievances received in consultation with the HOD concerned and with the Staff Union if the grievance is of a collective nature.

In terms of the Supreme Court judgment a Committee has also been constituted for the prevention of sexual harassment of women at work place.

Status of Public/Staff Grievances:

	Pending on 01.04.10	Received	Disposed of	Pending (as on 31.12.2010)
Public Grievances	3	30	29	4
Staff Grievances	-	-	-	-

13.7 Ferro Scrap Nigam Ltd. (FSNL)

FSNL is engaged in rendering specialized services to the integrated steel plants in scrap recovery & processing operations. Hence, no direct public dealings are made by the company. However, FSNL has already implemented Citizen's Charter, in adherence of the instructions received from the Ministry on the subject. As regards grievance redressals, in case any public grievance is received, the same is redressed without any delay.

13.8 Hindustan Steelworks Construction Ltd. (HSCL)

Grievance Redressal Mechanism :

Compliance with regard to Public/Staff Grievance Redressal has been made during 2009-10 and 2010-11 till December 10. The provisions of RTI act are in place.

13.9 MECON Ltd.

Public Grievances :

By and large MECON does not have dealings with the public in general. But any specific complaint relating to any kind of harassment is treated as a grievance. Complaints from customers are taken very seriously and attended to. There is no grievance pending from the contractors/customers or public in general. A notice has been put up near the Reception at the main gate mentioning the details of contact official whom the public can contact for the above purpose. Representatives

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of the public in general have access to meeting the concerned officials of the Department and also designated officials mentioned above on matters relating to public grievances. MECON has also designated officials under Right to Information Act, 2005 for handling public grievances and the same has been given wide publicity through press and electronic media for information of general public.

Employees Grievances :

In MECON there is a three-tier grievance procedure for redressal of employees' grievance. A Grievance Advisory Committee consisting of representatives of Executive and Non-Executive employees is operative to examine grievances of employees and submit recommendation for redressal. Further, there is a separate cell for redressal of grievances of SC/ST/OBC employees. At present, there is no staff grievance from any quarter.

Suggestion/Complaint Boxes have been placed at various floors/offices, which can be utilized by the employees for placing their grievances/point of view before the Management. Generally employees prefer to take up their issues/grievances through their elected representatives of MECON Employees Union (MEU) in respect of Non-Executive Employees and MECON Executives Association (MEA) in respect of Executive Employees both of which are recognized by the Company.

13.10 KIOCL Ltd.

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 organization, the Grievances are easily identified and redressed at the grass root level itself.

Whenever any Public Grievances are received by the Company in writing, the same are acknowledged promptly. The Grievances so received are carefully examined in detail and analyzed for taking quick and prompt action. One Director, Two Executive Directors and one General Manager are designated as Directors of Grievances for redressal of the Public/Staff Grievances.

In pursuance to Ministry of Steel directives, KIOCL has developed a Citizen Charters (SEVOTTAM) and implemented in the Company. The copy of the same is hoisted in the Company's website for information of citizens.

Status of Public Grievances:

Sl. No.	Name of Organization	Grievances outstanding as on 01-04-2010	No. of Grievances received during the period	No. of cases disposed off	No. of cases pending as 31-12-2010
1	KIOCL Limited	3	Nil	2	1

13.11 Bird Group of Companies (BGC)

Grievance Redressal Mechanism (GRM) is in place in Bird Group of Company at unit level and at corporate level. Nodal officers have been notified for this purpose. The name and designation of the officer have been posted in the company's website www.birdgroup.gov.in.

Status of Public/Staff Grievances:

Type of Grievance	Grievances Outstanding	No. of Grievance as received during the period	No. of cases disposed of the period	No. of cases pending on 31.12.2010
Public Grievances	0	0	0	0
Staff Grievances	2	2	0	2
Total	2	2	0	2



CHAPTER-XIV

IMPLEMENTATION OF PROVISIONS OF PERSONS WITH DISABILITIES ACT, 1995

14.1 Ministry of Steel

The Ministry of Steel and all the PSUs under it follow the Government rules with regard to the implementation of provisions of the Disabilities Act, 1995. Status of implementation of the Persons with Disabilities Act, 1995 during the year 2010-11 (as on December 31, 2010) in the Ministry of Steel:

Group	Number of employees							Direct recruitment						Promotion				
	No. of vacancies reserved							No. of appointments made				No. of vacancies reserved			No. of appointments made			
	Total	VH	HH	OH	VH	HH	OH	Total	VH	HH	OH	VH	HH	OH	Total	VH	HH	OH
Group A	42	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group B	105	-	1	1	-	-	1	1	-	-	1	-	-	-	1	-	1	-
Group C	103	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	250	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:

(i) VH stands for Visually Handicapped (persons suffering from blindness or low vision)

(ii) HH stands for Hearing Handicapped (persons suffering from hearing impairment)

(iii) OH stands for Orthopaedically Handicapped (Persons suffering from locomotor disability or cerebral palsy)

14.2 Steel Authority of India Ltd. (SAIL)

- SAIL provides scholarship to the physically challenged children of its employees to support their education.
- Employees in works division who become disabled while in service are redeployed in identified posts after providing them training. Proper medical facilities like Jaipur foot and wheel chair etc. are also provided to them
- Special relaxation is provided in allotment of quarters to differently abled employees. Care is taken to allot ground floor to such employees.
- SAIL extends free medical facility even to non-entitled major brother or sister of an employee, if they are differently abled and dependent on the employee.
- Addition special conveyance allowance is given to differently abled employees.
- Shops, STD booths, Milk booths, Hawkers licenses etc. are allotted to differently abled persons in plants of SAIL.
- Various facilities for sports and cultural activities are provided exclusively for the differently abled persons at plant locations. Separate playgrounds have been earmarked for the handicapped at some of the plant locations. Sports events like East Zone Disabled Cricket and Inter State Disabled Cricket have been organized to encourage differently abled persons at Bhilai.
- World Disability day, Musical programs, Drawing and Painting Competition etc are organised to build confidence in differently abled persons.
- SAIL plants have undertaken special initiatives to facilitate creation of centers of learning for education and training of mentally/physically challenged children by supporting the NGOs working in this area by :-
 - a. Providing building/infrastructure support
 - b. Special training equipments
 - c. Medical aid etc.



- As per NJCS agreement, SAIL provides employment to one of the dependent family member in case an employee becomes totally physically disabled due to an accident arising out of and in the course of employment.
- SAIL also has a scheme known as Employees' Family Benefit Scheme (EFBS), under which an employee who has developed total physical disablement during the course of employment can opt for monthly payment equivalent to his/her last drawn Basic and DA till his/her notional date of retirement, on completion of certain formalities. Under this scheme a totally physically disabled employee can continue to draw his/her last Basic and DA, without attending the office.
- SAIL is implementing provisions of the Disability Act and has employed about 790 persons suffering from various disabilities.

14.3 Rashtriya Ispat Nigam Ltd. (RINL)

With a view to encourage and support physically challenged children of VSP employees, the following scholarships are provided:

Applicable for	Criteria for Selection	Amount of Scholarships	No. of Scholarships
Children of employees with the following disabilities who are pursuing studies in any course in a Recognized School/ College /General or Vocational Institute: <ul style="list-style-type: none"> ❖ Blindness ❖ Hearing impairment ❖ Locomotors disability ❖ Mental retardation ❖ Mental illness ❖ Cerebral Palsy 	Nature and extent of disability of the child and the extent to which the training/ education would help in rehabilitation of the child, as assessed by the Committee consisting of 4 members each from Medical, Sports, F&A and Personnel	₹ 750/- per month for a period as recommended by the Committee	6 (Six) Per annum

Further, the following actions have been taken in RINL/Visakhapatnam Steel Plant for the convenience of differently abled persons visiting different offices in Main Administrative Building the Corporate Office of RINL/VSP.

- Ramp way
- Auditory signal in both the lifts of the building.
- Provision of a wheel chair at the Reception Centre located at the entrance of the Main Administrative Building.
- After the Disabilities Act came into force on 7.2.1996, the RINL has employed 65 persons suffering from various disabilities.

14.4 NMDC Ltd.

NMDC being a mining organization is governed by the provisions of the Mines Act and Rules and Regulations thereof and considering the safety factor it is not possible to employ PwDs in jobs involving working in the mines/plant. However NMDC has at present on its roll 38 employees with disabilities in various posts..

14.5 MOIL Ltd.

MOIL Ltd. being a Mining Company, 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 on strenuous nature at our Mines. There is no direct recruitment in the identified category since last 11 years. As and when the recruitment is made, the same will be taken care of. However, at present there are 23 persons with disability employed in MOIL.



14.6 MSTC Ltd.

Eight persons with disabilities are employed in MSTC.

14.7 Ferro Scrap Nigam Ltd. (FSNL)

To help physically challenged persons of the society, the company has identified some Government higher secondary schools of nearby villages where FSNL's units are functioning, and has distributed text books, notebooks and other useful items to the physically challenged students for their studies. As on 31.12.2010, five persons with various disabilities are working in FSNL.

14.8 Hindustan Steelworks Construction Ltd. (HSCL)

Six persons with disabilities are employed in HSCL Ltd.

14.9 MECON Ltd.

The Company has implemented the provisions of "Persons with Disabilities Act, 1995". Total employment strength of MECON as on 31.12.2010 is 1851, out of which persons belonging to disabled/ Physically handicapped category in various posts are 10.

14.10 KIOCL Ltd.

Nineteen employees belonging to Persons with Disabilities category in different groups are in position as on 31.12.2010 in KIOCL.

Further, as and when the Company gets fresh mining lease in alternative locations/new projects, every effort will be made to fulfill the shortfall of employees belonging to Persons with Disabilities as per Statutory obligations.



CHAPTER-XV

PROGRESSIVE USE OF HINDI

15.1 Introduction

The Ministry of Steel has made considerable progress in use of Hindi in official work during the year 2010-11 keeping in view the Annual Programme prepared and issued by the Department of Official Languages [Ministry of Home Affairs] for implementation of the Official Language policy of the Union.

The work relating to the Progressive use of Hindi in the Ministry is under the administrative control of a Joint Secretary. The Hindi Section, under the direct charge of Joint Director (Official Language), looks after the work relating to Implementation of Official Language Policy and Hindi Translation work and consists of one Assistant Director (OL), one Senior Hindi Translator, three Juniors Hindi Translators, and one UDC and other supporting staff.

15.1.1 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 December, 2010 during the current year.

15.1.2 Hindi Salahakar Samiti

Hindi Salahakar Samiti of this Ministry has been reconstituted on 15.06.2010 and its first meeting was held on 29.11.2010 under the Chairmanship Hon'ble Minister of Steel.



Hindi Salabkaar Committee meeting of the Ministry of Steel held under the Chairmanship of the then Minister of Steel Shri Virbhadra Singh



15.1.3 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.

15.1.4 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.

15.1.5 Rajbhasha Shield/Trophies

In order to encourage the use of Hindi in the PSUs 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. Shields and Trophies were awarded to PSUs for the year 2008-09 in Hindi Salahkar Samiti's meeting on 29.11.2010 by Hon'ble Minister of Steel.

15.1.6 Cash prize scheme for dictation in Hindi

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

15.1.7 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 ₹ 25,000/-, ₹ 20,000/- and ₹ 16,000/- each, is awarded for the first, second and third prize respectively.

15.1.8 Hindi Divas/Hindi Fortnight

In order to encourage use of Hindi in official work amongst officers/employees of the Ministry, appeals were issued by the Hon'ble Minister of Steel and Hon'ble Minister of State for Steel on 14th September, 2010. Hindi Fortnight was organized in the Ministry from 1st September to 14th September, 2010. During this period, various Hindi competitions were organized and 45 awards/Prizes were declared.

15.1.9 Training in Hindi/Hindi Typewriting/Hindi Stenography

All officers and staff possess working knowledge of Hindi. As far as Hindi typing and Hindi Stenography is concerned, out of 7 LDCs and 18 Stenographers, 6 LDCs (one LDCs is exempted from typing) and all Stenographers know Hindi typing and Stenography respectively.

15.2 Steel Authority of India Ltd. (SAIL)

SAIL continued its thrust on implementation of the Official Language policy of Govt. of India. The company won first prize at national level for its in house Hindi journal "Ispat Bhasha Bharti" which was given by Hon'ble Vice-President of India and received by Chairman SAIL on the occasion of Hindi Divas at Vigyan Bhawan, New Delhi. Further, SAIL was conferred with Rajbhasha Shield for technical development in the field of official language by Rashtriya Hindi Academy. The award was given by Hon'ble Governor of Tripura and Lt. Governor of Pondicherry. Two special issues of Ispat Bhasha Bharti were published one focussed on Steel and another on environment.

In addition to the fulfilment of various obligation under the policy, several Rajbhasha activities were organised across the company. As SAIL C.O is doing its 47 jobs in bilingual form through integrated system, a training programme focussed on the same was organized for the benefit of all PSU's under the Ministry in Delhi. Two Hindi Sangosthis were organized in which renowned personalities like Dr. Ashok Chakardhar, Dr. Maheep Singh, Dr. Prabhadar Kshotriya etc. were invited. Hindi Pakhwara celebrations were organized in Sept, 2010 in which various Hindi Competitions and programmes



were conducted. Moreover, an All India level Kavi Sammelan was organized in Delhi. Hindi Development Programme for the staff of all SAIL Plants/ Units was organized at Bokaro. Activation of Unicode in all the computers across the company is in progress as a part of maintaining uniformity in Hindi fonts.

A national level seminar was organized by Bhilai Steel Plant in August, 2010. Online production report in SMS-I and many other units started in Hindi at BSP.



Shri C.S. Verma, Chairman SAIL, receiving the first prize for SAIL's in-house journal 'Ispat Bhasha Bharti' from H.E. Vice President of India, Mohd. Hamid Ansari. Also seen in the picture is Shri M. Ramachandran, Hon'ble Minister of State for Home Affairs

15.3 Rashtriya Ispat Nigam Ltd. (RINL)

RINL-VSP received the of prestigious Indira Gandhi Rajbhasha Shield (2nd prize) from Hon'ble Vice President of India on 14th September, 2010 for effective implementation of Hindi.

RINL-VSP bagged 'Ispat Rajbhasha Shield' (1st prize) for the first time for excellent performance of Official Language. The award was presented by Hon'ble Steel Minister at New Delhi on 29th November, 2010. Other awards include 'Sahasrabdi Rashtriya Rajbhasha Shield Samman-2010' by Rashtriya Hindi Academy. A quarterly House Magazine 'SUGANDH' was recognized as best in-house magazine by Rajbhasha Sansthan, New Delhi in the National Level Hindi Conference An E-book viz. 'E-Pradarshika' has been prepared containing Administrative, Financial and Steel Terminology, Designations & Departments, Routine Office notings etc.

A National level Hindi Seminar was organised on 'Cost Control: Key to Success' on 27th & 28th April, 2010. A special issue viz. 'Bachat' has been released on this occasion containing the articles of the delegates. Hindi Week celebrations were organised at Headquarters and various Branches & Regional Offices by conducting competitions for the students & employees. 4 programmes of training to work on computers in Hindi through 'UNICODE' were organized. 366



employees have been trained in Hindi Prabodh/Praveen courses. Hindi classes are also organised separately for the housewives.

15.4 NMDC Ltd.

NMDC Limited made all efforts for implementation of the Official Language Policy and for use of Official Language in all its units and Head Office during the year.

Hindi workshops were conducted for officers and employees to make them efficient in using Hindi in day-to-day official work. Eligible employees were imparted training of Hindi in computer. To bring awareness about the official language among the employees and their family members as well as the employees of other offices situated in the vicinity of its offices, various programmes such as Hindi Divas, Hindi Pakhwara, Rajbhasha Maah etc. were conducted during the year. Incentive schemes were implemented for more and more usages of Hindi in the Offices of the company and suitable prizes were awarded to the employees.

To encourage use of official language in technical fields also, Rajbhasha Technical Seminars in Hindi were organized by the production units of the company. Technical seminar books and Rajbhasha souvenirs were also published.

Hindi House Journal viz. SHE (Safety, Health & Environment) Samachar - a bilingual quarterly magazine, Baila Samachar, Bacheli Samachar and Hira Samachar, Monthly Hindi bulletins were published, Doni Samachar - a trilingual monthly bulletin was also published during the year.

NMDC Limited was awarded Steel Ministry's Rajbhasha Shield for 'C' Region for the excellent implementation of the official language policy and progressive use of Hindi during 2008-09. The award was presented by the Hon'ble Minister of Steel on 29th November 2010.

NMDC was also selected for Rajbhasha Shield 1st Prize for the year 2009-10 by Town Official Language Implementation Committee (Undertakings) Hyderabad - Secunderabad, for excellent implementation of the Official Language Policy.

15.5 MOIL Ltd.

During the year, the Company continued its efforts in propagating the implementation of the provisions of Official Language Act, 1963. The Company is also publishing In-House Journal "SANKALP" in Hindi in order to encourage the employees to participate in various competitions like essay competition, noting, drafting, poetry and articles for propagating Hindi.

About 97% of the work is being done at Mines in Hindi. The Unicode system has been implanted in all computers of the Company. The Company has provided Hindi Language software in computer and imparting training to its employees, so that MOIL's employees can use the same in their workings. Employees are being given training under the "Hindi Education Scheme" of the Ministry of Home, in which 85 employees have already been given training for Pragya (Higher Level) and efforts are being made to train another 40 employees/officers of the Company.

"Town Official Language Implementation Committee" Nagpur has awarded MOIL "Protsahan Puraskar" for their outstanding work in promoting Hindi in the office. Furthermore the In-House Journal "SANKALP" was honored by the Institute of Official Language.

15.6 MSTC Ltd.

Three Hindi workshops were organized for Officers and staffs of Head office and Eastern Regional Office (ERO)-Kolkata on 7th, 8th and 9th April 2010. Total 38 officers and staffs participated in the workshops. Shri S.K. Tripathi, CMD, distributed certificates and bilingual dictionaries to all the participants.

On the occasion of Rajbhasha Puraskar Bitron Samroh, CMD distributed prizes to the executives and non-executives who won Hindi competitions and passed Hindi Prabodh, Praveen and Pragya examinations.

This year Rajbhasha Trimas was inaugurated on 9th July 2010. CMD delivered lectures and two directors and senior officers were present on this occasion. On the occasion of Rajbhasha Trimas, Hindi workshops and Hindi competitions were organized at Head office as well as in regional and branch offices. Director (Commercial) delivered lectures on the occasion of Hindi Divas organized on 14th September 2010.

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Rewards for Hindi signatures on correspondence and entry in Hindi have been provided to 08 employees. Reward for Hindi/bilingual letter writing and computer typing has been introduced this year.

Unicode has been enabled in the computers of H.O., Eastern Regional Office-Kolkata, Northern Regional Office-New Delhi, Southern Regional Office-Chennai, Western Regional Office-Mumbai, Bangalore branch, and Visakhapatnam branch. English-Hindi vice-versa translation job has been done and OLIC meeting has been organized.

In January-May'10 session three officers/employee passed Probodh and Praveen examinations and in July-November'10 session 04 officers and employees appeared in Probodh, Praveen and Pragya examinations.

Official Language Deptt. of Ministry of Home inspected Head office. All the issues related to inspections were made available. Ministry of Steel and its Hindi Salahkar Samity continuously provided their guidance about implementation of Official language Act.

15.7 Ferro Scrap Nigam Ltd. (FSNL)

Employees are motivated to carry out their day-to-day jobs in Hindi, and in order to encourage progressive use of Hindi, the company organizes "Hindi Diwas" & "Hindi Pakhwada" which includes various Hindi competitions, like Hindi debate, Hindi Gyan Pratiyogita, Hindi Essay writing competitions etc., and the employees take part in such competitions enthusiastically. The winners are suitably awarded with prizes.

Strict adherence of the directive/guidelines issued by the Government/Ministry with regard to implementation of Official Language policy are always ensured and implemented in the company.

Lumpsum cash awards under the "Hindi Protsahan Yojna" are provided to the employees on passing the Hindi exams of Prabodh, Praveen & Pragya. Similarly, on passing the Hindi Stenography/Hindi typewriting exams also, the concerned individuals are provided with Lumpsum Cash Awards under the scheme.

In addition to the above, as a measure of creating interest among the employees for carrying out the day-to-day jobs in Hindi, the Hindi Noting/Drafting and Hindi Typing competitions are also organized every year during Hindi Pakhwada, and the winners are provided with Annual Cash Awards as per the scheme.

The exemplary work done by the company in implementation of Official language policy, has always been lauded, and prestigious awards have been conferred on the company by the Ministry, which include Indira Gandhi Rajbhasha Shield, Ispat Rajbhasha Shield, Rajbhasha Trophy etc.

Constant encouragement by the company motivates the employees to participate in various Hindi competitions organized by the member concerns of Nagar Rajbhasha Karyanvayan Samithi, Bhilai-Durg, and such nominated employees have bagged various prizes in such competitions.

Thus, in the area of implementation of official language policy also FSNL is exhibiting an exemplary performance.

15.8 Hindustan Steelworks Construction Ltd. (HSCL)

The Company has made various encouraging efforts in implementing the official language Policy and Programs of Department of Official Language, Government of India. Besides holding meeting of the Official Language implementation Committees at Corporate and Unit levels at regular intervals, the Company made massive drive to motivate its officials at all levels for use of Hindi in official noting and drafts. The Govt.'s guidelines on the use of Rajbhasha are compiled with. Hindi Day on 14.9.2010 and Hindi Fortnight from 14th to 29th September 2010 were observed at the Head Office as well as at the Units of the Company.

15.9 MECON Ltd.

Efforts by way of Hindi Training of Personnel, organizing workshop & seminar to encourage use of Hindi in official work have been undertaken and conducive atmosphere has been created to spur use of Hindi in official work at Head Office and other offices of MECON.

A five days Translation Programme was conducted during 26.07.2010 to 30.07.2010 at Head Office, Ranchi by Central Translation Bureau, Department of Official language, Ministry of Home Affairs, Govt. of India. Training on UNICODE



System was also organized at Head Office, Ranchi by Shri Suresh Kumar, Manager (Rajbhasha) of State Bank of India, Ranchi.

"Rajbhasha Fortnight" was observed in Head Office as well as in all site offices of the company from 01.09.2010 to 14.09.2010. On the occasion all employees took pledge to increase use of Hindi in their day to day official work. During the "Rajbhasha Fortnight" competitions of various nature were also organised at Head Office and other offices of the Company. A one day Hindi workshop on the subject " Karyalayeen kam kaj mein rajbhasha hindi ka prayog " was organised on 08.09.2010. Also "Rajbhasha Diwas" was celebrated at Head Office, Ranchi on 14.09.2010 and key note was addressed by a renowned scholar - Acharya Dr. Dineshwar Prasad, Ex HOD (Hindi), Ranchi University, on the subject "Vishwa Bhasha ke roop mein Hindi ka Bhawisya".

In addition, a Hindi Magazine - "MECON BHARTI" is being published regularly which provides platform to employees for creating writing in Technical field.

15.10 KIOCL Ltd.

KIOCL follows the directives issued from time to time by the Department of Official Language, Ministry of Home Affairs and Ministry of Steel, Govt 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 the stationery, Name plates and Name boards of KIOCL are in bilingual form. The Annual Report, MoU, House Magazine, Employees' Pension Scheme, etc., are printed in Hindi also. Hindi Software is provided in Computers in all Departments.



Hindi Parliamentary Committee meeting at KIOCL, Bangalore

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Official Language implementation Committee meetings take place regularly and the progress during the previous quarter is reviewed in such meetings. Hindi fortnight was celebrated at all the locations of KIOCL. Hindi programmes and several Hindi competitions are held and prizes distributed to the winners. A lecture programme and a Kavi Sammelan are arranged during this period. Cash prizes are also given to employees for doing their office work in Hindi.

During the year 4 Hindi workshops are conducted to impart practical training to employees for doing their official work in Hindi.

KIOCL was conferred Rajbhasha Manishi Shield by Bharatiya Bhasha Evam Sanskriti Kendra on 10-06-2010 for its Official Language Implementation. The award is received by chairman-cum-Managing Director.

The Third Sub Committee of the Parliament on Official Language headed by Prof. Alka Balam Kshatriya, MP, (Rajya Sabha) visited Bangalore on 25-10-2010 and inspected the Official Language Implementation in KIOCL. During the interaction with Management, the Committee appreciated the efforts of the Company for the implementation of Official Language Policy.

KIOCL is Convenor of Bangalore Town Official Language Implementation Committee (Undertakings) and conducts regular meetings and Joint Hindi Fortnight programmes for all Central PSUs in Bangalore. The meetings were conducted on 8th July 2010 and 7th December 2010 and presided by the Chairman-cum-Managing Director Shri K Ranganath.

KIOCL has organized a Joint Hindi Fortnight for our Town Official Language Implementation Committee (Undertakings) members and 16 Hindi Competitions were conducted. Most of the PSU offices in Bangalore have participated in these competitions. Prize distribution function was organized in December. Offices of Official Language Department, Ministry of Home were also invited to address the members.

KIOCL has brought out 4th & 5th issues of half yearly Hindi Magazine named "Deepika" under TOLIC banner which covered Official Language Implementation activities of Bangalore PSUs and good articles on Hindi promotion.

15.11 Bird Group of Companies (BGC)

One Hindi Officer has been recruited in January 2011 at Corporate Office to implement use of Hindi in the company.

15.12 Joint Plant Committee (JPC)

JPC succeeded in publishing the first ever JPC Bulletin in Hindi. JPC's Hindi Bulletin presently includes around 16 pages with sections like "Rukh Pratibedan", "Bhawi Yojanae", "Rashtriya Samachar" and "Antarashtriya Samachar". The Hindi JPC Monthly Bulletin is now one of the regular monthly publications of the organization.



CHAPTER-XVI

EMPOWERMENT OF WOMEN

16.1 Introduction

The Supreme Court of India in its judgment in August 1997, in the case of Visakha and others versus State of Rajasthan and others, recognised international conventions and norms of 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 down 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 mechanism, a Complaints Committee (Sexual harassment of women at work place) with representatives from outside the organisation was constituted.

In compliance of the guidelines of the Supreme Court, Ministry of Steel has constituted a five-member Committee, headed by a Joint Secretary level woman officer and having three women as members, to look into complaints made by women employees and to address them. The committee did not receive any complaint in 2009-10, which is a broad indicator of general satisfaction of women work force in the Ministry.

All the public sector undertakings under the Ministry of Steel have also been directed to implement the Supreme Court's guidelines. The related details are briefly enumerated below:

16.1.1 Empowerment of women

Gender Budget Cell has been set up in the Ministry as per directions of the Ministry of Finance and the Ministry of Women and Child Development with the aim to initiate steps for implementation of the concept in this Ministry.

16.2 Steel Authority of India Ltd. (SAIL)

Recognizing that gender equality and empowerment of women leads to faster progress of society, a Mahila Samaj was formed in 1957 in Bhilai when the industrial complex was just coming up. Since then this revolutionary institution, which started with just 50 members on August 4, 1957 has inspired other SAIL plants to develop their ladies society / groups as well which have become the pioneer of community welfare and has been given the status of an ancillary industry by SAIL. These various plant level organizations today have a total of 4000 members and 15 affiliations with national-level organizations. They undertake various activities especially those involving women from the weaker sections or belonging to SC/ST communities. The members, through internal revenue collections, have been conducting / operating various functions, including manufacturing of hand gloves, masala, soaps, bags, etc., and contributing to women's colleges and for rehabilitation of the differently-abled and many other similar activities

The achievements of SAIL in affording accessibility to employment to women coupled with those of Mahila Samaj for impoverished women are significant. In India, the Gender Equality Index (GEI) measures the attainments of human development indicators by women and contrasts it with those attained by males. It has been reported that GEI rose marginally from 62% in 1980s to 67.6% in 1990s. From this it may be inferred that on an average, the attainments of women is only two-thirds of that of men.

16.2.1 Contribution of Women :

Products made for SAIL Employees	Hand Gloves, Spices, Soaps, etc.
Community Welfare	Sewing / Embroidery Centres, Creches, Kindergarten Schools, Schools for Special Persons, Adult Education, Children's Library, Health and Hygiene Education, Psychological Support to ill-treated tribal women, Medical Centres and Dispensaries, running of Petrol-Pump at Bhilai
Workshops	Workshops conducted by women on Banking, Insurance, Rights of Women, Information Technology, Civic Facilities
Assistance during Natural Calamities	Kargil War Relief, National Defence Fund, Cholera Control, Orissa Flood / Cyclone Relief, Welfare for poor women, Orissa Chief Minister's Blood / Drought Relief Fund, Gujarat Earthquake, etc.

16.3 Rashtriya Ispat Nigam Ltd. (RINL)

Recognizing the special needs and attention that is required for women employees, RINL/VSP facilitates the women workforce to be closely knit through the local cell of Forum of Women in Public Sector (WIPS).

Keeping in view the statutory provisions, the objectives of the Company and the objectives of the Forum of WIPS, measures are taken to provide an enabling working environment wherein the women employees can achieve their full potential.

Training and Development programmes aimed at career advancement, women empowerment, personality development, gender sensitization, safety awareness, occupational health, osteoporosis awareness, interpersonal skills, computer skills, communication skills, capacity building, work life balance, leadership and safe and healthy living etc. have been organized. During the year, about 290 women employees were covered in such programmes. Women employees have also been nominated for external program like Women Employees- Opportunities and Challenges, National competitions for Young Managers, Quality Circle conventions. Some of the notable programmes during Apr-Dec '10 are:

- Regional Meet of Women employees
- Transformation of Human Resource management
- Two programmes on gender sensitivity and on Women development
- National Management Games & Simulations

Women employees are provided an opportunity to interact with visiting dignitaries like Secretary, Ministry of Steel, panel of judges for various trophies etc.

Women employees are nominated members of various intra-organizational committees like recruitment, promotion and safety committees and inter-organizational committees like Inter-Plant Steel Standards. They are also auditors for ISO and OSHAS. One of the women employees was also nominated to participate in the International Convention on Quality Control Circles.

Women employees are provided opportunities to express their talent through the intranet portal & House Magazine "Disha".

16.4 NMDC LTD.

NMDC Limited employs 279 women employees, which constitute about 4.7% of its total manpower of 5902 (as on 31.12.2010). The company provides equal opportunities for the sexes at all levels by its selection, recruitment, placement or promotion. The number of women in senior positions is growing and two independent Directors on the Board of NMDC are women.

Facilities like separate wash rooms, rest rooms/ Lunch rooms etc. have been provided in the Head Office and various projects. NMDC has also been sponsoring women employees for training on awareness on healthcare, family planning etc. All statutory obligations of the Company are reflected in its policies for women employees.

In compliance to the directives of the Hon'ble Supreme Court guidelines relating to sexual harassment of women employees at work place, Complaints Committees have been constituted in all the Project and Head Office. The Committees, headed by a woman employee meets



NMDC supports exhibition of handicrafts made by tribal women



periodically to review the status of the complaints received. No case of harassment have been reported so far. The directives have been widely circulated and the Conduct Rules have been amended in the year 1998 incorporating suitable clause for prohibition of sexual harassment of women at work place.

NMDC Limited has made sincere efforts to increase the awareness of women in general in the remote areas where it has its mines. Various awareness programmes have been conducted on health care, family planning antenatal services, informative programmes on AIDS control and other social issues with the active involvement of the Mahila samities functioning in the projects.

16.5 MOIL Ltd.

MOIL employs 804 women employees which constitute 12.04% of its total workforce of 6676 as on 31/12/2010.

In compliance of the directives of the Supreme Court guidelines relating to Sexual Harassment of Women workers at work place were issued by Govt. of India, Ministry of Human Resources Development. Accordingly, a Complain Committee comprising of three officials including a lady Doctor was constituted in the year 1999 & reconstituted in March 2006. 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 education Blood donation camps, eye camps, family planning camps etc. are being organised 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 organised to mark the day.

Company grants Maternity Leave and Special Casual leave for Family Planning. Company has set-up crèches at its mines and gives time off for nursing mothers.

As part of its CSR activities, Self Help Groups have been created at the mines which comprise women hailing from the remote villages. They are trained to make candles, washing power, washing soaps, bamboo baskets, tailoring and various other vocational activities in order to make them self-reliant.

16.6 MSTC Ltd.

MSTC Ltd. is a Corporate Life Member of Forum of Women in Public Sector (WIPS) and in the year 2010-11, a number of women employees have participated in the programmes organized by WIPS. An executive of the Company is a member of the Executive Body of WIPS and actively contributes to the development of women employees in PSUs and also underprivileged girls/women in the society through CSR activities.

16.7 Ferro Scrap Nigam Ltd. (FSNL)

The Women employees of FSNL are given due importance in all activities, including recognition of their abilities in various competitions/areas. The representation of female employees in various committees, such as committee for prevention of Sexual harassment etc., is always ensured. The work culture of FSNL is quite conducive for the women employees.

16.8 Hindustan Steelworks Construction Ltd. (HSCL)

The break up of woman employees in the Company as on 1.1.2011 is as below:

• Executive	:	5
• Non-executive	:	1
• Worker	:	34
Total	:	40

These woman employees are scattered in different Units. Most of the female workers are posted at Bokaro and Bhilai. No organized body of women employees exists in the Company. However, it is ensured by the Management of the



Company that the interest and privilege of the woman employees are protected. It is also seen that they are not subjected to any sort of sexual harassment in the workplace.

16.9 MECON Ltd.

There is a Committee constituted with a senior Lady Engineer as its Chairman to look into the grievance or complaints of women employees in MECON Ltd.

16.10 KIOCL Ltd.

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.

54 women employees are on the rolls of the Company as on 31.12.2010.

Based on Hon'ble 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 Women Executive at the level of Dy.Manager as a Chair person, three nominated women representatives and Lady Advocate from High Court of Karnataka as a third Party Member.

A Women's Forum Women in Public Sector is operating in KIOCL and most of the women employees are members of the said Forum. KIOCL is a life member of WIPS. Coordinators 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.

16.11 Bird Group of Companies (BGC)

A Women Grievance Cell is functioning in the Company to redress grievances of women employees. The company has taken up various programs under CSR projects e.g. providing free bi-cycle to the girls students of the periphery villages, providing training for sewing/tailoring to women folk of the periphery villages and supply sewing machines to them at free of cost to promote self-employment.



CHAPTER-XVII

PROMOTION OF STEEL USAGE

17.1 Steps taken to increase Domestic Steel Consumption

One of the major objectives of the National Steel Policy is to augment consumption of steel in the country by conscious promotion of steel usage. In furtherance to the National Steel Promotion Campaign launched in March 2007 to create mass awareness regarding various innovative and common uses of steel, the Institute for Steel Development and Growth (INSDAG) has initiated several innovative and cost effective solutions.

17.1.1 Steel Intensive Housing

INSDAG had given a detailed technical presentation before Ministry of Housing and Urban Poverty Alleviation, GOI highlighting the advantages of using steel in Affordable Housing Projects in urban areas. Accordingly, INSDAG developed some model G+3 building plans, completed the steel intensive design and submitted with the concerned Ministry along with cost estimation. Development of variety of steel intensive solutions for Rural Housing, Low Cost Housing for the urban poor and presentation to the appropriate authorities including State Government Development Agencies are also being carried out from INSDAG's end. One model steel village comprising of houses, toilets, meeting hall and school building has already been constructed by RINL at Visakhapatnam. Once finalized, these steps will enhance domestic steel consumption in many folds.

17.1.2 Earthquake Resistant Structurals and Rebars

INSDAG has prepared draft code on Earquake Resistant Structurs which has been included by BIS widely among the potential users. The code is under printing. Earthquake Resistant Rebar standard is still with the Civil Engineering Committee of BIS (CED 54). INSDAG is trying to popularize safe building practices by introducing two separate Indian standards on Earthquake Resistant Structural and Rebars. These products are being manufactured primarily by SAIL, RINL and TATA Steel.

17.1.3 Bridges and Culverts

Another area in rural and urban sector is bridges and culverts. As per INSDAG's design NRRDA (National Rural Road Development Authority), had brought out design manual for rural bridges and culverts which are being constructed across the country. INSDAG is also designing several other types of rural and urban bridges as well as steel-concrete composite bridges (including Steel Box-girder composite with concrete) as per IRC-22 with Limit State Method of design.

17.1.4 Steel Bullock Carts

Till date, 800 steel bullock carts as developed by INSDAG and sponsored by SAIL, RINL and other private sector steel units have been fabricated for distribution. The utility of steel bullock carts vis-à-vis primitive bullock carts were propagated widely. These are for distribution through the District Administration with preference to weaker sections.

17.1.5 Dissemination of Knowledge

Advancement in technical know-how is a never ending phenomenon. In order to disseminate these developments on the application side, INSDAG is delivering technical presentations in various suitable forums (including government authorities) aiming at popularizing the usage of steel in construction. The target participants are the decision makers, Architects, Structural Engineers and related professionals in the chain.

As an appropriate alternative the process of dissemination of knowledge is also being carried out at the grass-root level by INSDAG by way of organizing technical competition among students of Civil and Structural Engineering and professional.

INSDAG is continuously updating, modifying and formulating the BIS codes in the field of Civil and Metallurgical Engineering application and IRC codes related to the subject. To deliver proper guidance in the effective usage of these codes, INSDAG is preparing manuals, guidebooks and technical aids as a tool for design of steel structures. INSDAG is continuously organizing training programmes for Teachers and professionals. The responses are encouraging.

During the reported period, INSDAG has brought out need based four Technical Project Publications which were distributed among the member organizations. Good number of professionals from Civil/Architecture discipline has been using these publications.

In order to disseminate advantage of steel usage, INSDAG is putting efforts to deliver technical talk to final year Engineering Students in both Govt./Private Engineering Colleges.

17.1.6 Study for assesment of steel demand in rural India

India's steel production capacity is going to increase manifold in the coming years. The current abysmally low per capita consumption of steel of 49 Kg, compared to the world average of 182 Kg, strengthens the argument that the domestic steel industry has a huge growth potential. The Parliamentary Standing Committee (PSC) on Coal and Steel on Demand for Grants (2007-08) of the Ministry of Steel in its 25th Report had noted that 'to achieve this objective, it is necessary to create required infrastructure for steel industry as well as increase per capita consumption of steel'. The Committee observed that 'the biggest challenge in achieving the desired level of consumption is removing the wide disparity between urban and rural areas. The Committee, therefore, desired the Ministry to conduct a survey to assess the demand of steel in rural areas.

In pursuance of the recommendation of the PSC, Ministry of Steel is getting a survey carried out through Joint Plant Committee to assess the demand for steel in rural areas. The objective of the survey is to assess trends in consumption pattern of different items of steel in the Indian rural market. The survey would also capture the steel demand arising from investment going into infrastructure development through projects like Bharat Nirman, etc. focused exclusively on development of rural India.

A Technical Committee, headed by a Joint Secretary of Ministry of Steel and comprising of members from industry and industry associations has been constituted to monitor the survey. IMRB International, a pioneer in market research, has been selected by the Technical Committee to conduct the field and analytical work of the survey. The survey would be based on stratified sampling of the rural population, taking into consideration the following:

- All the 35 states and union territories separately
- 300 districts (based on percentage of rural population)
- 1500 villages (based on percentage of rural population)
- At least 15-20 households and all institutions like gram panchayats in each village
- A total of 4500 manufacturers and 8000 retailers (based on output/turnover) at the rural level.

Data, for analysis purpose, for the survey would be collected for the three years viz., 2006-07, 2007-08 and 2008-09 and assessment of rural steel demand would be for the periods 2011-12, 2016-17 and 2019-20. A pilot survey has already been conducted covering one district from each of the four zones (north, south, east and west) in the country. The districts identified were Nadia in West Bengal (east), Rae Bareilly in Uttar Pradesh (north), Ahmednagar in Maharashtra (west) and Vellore in Tamil Nadu (south).

M/s. IMRB International have submitted the draft report of their survey, which is being scrutinized by the Technical Committee. The Report is likely to be finalized by June 2011.

17.1.7 Steel distribution network

It had been felt that prices of steel should be kept at a reasonable level to safeguard the interests of the common man. Therefore, the main steel producers in a meeting held in the Ministry on September 8, 2006 resolved to make available items of common steel consumption in the rural areas through their dealer network at the same price as applicable in metros and a decision was taken to have at least one dealer in each district in order to make available steel items to the



common man. Consequently, a significant part of the cost of transportation as well as distributors/wholesalers' margin would be borne by the producers.

This is providing relief of about ₹ 600-1,000 per tonne to the individual customer in the rural areas. In order to ensure the availability of commonly used items of steel in the rural areas across the country, SAIL and RINL are expanding their distribution networks at a fast pace with the objective of having dealers in all the districts of the country.

Preference for SC, ST and OBC are given while allotting District level dealerships and relaxed entry conditions have been formulated for SC/ST and OBC categories for their wider participation.

17.2 Steps taken by SAIL to promote usage of steel

- As on 1st January, 2011, SAIL has a marketing network of 37 Branch Sales Offices, 26 Customer Contact offices and 67 Warehouses. This wide network of outlets across the country helps SAIL in meeting requirements of a wide range of customers in time.
- SAIL has also expanded its dealer network extensively. As on 1st January, 2011 SAIL dealership network consists of 2579 dealers across 630 districts. Items of mass consumption like Rebars and Galvanised Sheets, required by common man are being sold through district dealers. In addition, Light Structurals and small quantities of HR Sheets, CR Sheets and Wire Rods are also sold through dealer network. Further expansion of SAIL dealer network is in progress.
- Suitable incentive schemes are being operated to encourage dealers to improve their performance. Dealer meets, architects meets and masons meets along with its dealers are held regularly for promotion of SAIL steel.
- With a view to spread awareness about SAIL outlets across the country, a dealers' directory consisting of details of SAIL Dealer Network and SAIL Warehouse Network was released and distributed to council members during the 23rd Steel Consumer Council meeting held on 16th July, 2010 at Delhi.
- Some of the promotional activities undertaken to promote SAIL steel during April-December, 2010 are given as under:
 - ❖ Hoardings put up at major airports (17 in number) and in metros and tier II cities across the country.
 - ❖ Wall Paintings done at various locations including interior areas for promotion of sale through SAIL dealers.
 - ❖ Advertisements of SAIL steel in Rajdhani and select Shatabdi trains, bus bodies and local trains.
 - ❖ Advertisements in in-flight magazines for usage of SAIL steel
 - ❖ SAIL MRRP is prominently displayed at all dealer shops and also regularly updated on SAIL web site.
- SAIL regularly participates in trade fairs and exhibitions highlighting various usages of steel.
- At SAIL, continuous efforts are being made to develop new products for meeting specific applications as required by our customers for promoting steel usage. During Apr-Dec'10 twelve new products were developed for various applications like High Strength Steel for Pre-Engineered Buildings, Automotives, Propane Gas Cylinders; special steel for High Mast Poles, Transmission Towers; Special Quality Roll Threaded Bolts for Under Ground Mines; High Tensile Structurals for Construction; High Tensile Plates with improved ductility for Defence; Corrosion Resistant Galvanised Sheets for White Goods & Roofing etc.

17.3 Rashtriya Ispat Nigam Ltd. (RINL)

Continuous efforts are made at RINL-VSP for developing new products to meet specific applications and promoting steel usage. The requirements of customers of new products / grades / sizes of steel products are studied on continuous basis and in case it is found feasible, these products are developed and supplied to the customers. During the period Apr-Dec'10, 22 new products / sections have been developed. These new products are used for manufacturing products / applications like Axles and Fasteners of Automobile Sector, Fasteners for Transmission Line Tower Sector, Spring Hangers for Railways, Fine Drawing Quality Wire Rods for Wire Drawing Industry, Earth Quake Resistant TMT Bars of Fe 500 D Grade for Construction Sector, etc.

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During 2010-11, RINL/VSP introduced a Policy of Registration of Retailers to serve the customers in Urban and Semi-urban areas. Sales to Trade Segment have been completely dispensed with. Till the end of December '10 in 2010-11, 160 retailers, spread across the country have been registered. This initiative has helped in widening the Distribution Network, which ultimately helps in promotion of steel usage.



Launch of Customer Information System at RINL

In order to promote consumption of steel in the rural areas, VSP has started District Level Dealership Scheme (DLDS) from 2004-05. The main objectives of DLDs are to establish a wide distribution network so as to ensure availability of VSP's steel products even in the hinterland for improving availability of steel and increasing customer base. At the end of Dec'10, 120 DLDs are in position.



CHAPTER-XVIII

CORPORATE SOCIAL RESPONSIBILITY

18.1 Introduction

Corporate Social Responsibility (CSR) has been identified as an important parameter in the MoUs drawn up by the major PSUs with the Ministry of Steel since 2007-08. CSR activities focusing on environmental care, education, health care, cultural efflorescence and peripheral development, family welfare, social initiatives, including sports activities and other measures are under implementation as per the guidelines, issued by the Deptt. of Public Enterprises.

- All profitable steel PSUs have earmarked at least 2% of their distributable surplus for CSR activities since 2007-08. Mining PSU-NMDC earmarked 5% of its distributable surplus for CSR activities.
- Total budget of ₹ 199 crore had been allocated for carrying out CSR activities by the Steel Ministry PSUs during 2010-11. The expenditure on CSR during the period 2010-11 stood at around ₹ 87 crore. The details are at Annexure-XVI.

18.2 Model Steel Villages

All the main producers have been urged by the Ministry to adopt villages around their plants and as part of their CSR, help develop these villages as model steel villages, with the objective of attaining a holistic development model which would include the promotion and sustenance of medical and health services, education, sports, livelihood promotion through agriculture, self help groups, roads and connectivity, sanitation and community centres.

Use of steel is emphasised in items such as storage bins, bullock carts, buildings such as school buildings, panchayat halls, health centre buildings, water tanks, waiting sheds etc.

104 villages are being developed as 'Model Villages' under CSR activities by SAIL, NMDC, Rashtriya Ispat Nigam Limited (7) (RINL) and MOIL Ltd. SAIL has adopted 79 villages across eight states - Chhattisgarh (21 villages), West Bengal (20 villages), Orissa (20 villages), Bihar (3 villages), Jharkhand (12 villages), Karnataka (1 village), Madhya Pradesh (1 village) and Tamil Nadu (1 village). Out of these 79 villages, 54 villages were completed upto 2010-11 (upto December '10). In respect of NMDC, integrated development of 5 villages in Bailadila at a cost of ₹ 820 lakh has been initiated (apart from 8 villages where work is already in progress). MOIL has adopted three villages in Maharashtra and two in Madhya Pradesh as Model Villages. RINL has adopted seven villages in its periphery as Model Villages.

The PSUs had been advised to strengthen their existing mechanism for implementation and review of the CSR activities and to empower suitable officials in their respective organisations with appropriate administrative and financial delegation of powers so as to streamline and ensure the implementation of CSR activities as per their respective earmarked budgets. Beginning with the peripheral areas around their respective plants, the PSUs will gradually target the CSR activities to cover the areas populated by the SCs, STs and weaker sections of the society. In addition, the PSUs will also provide assistance to National, State and reputed local organisations involved in the field of arts, culture, health care, tourism, sports and other allied areas.

18.3 Steel Authority of India Ltd. (SAIL)

SAIL has put in place systems for socio-economic development of the neighbourhoods and communities amidst which its plants and units operate. The objective was to plough prosperity back into the environment from which its strengths emanate, to minimise inequalities by providing quality education, healthcare, infrastructure and employment avenues to all, to ensure that man and nature live in harmony, to preserve the originality of Indian culture while simultaneously promoting scientific temperament and modern technology. SAIL has over the years, adopted a Triple Bottom Line approach in the pursuit of its social obligations and has endeavored towards value balancing, value transferring and value adding relationships with all its stakeholders.

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SAIL has established 54 Primary Health Centres, 12 Reproductive and Child Health Centres, 17 Hospitals and 7 Super-Specialty Hospitals to provide specialized healthcare to almost 30.60 million people. It has opened over 146 schools in the steel townships to provide modern education to about 70,000 children. Besides adopting and providing free education and facilities to tribal children, SAIL is providing assistance to over 286 schools. In this endeavour, SAIL has achieved a Girl:Boy ratio of 1:1 for all levels of education and a survival rate, i.e. rate of retaining enrolled students of 93% in SAIL Primary Schools and 90% in SAIL Secondary schools.

SAIL has provided access to around 73.31 Lakh people across 435 villages since inception by constructing and repairing of roads. It has provided access to water infrastructure to people living in far-flung areas by installing over 5100 water sources, thereby providing drinking water access to around 38.64 lakh people.

SAIL's role as a responsible corporate citizen in nation building has not gone unrecognised. The company has won prestigious awards, honours and accolades in this sphere such as SCOPE Meritorious Award for Corporate Social Responsibility and Responsiveness for the year 2008-09, Annual FICCI Awards 2008-09 in the category of "The Vision Corporate Triple Impact - Business Performance : Social and Environmental Action and Globalisation Award", Businessworld-FICCI-SEDF CSR Award for the year 2006, FICCI Award for Rural and Community Development - 2006-07, CSR Award of the Ministry of Rural Development, Government of India; Golden Peacock Award - 2008, 2009 and 2008-09 for CSR to Bhilai Steel Plant of SAIL; CSR Award of Tamil Nadu Government to Salem Steel Plant for 2008-09, was adjudged a finalist of International 'Stivie Award' etc.

SAIL has adopted 79 villages across eight (8) States (Chhattisgarh, West Bengal, Orissa, Bihar, Jharkhand, Karnataka, Tamil Nadu, Madhya Pradesh) and these are being developed as Model Steel Villages in a phased manner. The developmental activities being undertaken in these villages include medical and health services, education, roads and connectivity, access to potable water, sanitation, community centres, livelihood generation, sports facilities, etc. 54 Model Steel Villages (MSVs) have been completed till date. Thus, the result of the CSR efforts in this direction has touched all the areas of the village- life and has provided them with much improved living standards.

Ever since inception, the company has endeavoured to provide a healthy life by providing medical care to the people living in the peripheral areas of its plants/units. As the plants/units are located mainly in backward areas, the company took steps to create better and healthy living conditions for both its employees as well as people living in the periphery. The company organizes a number of health camps at various villages on fixed days. The purpose of the Health-Camps is to create health awareness and sensitize people on health related issues by immunization, blood-donation, water purification tablets, distributing handbills, etc, and providing them medicines in the medical/health camps. Villagers with major ailments detected during the health camps, are referred during the health camps to the main plant hospitals/Govt. hospitals for treatment. Provision of specialists in the area of Gynecology, Cardiology, Pediatrics, Ultrasound, Orthopedics are made, besides activities like and minor surgery for the affected people.

SAIL has organized more than 475 medical camps in 2007-08 in 12 states (Bihar, Jharkhand, Chhattisgarh, Orissa, West Bengal, Tamil Nadu, Karnataka, Maharashtra, Madhya Pradesh, Haryana, Himachal Pradesh, Rajasthan) to benefit over 5 lakh of the needy persons and over 2200 Health Camps in 2008-09, benefitting around 10 Lakh people. In 2009-10, more than 3850 camps have been organised benefitting over 2.32 Lakh people and in 2010-11(H1), more than 1880 health



Patient with hearing impairment being treated by SAIL doctor



camps have been organised benefitting 1.13 Lakh people providing free health check-up, path lab treatment, medicines, immunization, surgical cases referred to plant hospitals (free stay, to and fro transport and food with 1 attendant each).

To help the poor and down-trodden, 11 (eleven), 13 (Thirteen), 12 (Twelve) and 12 (Twelve) number of MMUs/ Ambulances etc. provided to various NGOs like Smile Foundation, Bharat Sewashram Sangh etc. in 2007-08, 2008-09, 2009-10, and 2010-11 (April-Dec 2010).

Six Special Schools have been set up exclusively for poor, underprivileged, BPL children at five integrated steel plant locations covering around 1400 children providing free education, Mid day meals, Uniform including shoes, Text books, Stationary items, School bag and water bottles etc. A number of benefits have been provided to the SC/ST children, such as scholarships to deserving SC/ST undergraduate engineering students, adoption of 225 tribal children at Bhilai and another 12 children nearly extinct Birhore Tribe at Bokaro to provide free education, boarding and lodging facilities, etc. Besides adopting and providing free education and facilities to tribal children, SAIL has provided assistance to over 286 schools. ITI has been set up at Gua Mines and foundation stone for the ITI at Samastipur, Bihar, has been laid.

The company constructs on an average 157 water infrastructure every year for people living in far-flung areas. In the year 2009-10, 439 no. of water infrastructures and like borewells, handpumps, overhead tanks, ponds, etc. were created providing potable water to 1,63,311 people. Each SAIL plant has ensured that villages within the radius of approximately 16-18 kms of its township have access to potable water. This has been done by installing 5153 water sources. It is providing drinking water access to around 38.64 lakh people.

SAIL has been involved in the construction and repair of pucca roads. In the year 2009-10, 103.35 Km of pucca road was constructed benefitting 17,24,114 people. The company has so far provided access to around 73.31 Lakh people across 435 villages since inception by constructing and repairing of roads.

Promotion of sports has been an integral part of the corporate philosophy of SAIL right from its inception. The company has setup 6 sports academies, viz. an Athletics Academy for boys at Bhilai, a Hockey Academy at Rourkela, a Football academy at Bokaro, an Athletics Academy for girls at Durgapur, an Archery Academy at Kiriburu and a Football Academy at Burnpur.

The Sports academies scan the peripheral areas of the steel plants as well as different regions of the country and select suitable young talents for enrolment. The trainee are put through strict training by well-qualified coaches in each of the fields and groomed to higher levels of competence. Continuous emphasis on sports activities has helped develop players who have gone on to compete at state and national level tournaments. As an organization, SAIL also undertakes sponsorship of various major sporting events for eg. All India Tennis Association, New Delhi; 7th World Korfball Championship, Jawaharlal Nehru Hockey Tournament, New Delhi etc.

The company is doing its bit in preserving ancient form of art by promoting various dying art-forms. This is done by promotion of the art form, giving the performers a platform to showcase their talent, etc. Along with the ASI, SAIL has taken up the task of preserving the monuments of Lodhi Garden, New Delhi. Improvement / developmental works undertaken at Swargadwar and Temple Complex at Vedyas, near Rourkela, Orissa. Bokaro Steel Plant (BSL) is undertaking development of infrastructural facilities and amenities etc. at Archeological sites of Lauria Nanandargarh and Chankigarh in West Champaran district of Bihar.

18.3.1 Creating Sustainable Incomes

A sense of hope for future is most important for leading a good life. SAIL is constantly working to identify various areas where training and help to the communities can be imparted so as to make them self sustaining units that can generate incomes for themselves. People living in the peripheral area of SAIL's plants/ units are taught skills like animal husbandry, chullah making, goatery, piggery, fishery etc, that will help them to merit more than two square meals a day. These programmes promote rural savings and credit, natural resource management, village infrastructure development, increased agricultural productivity through better management of resources and intensive cropping, and skill development and enhancement of the community. During last three years, SAIL has provided income generation training to around 44,000 people enabling them to earn their sustainable livelihood.

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Recognizing that gender equality and empowerment of women leads to faster progress of society, a Mahila Samaj was formed in 1957 in Bhilai when the industrial complex was just coming up. Since then this revolutionary institution, which started with just 50 members on August 4, 1957 has inspired other SAIL plants to develop their ladies society / groups as well which have become the pioneer of community welfare and has been given the status of an ancillary industry by SAIL. These various plant level organizations today have a total of 4000 members and 15 affiliations with national-level organizations. They undertake various activities especially those involving women from the weaker sections or belonging to SC/ST communities. The members, through internal revenue collections, have been conducting / operating various functions, including manufacturing of hand gloves, masala, soaps, bags, etc., and contributing to women's colleges and for rehabilitation of the differently-abled and many other similar activities.

The achievements of SAIL in affording accessibility to employment to women coupled with those of Mahila Samaj for impoverished women are significant. In India, the Gender Equality Index (GEI) measures the attainments of human development indicators by women and contrasts it with those attained by males. It has been reported that GEI rose marginally from 62% in 1980s to 67.6% in 1990s. From this it may be inferred that on an average, the attainments of women is only two-thirds of that of men.

SAIL incurred an expenditure of about ₹ 37 crore on CSR till December 2010.

18.4 Rashtriya Ispat Nigam Ltd. (RINL)

RINL-CSR activities focus on sustained development and inclusive growth of the surrounding community and some of the major focus areas include Peripheral Development, Education, Medical & Health, People care, Sports & Cultural Efflorescence and Help during Natural calamities. An expenditure of ₹ 8.49 Crs. was incurred on CSR activities for the period Apr-Dec '10 against budget of ₹ 15.40 Crs. for the year 2010-11. The company has taken up various initiatives during 2010-11 towards Corporate Social Responsibility.

18.4.1 Education

With a view to provide education to children and to meet basic learning needs, VSP has taken several initiatives like additional class rooms in ZP school, Konda koppaka and in MPP school Gangireddy colony, construction of Hostel Block (covering 3 Districts) for 21st Century Gurukulam under Andhra University at Visakhapatnam, construction of library hall in Govt. ITI campus, Visakhapatnam etc. Monetary support is being extended for construction of Arunodaya Special School for Differently Abled Children.

18.4.2 Medical & Health

Some of the initiatives taken up in this direction are conducting of various medical camps, De-addiction programmes, Child immunization, AIDS awareness campaigns. RINL extended its support to Andhra Medical College, Visakhapatnam towards procurement of Pathology equipment and Dermatology equipment. Eye Camps conducted through "Sankar Foundation" (renowned Eye Hospital) covering 1501 patients / 292 Cataract Surgeries during 2010-11.

18.4.3 People care

People care is an integral part of CSR activities in the company. RINL is supplying drinking water to 4 RH colonies ensuring supply of water through tankers for each RH colony for a period of 60 days. The beneficiaries are 18,000 people (approx.) per day.

Other activities organized in this direction include distribution of Mosquito nets to Ashram Schools in nearby villages of Visakhapatnam district to prevent diseases due to mosquito bite. Items like Computers, printer, Computer tables & Chairs, Television & DVD player sets were donated to M/s Family Services, who are doing yeomen service to the deaf & dumb children.

Empowerment programs to women & un-employed youth were inaugurated through Jan Shikshan Sansthan in nearby villages.



18.5 NMDC Ltd.

- Integrated development of 5 villages in Bailadila at a cost of ₹ 820 lakh has been initiated (apart from the 8 villages where work is already in progress).
- Free out-door & in-patient treatment facility was extended to 44462 & 4942 local tribals respectively at a cost of ₹ 344.18 lakhs during the current year up to November, 2010.
- During 2010-11 (up to November, 2010), 13423 villagers in remote areas have been treated at their door steps.
- A Residential Public School with 194 tribal students from Bastar District has been started at Nagarnar on 17th August, 2010, initially with classes I, II & III. Presently 65 students belonging to BPL category tribal families brought from remote villages of Bastar have been accommodated in the Hostel.



A view of school children at Nagarnar Residential School run by NMDC

- An ITI with 2 trades has been started at Nagarnar from the academic session 2010-11.
- A Polytechnic College has been made operational at Dantewada from the academic session 2010-11 with Mechanical and Electrical streams.
- The Scholarship scheme to motivate SC/ST students has been in operation with good response and reception. In the current financial year, an amount of ₹ 391.57 lakh for 11478 students was distributed in 340 schools in the five districts of Bastar.
- Mid-day meal programme covering 10150 school children in and around Donimalai Project is running successfully.
- Various infrastructural development works viz., Construction of By-pass road to Jagdalpur at a cost of ₹ 3586.20 lakh, Construction of high level bridge at a cost of ₹ 525.96 lakh, Setting up a Special School for tribal children (Prayas) at Bhilai & Raipur with financial contribution of ₹ 200 lakh etc. proposed by Chhattisgarh Govt. have been agreed upon.
- An amount of ₹ 1442.31 lakh has been contributed to Chhattisgarh Govt. towards various infrastructural and development works including those in the focus areas of education, drinking water, environment etc during the year 2010-11 (up to November, 2010).
- Construction of Flood Relief Shelter at Kusheshwar Asthan, Bihar is in progress
- Establishment of a Residential school in Sitapur Dist in U.P. is in progress.
- Promotion of 'Archery' & 'Handball' in Chhattisgarh
- Financial assistance for National Wrestling Championship to be held in Jharkhand

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- Sponsorship of 'All India Volley Ball Tournament' in H.P. etc.
- Support to Kannada Rajyotsav
- Support to Bastar Lokotsav etc.

18.5.1 Annual Expenditure incurred on CSR Activities

During the year 2010-11 (Upto Dec 2010), NMDC has already committed ₹ 86.37 crore for various developmental works as per the formulated CSR policy. The actual expenditure on CSR activities during the year (Up to Dec'10) is ₹ 36.54 crore. The year wise CSR expenditure in last three years has been as follows:

Year		Amount in ₹ lakh
2008-09	-	9883.93
2009-10	-	8306.94
2010-11 (April-December 2010)	-	3654.00
2010-11 (Jan-March - Estimated)	-	2200.00

18.6 MOIL Ltd.

MOIL Ltd. continued its efforts and carried several welfare programmes under CSR. The Company has undertaken following major activities under CSR :

- Donated 2 Nos. ambulances, 1 No. to Home for the Aged and Handicapped, Nagpur and 1 No. to Sisters of Charity, Nagpur. Both the ambulances are for the use of needy people.
- Donated 1 No. Mini School Bus for Deaf & Dumb Residential School, Saoner, Nagpur District for the use of the inmates of this school located in the rural area. This bus shall be used for transportation of children to participation in various competitions/sports tournaments in Nagpur and other areas.
- Sponsored 1000 Nos. free cataract surgeries and free eye examination of 2000 children including providing of spectacles wherever necessary.
- It has been decided to provide medical equipment to the hospitals in the rural areas of Nagpur district.
- In addition, the Company has carried out a number of schemes under CSR such as construction of roads, cremation sheds, renovation of schools, construction of additional class rooms, drains and water supply facilities etc., in the villages adopted by the Company and also at other villages surrounding the mines of the Company.
- During the period April-December 2010, a sum of ₹ 2.55 crores have been spent towards CSR.

18.7 MSTC Ltd.

The company has identified various developmental projects for the upliftment of women and poor children, education and shelter to the tribal children in various parts of the country.

Financial assistance was provided for infrastructure development for vocational training of the distressed women, medical infrastructure facilities for poor children, infrastructural facilities for poor and tribal children home.

Committed expenditure as on 31.12.10 is ₹ 43.24 lakhs against an annual budget of ₹ 1.00 Crore.

18.8 Ferro Scrap Nigam Ltd. (FSNL)

18.8.1 Background of CSR activities and CSR Policy

The Board of Directors of FSNL has approved a Scheme under CSR, in September 1997 for the welfare of the children of Scheduled Caste, Scheduled Tribe & Other Backward Class communities.



Under the above scheme, free Text books/Note books were being distributed to the meritorious top scoring Male & Female children belonging to SC/ST/OBC communities, studying in class-IX, X & XII in Government Higher Secondary school located in a village nearby FSNL's units, on the basis of the list received from the Principal(s) of the concerned schools.

In due course of time, the activities have been expanded by increasing the budget allocation for this purpose, covering students of such communities studying in Class-VI to Class-XII in the identified Government Higher Secondary Schools located in the nearby villages of all the Units of FSNL, where School Uniforms are being distributed to the students of such communities, every year at the beginning of the Academic Session.



Distribution of School uniforms at FSNL Dolvi

18.8.2 Organizational Mechanism and framework for conduct of CSR activities

FSNL has identified Government Higher Secondary Schools situated in the village nearby FSNL's units at Rourkela, Burnpur, Bhilai, Bokaro, Visakhapatnam, Durgapur, Dolvi(Maharashtra) and Duburi (Orissa).

Every year, the list of meritorious students belonging to SC/ST/OBC communities & Physically challenged students, are obtained from the Principals of the concerned higher secondary schools, and based on this list provided by the school management, School uniforms are distributed to such students.

18.9 HSCL

Under CSR activities, the company has the following targets/achievements for the year 2010-11:-

Year	Annual Target (₹ . in lakh)	Cumulative achievement up to December 10 (₹ . in lakh)	Cumulative % expenditure to Net Profit of previous year
2010-11	25.00	1.87	The expenditure budget is as per the approval of the Board for 2010-11

As per the MoU, 4 programmes have been targeted for 2010-11, out of which 2 have been accomplished till December 2010.

18.10 MECON Ltd.

MECON LTD, a Public Sector Undertaking under the Ministry of Steel has been intimately associated with the Country's Iron and Steel Industry since last more than four decades and has played a significant role in its growth and development.

MECON's concern towards Corporate Social Responsibility (CSR) has been duly reflected in its



Amragori Health Care Center under CSR Project of HSCL



engagement in rural/community development activities since 60's. The following activities are being undertaken by MECON Ltd. under its CSR programme :

Community education scheme

- Under this scheme, at present there are twelve (12) nos. primary educational centers running successfully. Presently, the total numbers of students in all these centers are around three hundred sixty (360). Each center has a dedicated teacher, and he / she is given a monthly honorarium amount.
- As per the requirement, these educational centers are being regularly provided with study materials such as slates, pencil, black boards, charts, chalks, books, exercise copies etc.

Empowerment of Women

Resource generation scheme

Under this scheme, at present there are seven (7) nos. resource generation centers (stitching centers) running successfully. Presently, the total numbers of students in all these centers are around one hundred thirty (130). Each center has a dedicated teacher, and she is given a monthly honorarium amount.

Welfare of Disabled Persons

- Assistance to Cheshire Home (a home for the disabled persons) located in the vicinity of Ranchi in the following area:
 - ❖ Stitching training center for the women folk.
 - ❖ Construction of boys hostel for the school for blind
 - ❖ Renovation of school building for deaf & dumb.

Vocational Training

Training being imparted in the following courses :

- | | |
|-------------------------|----------------|
| ❖ Radio & TV Technician | (1 Yr. Course) |
| ❖ Electrical Technician | (1 Yr. Course) |
| ❖ Welding Technology | (1 Yr. Course) |
| ❖ Computer Applications | (1 Yr. Course) |

Afforestation programme and other welfare activities

- 975 (nine hundred seventy five) saplings of Mango, Guava, Litchi, Sapato, Amla, etc. distributed to villagers.
- Assistance to Aurobindo Ashram, Doranda for construction of Rain Water Harvesting System.
- Assistance to Jawahar Lal Nehru Kala Kendra, Shyamali, Doranda, Ranchi for development of infrastructural facilities.

18.11 KIOCL Ltd.

As a socially conscious corporate, KIOCL has contributed significantly towards community development in and around its projects sites since inception. The KIOCL's approach to social development is to ensure growth, focusing especially on the most marginalized sections of the society. It primarily focused on villages within the radius of its project area. The ensuing social development activities have led to the construction of roads, houses, schools, hospitals, and associated facilities, economically and socially benefiting thousands of people living in the area. KIOCL adjudged that the primary needs of the communities in its remote project areas were for economic independence and, to that end the communities needed skills that could be marketed, and an environment that would facilitate such economic activity. As a responsible



corporate entity, it thereupon began organizing initiatives in education and training, in providing infrastructure and health care.

Keeping in view of the above, KIOCL during the year re-framed its CSR policy with the approval of its Board of Directors. Some of the major activities undertaken under CSR is as follows:

- Construction of Lab Facility for Junior College, Canara Education and Cultural Society, Cherkadi, Udupi Dist.
- Construction of Science Block for Govt. First Grade College, Kavoor, Mangalore.
- Donation of Ambulance to Balehonnur School, Chickmagalur.
- Distribution of books on promotion of cultural tourism and folk art in Andhra Pradesh to the villagers.
- Financial Assistance for medical treatment to Poor peoples.
- Regularly organizing Health Awareness Camps/First Aid Treatment/Blood Donation Camp in nearby village at Mangalore & Kudremukh
- Distribution of books, note book, payment of school fees, Scholarship to the poor children and SC/ST candidates.
- Sponsoring for funds for disabled persons for participating in International Sports events.
- Sponsoring for adopting animals of Pilikula Biological Park, Mangalore.
- Contribution to the Programme on the occasion of World Environment Day.

In the current financial year 2010-11, the Company has earmarked a sum of ₹ 100 lakhs towards CSR. During the current financial year, the Company has spent about ₹ 23.28 Lakhs upto December 2010 towards CSR activities.

18.12 Bird Group of Companies (BGC)

The proposed budget under CSR activities for the year 2010-11 is ₹ 1.50 crores against which an amount of ₹ 0.83 crores has already been spent till 31st December 2010 by OMDC. The CSR activities under taken by OMDC covers as many as 21 (Twenty One) No of revenue villages in core and buffer zone of OMDC lease hold area. The population covered under the CSR scheme by the company is about 20,000. The SC/ST population in the villages is about 65%.

The CSR scheme of the company covers activities related to educational support, health and hygiene, drinking water supply, games and sports, socio-welfare and culture programme and environment protection and improvement programme, etc.. The breakup expenditure by the company on CSR scheme during the financial year 2010-11 (up to Dec-2010) is as under:

Area of Activities	Amount spent in (₹)
1. Educational support	34, 00,000/-
2. Health & Hygiene	2, 68,000/-
3. Drinking Water Supply	28, 00,000/-
4. Games & Sports	1, 50,000/-
5. Socio welfare and cultural activities	2, 50,000/-
6. Environment protection and improvement programme	13, 42,000/-
7. Others	1, 50,000/-
TOTAL	83, 60,000/-

The company has proposal to spend about balance ₹ 67,00,000/- under the major heads like construction of concrete road , provision of solar street light to the tribal villages (50 Nos), provision for transformers and extension of electric line, aid to SSG Group, financial assistance for technical trainees/education to 05 (Five) no ST/SC & OBC boys/girls, boundary wall of Thakurani play ground and Roida play ground, construction of bridge on Sona river near Camp hutting, expenditure on water supply, health and hygiene, construction, educational support, games and sport, socio-

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cultural Programme etc during the rest period of the financial Year 2010-11. OMDC has made a provision to spend 5% of the disposable income for CSR activities.

18.13 Joint Plant Committee (JPC)

The Joint Plant Committee observed its 46th Foundation Day on 1st March, 2010. On this day, JPC distributed tri-cycles to 50 physically challenged individuals. The recipients were identified by the Bharat Shevashram Sangha. The "differently abled" children of Manovikas Kendra (Rehabilitation and Research Institute for the handicapped) performed on the occasion.



CHAPTER-XIX

TECHNICAL INSTITUTES UNDER THE MINISTRY OF STEEL

19.1 Introduction

Several efforts have been made 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:

19.2 Biju Patnaik National Steel Institute (BPNSI)

Based on the concept plan developed by a 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-Research & Development centre. The foundation stone for the Biju Patnaik National Steel Institute (BPNSI) at Puri was laid on January 1, 2001. The institute is registered under the Societies Registration Act, 1980 and started functioning from January 1, 2002. The JPC chairman is also the Chairman of the BPNSI. The BPNSI was established to help the domestic secondary steel industry to keep up with the rapid transformation which the global and Indian steel industries have been undergoing. The Cabinet had on February 20, 2004 approved the setting up of the BPNSI at Puri as a full-fledged institute with capital funding from JPC. Presently, the Institute is being run from two separate buildings in Puri, having laboratory, library, and seminar room facilities. A workshop for welding technology has also been set up at Puri to impart hands-on practice to the trainees.

Some of the major initiatives taken by the BPNSI are enumerated below:

- Since October 2006, the institute has been conducting a course on "Advanced Certificate in Iron and Steel Manufacturing and Plant Management" which prepares students to take managerial positions in the industry. Admission for new batch of students is under process.
- For the benefit of the working executives, the said course is being offered from January 2007 onwards as part of its Training and Further Education (TAFE) Programme. Presently third batch students are continuing training.
- The revenue department of Government of Orissa is processing the application of the Institute for land for setting up its permanent campus and shortly it is expected.
- At its Bhubaneswar Office, production data collection from the Steel Industries in Orissa is being undertaken on behalf of Joint Plant Committee.

19.3 National Institute of Secondary Steel Technology (NISST)

The need for Human Resource Development and Technology Upgradation in the Secondary Steel Sector comprising mainly the steel melting units with Electric Arc Furnace (EAF) or Induction Furnaces (IF), and the Re-Rolling units has been felt since long. A similar opinion was expressed by the Advisory Committee on Steel Rolling Industries, set up by the Ministry of Steel, Government of India in 1984. It was primarily based on these needs and also the demand from the industry, that the National Institute of Secondary Steel Technology was set up as a registered society on 18th August, 1987 under the Chairmanship of the then Development Commissioner for Iron & Steel and presently Joint Secretary, Ministry of Steel.

19.3.1 Aims and Objective of the NISST

- To provide trained technical manpower to the secondary steel sector through short-term and long-term courses and to update their knowledge base.
- To bring awareness about the State-of-Art Technology by holding Seminars, Workshops, and Symposia.
- To provide various industrial services and testing facilities.



- To extend consultancy services to industries 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 organise for documentation and information retrieval services to the industry.
- To provide a platform for interaction between industry and educational as well as research institutions.

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

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

19.3.2 Major Achievements :

During the current year, the Institute has achieved certain milestones and taken initiatives as mentioned :

- R&D Project on reduction of Phosphorus through Induction furnace steel melting has been commenced w.e.f. April, 2010 jointly with NML, Jamshedpur. Two sets of trials have been conducted.
- The Job Oriented Certificate Course (JOCC) in Steelmaking and Rolling Technology run by NISST. It has already provided more than 600 skill/semi-skilled, supervisory level technical personnel to the secondary steel sector, thereby opening a new channel of employment.
- NISST is instrumental in implementation of Energy Efficient Technologies through three Resident Missions of UNDP/GEF Project (Steel) at Mandi Gobindgarh, Raipur and Kolkata for SMEs of steel sector. Also conducts energy audits of buildings, industries etc. by our BEE accredited qualified energy auditors.
- A proposal has been submitted to Ministry of Steel for establishment of Centre of Excellence at NISST campus located at Mandi Gobindgarh in association with Indian Institute of Technology, Ropar.
- Upgradation of Laboratories for NABL Accreditation and Pollution Control laboratory of NISST to Category 'B' at Mandi Gobindgarh is in progress.
- The institute is organizing Seminar, in-house training, Safety Awareness programmes, Workshops for the steel industry. It has organized number of in-house training programmes throughout the country and two Seminars at Chennai & Mandi Gobindgarh.
- Launching various professional skill development modular courses as per DGET norms for the SMEs of steel sector. Application has been submitted to DGET, Chandigarh.
- NISST is continuously providing technical support to the secondary steel sector to improve quality, yield, value addition and cost reduction to meet the challenge.
- Publishes FREE OF COST quarterly publication of 'NISST Bulletin'. Two issues have been released so far for the benefit of SMEs of steel sector.

19.3.3 Future Plans (Upto March, 2011)

- To take up R&D Projects on Development of Super Surface by Impregnation of second phase during hot rolling of steel and Computer Simulation & e-demonstration of reheating furnace.
- Introduce 3 yr. Diploma and 4 yr. Degree Course in Industrial Metallurgy in all parts of the country. First phase covers Mumbai University in Western India & Vel Tech Technical University in South.
- Propose to set up Regional Centres of NISST in Bihar and Nellore (A.P.)
- To introduce skill development programmes for the steel industry along with State Governments of West Bengal, Orissa, Bihar & Jharkhand.



19.4 Institute for Steel Development & Growth (INSDAG)

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 in the steel industry so as to evolve ways and means for efficient usage of steel and provide optimum value to the customers. The Institute primarily works towards the development of technology in steel usage and build market for the steel fraternity.

Education/Training of Professionals and Teaching Faculty on Steel Design: For enhancing the knowledge and skill of faculty and professionals in the country on structural steel design methods and technologies, INSDAG is organizing Short Term Training Courses for 6 days for Teachers of Engineering Colleges. Refresher Courses and seminars are organized regularly for professionals. Courses on understanding of different codes are also organized regularly by the institute. Architects, design engineers and planners have been educated in the innovative uses of steel in modern structures and constructions. INSDAG is regularly engaged in publication of various designs and updation of current designs in structural engineering. INSDAG also took several consultancy assignments from Government agencies to showcase steel intensive structures usefulness and cost effectiveness in large commercial/office complexes, multistoried car parks, bridges etc.

In order to implement the various studies conducted by INSDAG, the institute has undertaken consultancy assignments in live projects. INSDAG has developed several steel-concrete composite short span bridges for National Rural Roads Development Agency (a central body formed by Ministry of Rural Development for implementation of PMGSY schemes of Government of India) for construction/replacement in hilly areas easily. The Steel-Composite structure for Handloom House at New Delhi is another example. Vertical extension of existing Applied Science and Humanities Department (ASHD) building for Sardar Vallabhbhai National Institute of Technology, Surat is an example where steel as construction material is the only choice. INSDAG has developed a steel intensive improved Bullock Cart which is finding use in rural areas.

INSDAG has created very good network for providing technical information among the member organizations and directly involved with several organizations to train up their Executives on the choice of steel as a preferred material, design of steel structures and innovative use of steel in various end using segments.

CHAPTER-XX

IMPLEMENTATION OF THE RIGHT TO INFORMATION ACT, 2005

20.1 Introduction

With a view to promoting openness, transparency and accountability in the administration and good governance of the country, the Government of India enacted the Right to Information (RTI) Act, 2005 on June 15, 2005. The objective of the Act is to promote openness, transparency and accountability in the administration and to provide good governance in the country. The Act also aims to protect the citizens' Right to Information to enable every citizen to secure access to information from public authorities. Correspondingly, dissemination of such information has become an obligation for all public authorities.

20.2 Implementation of the RTI Act in the Ministry of Steel

One Director level officer has been nominated as nodal officer for implementation of the RTI Act and its monitoring in the Ministry. The officers of the rank of Deputy Secretary/Director, or equivalent level, and the concerned Joint Secretary have been nominated as Public Information Officer (PIO) and Appellate Authority respectively. In addition, two Assistant Public Information Officers (APIOs) have also been nominated. On the directions of the Central Vigilance Commission, one Joint Secretary level officer has also been nominated as the 'Transparency Officer' for the Ministry of Steel. The Ministry also monitors the progress/implementation of the RTI Act in its PSUs/Companies and other organisations which are under its administrative control. The manual of 17 items, details of Appellate Authority/Public Information Officer, Assistant Public Information Officers have been hosted on the Ministry's website www.steel.gov.in. All the public authorities under the administrative control of the Ministry of Steel have also hosted the manual of 17 items on their respective websites and have nominated their respective Public Information Officers/ Assistant Public Information Officers and Appellate Authority. During the year 2010-11 (up to December 31, 2010), the Ministry of Steel alone had received 145 RTI applications which were duly disposed of within the prescribed time limit.

20.3 Steel Authority of India Ltd. (SAIL)

The manual of 17 items, details of appellate Authority/Public Information Officer, Assistant Public Information officers and the name of SAIL Plants/Units with their categories have been updated and hosted on the SAIL website www.sail.co.in. All the SAIL Plants/Units under the administrative control of SAIL have also hosted the manual of 17 items on SAIL website and have nominated their respective Public Information Officer/Assistant Public Information Officers and Appellate Authority.

A compilation of Record Retention Policy of all groups of Personal Directorate has been prepared and Record Retention Schedule has been approved by ED (P&A) and it is uploaded on SAIL website www.sail.co.in. Record Retention Schedule for CIG, RDCIS and VISL has been approved from their competent authority and it is uploaded in SAIL website. Rest of the Plants/Units is in progress.

A total of 2326 application were received in SAIL as a whole during the financial year 2010-11 from April to December and all the application disposed off as per the prescribed time of RTI Act, 2005. Out of the 311 applications received in Corporate office, 118 cases were related to SAIL Plants/Units which have been transferred to the respective Plants/Units under section 6(3) of RTI Act. Out of the remaining 193 queries 183 were disposed of, 06 queries are in progress and 04 queries have been asked for cost of information. All the applications were replied within the stipulated time period.

An awareness programme/workshop on "Obligation of Public Authorities under RTI" was organised on August, 2010 at Corporate office for the benefit of all PIOs of the SAIL Plants/Units and senior officers of Corporate office. Also at Plants/Units various programmes to spread awareness of RTI are being organised from time to time.



Since enactment of the RTI Act, 2005, a total of 10642 queries (Application) were received, and out of which 1350 appeals were received and all the applications were replied within the stipulated time period. Out of the total application only 234 cases were referred to CIC and all cases disposed off favourably by CIC.

20.4 Rashtriya Ispat Nigam Ltd. (RINL)

A total of 286 requests have been received under the Right to Information Act, by RINL during the period 1st April 2010 to 31st December 2010. Out of the same, 236 requests have been disposed off by furnishing information to the seekers and 50 requests are pending as on 31st Dec 2010. There were 8 (eight) No. of cases where appellant has appealed to Central Information Commission and all the cases were disposed off by the CIC.

A one and half day workshop on "Right to Information Act 2005" was conducted to bring in awareness among the officers dealing with RTI matters in the organization. As a part of Vigilance week celebrations, a programme on 'Salient features of RTI Act 2005' was conducted during Oct. '10 and around 250 frontline executives, vendors, contractors participated in the programme.

Information available in the 17 manuals of the RTI portal in company website are being regularly updated in accordance with the requirement of section 4(1) (b) of Right to Information Act-2005. Quarterly Returns, Annual returns on implementation of RTI Act-2005 are being submitted regularly in the CIC portal.

20.5 NMDC Ltd.

NMDC has published on its website, www.nmdc.co.in, information under Sec 4 (b) of the RTI Act 2005. NMDC website, which has specifically provided information under the RTI Act has also other information, statutory or otherwise.

List of PIOs/AA, are being updated regularly for the information of the public. Annual Reports of the Company, which gives lots of information on its working are widely circulated and given to any interested person. Further, information is disseminated through press conference, press handouts etc. NMDC maintains all its records in a transparent manner. Information is given to the maximum extent in the form in which it is asked for and in the local language as well, when needed.

The number of RTI Queries received and disposed during the period 01.04.2010 to 30.11.2010 is as under:

No. of Queries Received	No. of Queries Replied	Queries Referred to CIC	Queries Disposed of by CIC
54	50	1	1

20.6 MOIL Ltd.

MOIL has appointed PIOs at the Corporate Office and PIOs/APIOs in all its Mining Units. Director (P&P) has been appointed/designated as Appellate Authority under the Act. The names of all the PIOs/APIOs and the Appellate Authority has been also hoisted in the company's www.moil.nic.in. The obligation of the preparation of the 17 manual prescribed in clause (b) subsection (1) section (4) has been uploaded on company's portal within the stipulated time frame given under the Act and information is updated from time to time.

On the basis of the directive issued by Central Information Commission and Ministry of Steel from time to time, MOIL has been updating the requisite information every three months pertaining to Section 25(3) of the Act filed the Annual Return within the stipulated time frame. The monthly return is being sent to the concerned authority regularly.

A lot of awareness has been generated in order to make its employees aware about the intention and true spirit of this Act. The various provisions of the Act has been highlighted by issue of the circulars and asked them to keep transparency in day-to-day work and maintain all the records in a proper/systematic manner. Further, MOIL has also



hosted/updating in its website as much information suo-moto at regular intervals for the public so that public has minimum resort to use the various provisions under the RTI Act to obtain information. For the awareness of employees at large a Seminar has been organised to make them understand the importance of RTI Act in the present scenario and highlighted the provisions of the Act.

The details of applications pending, received and disposed off, during the period are as under:

Applications pending as on 01/04/2010	NIL
Applications received during April to December 2010	39
Applications disposed of during April to December 2010	37
Applications pending as on 31/12/2010	2

20.7 MSTC Ltd.

During the period of 01 April, 2010 to 31 December, 2010 total 51 applications have been received under RTI by our Head office and all regional and branch offices. Required information of fifty letters have been forwarded and one application is under process. MSTC has a CPIO and a PIO in the Head office and in every region/branch has a PIO and an APIO.

20.8 Ferro Scrap Nigam Ltd. (FSNL)

FSNL has implemented Right to Information Act, 2005 by nominating CPIO/APIO, finalisation of manuals of 17 items (manuals) and hosting of manuals on the company website (www.fsnl.nic.in). Quarterly reports are submitted to the Ministry of Steel and CIC regularly. All requests for information are dealt with as per the prescribed guidelines of the RTI Act, 2005. The total number of RTI applications received during the period April 1, 2010 to December 31, 2010 was 30. Out of these 27 applications have been disposed off.

20.9 Hindustan Steelworks Construction Ltd. (HSCL)

Right to Information Act 2005 has been implemented in HSCL. The Company has nominated one (1) CPIO and seven (7) APIOs. CMD, HSCL is the first Appellate Authority under the Act for the Company.

From 1.4.2010 to 31.12.2010 the summary statement of application received and disposal action taken is as under:

• Total No. of RTI application received	:	67
• Total No. of RTI application disposed off by CPIO	:	67
• Total No. of 1st appeal received	:	11
• Total No. of 1st appeal disposed off by Appellate Authority	:	11

20.10 MECON Ltd.

In line with the directives of Govt. of India, MECON has also implemented the Right to Information Act, 2005. All the relevant manuals pertaining to RTI Act, 2005 have been hoisted on "MECON's Website www.meconlimited.co.in w.e.f. 19th September, 2005. A Public Information Officer (PIO) has been nominated by MECON at its Headquarters and Assistant Public Information officers (APIOs) have been nominated at various Regional and Site Offices. The queries coming to MECON from the public are being attended to by these nominated officials and replied back to them by the Public Information officer within the stipulated time period.



The status of applications received and processed during the year 2009-2010 and 2010-2011 (Till November, 2010) under Right to Information Act, 2005 are given below:

		2009-2010 (01.04.2009 to 31.03.2010)	2010-2011 (01.04.2010 to 31.11.2010)
Opening Balance as on	:	01	Nil
Application received during the year	:	48	47
Total	:	49	47
Applications processed during the year within time frame	:	47	42
Applications transferred to other Public Authority	:	02	Nil
Closing balance	:	Nil	05

20.11 KIOCL Ltd.

- RTI Act, 2005 was enacted by Govt. of India on 15.6.2005 with an objective to promote openness, transparency and accountability in the administration and to provide good governance in the country. It also gives the opportunity to every citizen to secure access to information from public authorities. KIOCL being a CPSE's falls within the ambit of aforesaid regulation, had operationlized the same since from the date came into effect.
- KIOCL has appointed PIOs at the Corporate Office and PIOs/APIOs have also been appointed in all its Plants/ other Units. Executives at the Top levels has been appointed/ designated as Appellate Authority under the Act. The names of all the PIOs/APIOs and the Appellate Authority has also been hosted on KIOCL's website www.kioclltd.com. The obligation of the preparation of the - manual prescribed in clause (b) subsection (1) Section (4) has been complied with and these have also been hosted on KIOCL's portal within the stipulated time frame given under the Act.
- On the basis of the directives issued by Central Information Commission and the Ministry of Steel from time to time, KIOCL has been updating the requisite information on periodical basis. The monthly return is being sent to concern authorities regularly. Further, as per the Ministry of Steel directives the system of submission of quarterly return to the CIC has been introduced from the current year onwards.
- The details of applications received, disposed of and pending during the period are as under:

Applications received during 2010-11 (upto Dec 2010)	-	49
Applications disposed of during 2010-11 (upto Dec 2010)	-	48
Applications pending as on 31.12.2010	-	01

20.12 Bird Group of Companies (BGC)

In line with the directives of Government of India, Bird Group of Companies (BGC) has also implemented the Right to Information (RTI) Act 2005.

All the relevant manuals pertaining to RTI Act 2005 have been hoisted on BGC's website www.birdgroup.gov.in.

The public queries are regularly attended through a Public Information Officer at its Corporate Office and through Assistant Public Information Officer at operational sites of OMDC and BSLC.

20.13 Joint Plant Committee (JPC)

The manual of 17 items has been drawn up and hosted in the JPC Website. JPC has designated senior officers as Public Information Officers who would be responsible for disposal of requests received under the Act. In addition, an appeal system under the highest authority of JPC has also been created as per the provisions of the Act. All the RTI applications received by the JPC have been disposed of in time.

CHAPTER-XXI

DEVELOPMENT OF NORTH-EASTERN REGION

21.1 Introduction

The Ministry of Steel has been exempted from the requirement of earmarking 10% of its budgetary allocation for this purpose.

21.2 Steel Authority Of India Ltd. (SAIL)

Installation of Steel Processing Unit at Guwahati

With a view to meet increased customer demand for tailor made steel products, it was felt that there is a need to set up Steel Processing Unit (SPU) near the consumption points, particularly in a State where no steel plant is located and where steel consumption is low as compared to national average. The Working Group on Steel Industry for 11th Five Year Plan emphasized that "an important potential area for steel usage resulting from economic growth and rising income levels in the household sector is in the rural areas. However, unlike urban areas, in rural areas concerted efforts would be required to convert this rural potential into actual consumption of steel".

Keeping this in view, SAIL is setting up Steel Processing Units at various locations including the North-East region, Guwahati has been identified as one of the location for setting up of the SPU based on the demand and availability of steel especially for construction/housing sector, subject to certain exemptions/concessions from the State/ Central Government and financial viability of the project.

A TMT Bar Mill is proposed to be installed at Guwahati. The land for the project has been identified at Tilingaon near IIT, Guwahati and the State Government has approved land acquisition in December 2007. The proposal for setting up the SPU has been approved by SAIL Board in April 2008. SAIL has already made payment of ₹ 7.97 crore for 31 acres of land. Soil investigation carried out, barbed wire fencing of boundary, security room and gate completed. SAIL has also planned for a ware house at this location. Accordingly, the activities for constructing the ware house have started. Further, the matter for concessions and subsidies has been taken up by SAIL with the Government of Assam.

21.3 Rashtriya Ispat Nigam Ltd. (RINL)

RINL-VSP is servicing North-Eastern Region directly through Branch Sales Office, Kolkata and a District Level Dealer (DLD) at Birpara, Coochbehar. In order to promoting sales and servicing customers of the North-Eastern Region, BSO, Kolkata of RINL is extending additional discount to the Project Customers of the Region up to ₹ 500 per tonne.

RINL is also supplying steel products directly to the Hydro Electric and other Projects in the North Eastern Region through VSP's Stockyard at Kolkata and through the Retailers based in Kolkata.

RINL-VSP has made sales of 4569 tonnes through the above channels to North-Eastern Region customers during Apr-Dec '10. RINL-VSP has a DLD (M/s Dilip Roy) at Birpara, Coochbehar District and has plans to appoint Retailers at Guwahati and Siliguri to cater to the North Eastern Region customers.

21.4 MSTC Ltd.

As such MSTC does not have any direct involvement with the North Eastern Region apart from the indirect involvement of selling scrap of Public Sector Units and Defence units situated in the North East such as Oil India Ltd., ONGC, BRPL, North Eastern Coalfields Ltd. etc. and Army units at Bengdubi, Hashimara, Jorhat etc. Generally, scrap of such units is purchased by local businessmen which indirectly benefits the region.



21.5 Hindustan Steelworks Construction Ltd. (HSCL)

HSCL's Participation in Bharat Nirman Programme and Development of North Eastern States

The Company has a proud privilege of participating in the Bharat Nirman Programme of Govt. of India in construction of rural roads in the North Eastern State of Tripura under PMGSY. HSCL has been working as a Project Implementation Unit there with the responsibility starting from preparation of DPR to the maintenance of the roads for five years after construction. The present value of work under PMGSY is about ₹ 500 crore in Tripura, which is likely to go up to ₹ 700 crore in phases.

HSCL has taken up 3 Nos. of 150 bedded District Hospitals one each in North, South and Dhalai District and one 100 bedded hospital at Teliamura under Department of Health, Govt. of Tripura. Staff Quarters at the three District Hospitals are also being constructed by HSCL.

HSCL has been engaged in execution of the following two Projects in the North Eastern States of Sikkim also, which will help in infrastructure and tourism development of the State:

- (i) Construction of Pilgrimage Centre at Solopok, involving installation of a 108 feet tall idol of Lord Siva and a number of shrines of Hindu deities at the hilly terrain of picturesque Sikkim.
- (ii) Construction of Cultural Centre and tourist cottages at Yangang, which will immensely contribute in tourism development in Sikkim.

The Company, at present, is executing projects worth about ₹ 835 crore in these two North Eastern States. The value will increase further during the coming months.

ANNEXURE - I

LIST OF SUBJECTS ALLOCATED TO THE MINISTRY OF STEEL AS PER GOVERNMENT OF INDIA (ALLOCATION OF BUSINESS) RULES, 1961

1. Planning, development and facilitation of setting up of iron and steel production facilities including Electric Arc Furnace (EAF) units, Induction Furnace (IF) units, processing facilities like re-rollers, flat products (hot/cold rolling units), coating units, wire drawing units and steel scrap processing including ship breaking.
2. Development of iron ore mines in the public sector and other ore mines (manganese ore, chrome ore, limestone, sillimanite, kayanite, and other minerals used in the iron and steel industry but excluding mining lease or matters related thereto).
3. Production, distribution, prices, imports and exports of iron and steel and ferro-alloys.
4. Matters relating to the following undertakings including their subsidiaries, namely:
 - (i) Steel Authority of India Limited (SAIL);
 - (ii) Rashtriya Ispat Nigam Limited (RINL);
 - (iii) NMDC Limited;
 - (iv) MOIL Limited;
 - (v) MSTC Limited;
 - (vi) Ferro Scrap Nigam Limited (FSNL);
 - (vii) Hindustan Steelworks Construction Limited (HSCL);
 - (viii) MECON Limited;
 - (ix) KIOCL Limited; and
 - (x) Bird Group of Companies
 - (xi) ICVL

ANNEXURE - II

MINISTER IN-CHARGE AND OFFICERS IN THE MINISTRY OF STEEL (upto Deputy Secretary level)

Minister of State for Steel (Independent Charge)	Shri Beni Prasad Verma
Secretary	Shri P.K. Misra
Additional Secretary & Financial Adviser	Shri S. Machendranathan
Joint Secretaries	Dr Dalip Singh Dr Udai Pratap Singh Shri J.P. Shukla
Economic Adviser	Ms Chandralekha Malviya
Chief Controller of Accounts	Ms L.N. Tochwang
Industrial Adviser	Shri A.C.R Das
Directors	Shri Nihar Ranjan Dash Shri Sanjay Mangal Shri L. Siddhartha Singh Ms Indrani Kaushal Shri M.K. Roy
Director Level officers	Shri Ravinesh Kumar PS to Hon'ble Minister of State for Steel (I/C) Shri B.D. Ghosh, Additional Industrial Adviser
Deputy Secretaries	Shri Sunil Prakash Shri Anil Kumar Madan Shri D.B. Singh
Deputy Secretaries level officers	Shri Ashok Kumar, Joint Director Shri R.K. Mahajan, Sr. PPS

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ANNEXURE - III PRODUCTION OF MAIN AND SECONDARY PRODUCERS (SUMMARY)

SL.NO.	ITEM / PRODUCER PRODUCTION	2006-07	2007-08	2008-09	2009-10*	(^{000 tonnes}) 2010-11* (Apr-Dec)
I.	CRUDE STEEL:					
	Main Producers	21868	21789	21755	22969	17425
	ASP + VISL	309	315	263	308	232
	Other Producers					
	E.A.F.Units (incl.Corex & MBF/EOF)	13250	14820	18365	21738	16412
	Induction Furnaces	15390	16933	18054	19860	16525
	TOTAL (Crude Steel)	50817	53857	58437	64875	50594
	% share of Other Producers	56.4%	59.0%	62.3%	64.1%	65.1%
II.	PIG IRON:					
	Main Producers	860	936	589	731	490
	Other Producers	4133	4378	5618	5003	3727
	TOTAL (Pig Iron)	4993	5314	6207	5734	4217
	% share of Other Producers	82.8%	82.4%	90.5%	87.3%	88.4%
III.	SPONGE IRON:					
	Gas Based	5265	5845	5516	6161	4484
	Coal Based	13080	14531	15575	14577	15521
	TOTAL (Sponge Iron)	18345	20376	21091	20738	20005
	% share by Process (Coal Based)	71.3%	71.3%	73.8%	70.3%	77.6%
IV.	FINISHED STEEL FOR SALE (Alloy/Non-Alloy):					
	Main Producers	17614	18020	17216	17900	13289
	Other Producers	40047	43332	46229	47565	38437
	Less IPT/Own Consumption	5132	5277	6281	5773	4430
	TOTAL (finished steel)	52529	56075	57164	59692	47296
	% share of Other Producers	76.2%	77.3%	80.9%	79.7%	81.3%

*Provisional

EAF : Electric Arc Furnace
MBF : Mini Blast Furnace
EOF : Energy Optimising Furnace
IPT : Inter-Plant Transfer

ANNEXURE - IV

PRODUCTION OF CRUDE/LIQUID STEEL

(By Producers)

Producer	2006-07			2007-08			2008-09			2009-10*			2010-11* (Apr - Dec 2010)		
	Working Capacity	Prod.	% Utili sation	Working Capacity	Prod.	% Utili sation	Working Capacity	Prod.	% Utili sation	Working Capacity	Prod.	% Utili sation	Working Capacity	Prod.	% Utili sation
PUBLIC SECTOR															
B S P	3925	4799	122	3925	5055	129	3925	5183	132	3925	5108	130	3925	3981	135
D S P	1802	1869	104	1802	1914	106	1802	1886	105	1802	1966	109	1802	1476	109
R S P	1900	1990	105	1900	2093	110	1900	2083	110	1900	2128	112	1900	1622	114
B S L	4360	4067	93	4360	4127	95	4360	3577	82	4360	3599	83	4360	2625	80
I S P	500	472	94	500	458	92	500	417	83	500	400	80	500	303	81
A S P	234	150	64	234	157	67	234	168	72	234	205	88	234	149	85
V I S L	118	159	135	118	158	134	118	95	81	118	103	87	118	83	93
TOTAL (SAIL) :	12839	13506	105	12839	13962	109	12839	13409	104	12839	13509	105	12839	10239	106
R I N L (Crude Steel)	2910	3497	120	2910	3129	108	2910	2963	102	2910	3205	110	2910	2340	107
TOTAL : (Public Sector)	15749	17003	108	15749	17091	109	15749	16372	104	15749	16714	106	15749	12579	106%
PRIVATE SECTOR															
Tata Steel Ltd	5000	5174	103	5000	5013	100	5000	5646	113	6800	6563	97	6800	5078	100
Majors	9750	8410	86	11400	9538	84	14800	10218	69	17400	13381	77	17400	10076	77
Other E A F Units/ Corex-BOF/MBF-EOF	6844	4840	71	6831	5282	77	8614	8147	95	8614	8357	97	8614	6336	98
INDUCTION FURN. UNITS	19500	15390	79	20865	16933	81	22180	18054	81	24400	19860	81	26900	16525	82
TOTAL : (Private Sector)	41094	33814	82	44096	36766	83	50594	42065	83	57214	48161	84	59714	38015	85
GRAND TOTAL :	56843	50817	89	59845	53857	90	66343	58437	88	72963	64875	89	75463	50594	89

Majors = Essar, Ispat, JSWL and JSPL
* Provisional

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ANNEXURE - V PRODUCTION OF CRUDE/LIQUID STEEL (BY ROUTE)

CATEGORY	2006-07	2007-08	2008-09	2009-10*	(<i>'000 tonnes</i>) 2010-11* (Apr-Dec.)
OXYGEN ROUTE					
B S P	4799	5055	5183	5108	3981
D S P	1869	1914	1886	1966	1476
R S P	1990	2093	2083	2128	1622
B S L	4067	4127	3577	3599	2625
I S P	472	458	417	400	303
V I S L	159	158	95	103	83
R I N L	3606	3322	3145	3205	2340
T S L	5174	5013	5646	6563	5078
JSW Steel Ltd.	2643	3147	3218	5257	4331
Other Oxygen Route	724	872	995	1000	784
TOTAL OXYGEN ROUTE :	25394	25966	26063	29329	22623
ELECTRIC ROUTE					
ELECTRIC ARC FURNACE					
A S P	150	157	168	205	149
Essar Steel Ltd.	3006	3564	3342	3474	2486
Ispat Industries Ltd.	2761	2827	2201	2689	1612
Jindal Steel & Power Ltd.	803	1219	1457	1961	1647
Lloyds Steel Ltd.	537	463	460	506	278
Jindal Stainless Ltd.	585	585	470	517	426
Other Electric Arc Furnace	2191	2143	6222	6334	4848
TOTAL ELECTRIC ARC FURNACE :	10033	10958	14320	15686	11446
ELECTRIC INDUCTION FURNACE					
Induction Furnace	15390	16933	18054	19860	16525
TOTAL ELECTRIC ROUTE :	25423	27891	32374	35546	27971
GRAND TOTAL :	50817	53857	58437	64875	50594
<i>* Provisional</i>					

ANNEXURE - VI

PRODUCTION OF HOT METAL

Plants	2006-07	2007-08	2008-09	2009-10*	(<i>'000 tonnes</i>) 2010-11* (Apr-Dec.)
A. PUBLIC SECTOR					
BHILAI STEEL PLANT	4817	5268	5387	5370	4276
DURGAPUR STEEL PLANT	2064	2186	2111	2174	1619
ROURKELA STEEL PLANT	2124	2229	2200	2258	1738
BOKARO STEEL PLANT	4588	4658	4021	4066	3033
IISCO STEEL PLANT	775	640	598	502	367
VISVESVARAYA I & S PLANT	238	218	125	126	102
RASHTRIYA ISPAT NIGAM	4046	3913	3546	3900	2812
SUB TOTAL (A) :	18652	19112	17988	18396	13947
B. PRIVATE SECTOR					
TATA STEEL LTD.	5552	5507	6254	7232	5569
MINI BLAST FURNACE	10463	12139	12813	13335	9455
SUB TOTAL (B) :	16015	17646	19067	20567	15024
TOTAL (A+B) :	34667	36758	37055	38963	28971
%age SHARE OF PRIVATE SECTOR	46.2%	48.0%	51.5%	52.8%	51.9%
<i>* Provisional</i>					

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ANNEXURE - VII PRODUCTION OF PIG IRON

Plants	2006-07	2007-08	2008-09	2009-10*	(<i>'000 tonnes</i>) 2010-11* (Apr-Dec.)
A. PUBLIC SECTOR					
BHILAI STEEL PLANT	40	136	61	114	55
DURGAPUR STEEL PLANT	38	57	20	42	16
ROURKELA STEEL PLANT	44	26	1	16	15
BOKARO STEEL PLANT	160	98	78	111	116
IISCO STEEL PLANT	177	93	99	36	19
VISVESVARAYA I & S PLANT	49	31	8	4	2
RASHTRIYA ISPAT NIGAM	352	495	322	408	267
SUB TOTAL (A) :	860	936	589	731	490
B. PRIVATE SECTOR					
OTHER BLAST FURNACE/ COREX UNIT	4133	4378	5618	5003	3727
SUB TOTAL (B) :	4133	4378	5622	5003	3727
TOTAL (A+B) :	4993	5314	6211	5734	4217
%age SHARE OF PRIVATE SECTOR	82.8%	82.4%	90.5%	87.3%	88.4%
<i>* Provisional</i>					

ANNEXURE - VIII
PRODUCTION FOR SALE OF FINISHED STEEL
 (NON-ALLOY & ALLOY STEEL)

Plants	2006-07	2007-08	2008-09	2009-10*	(<i>'000 tonnes</i>) 2010-11* (Apr-Dec.)
A. PUBLIC SECTOR					
BHILAI STEEL PLANT	3232	3603	3604	3356	2655
DURGAPUR STEEL PLANT	707	685	671	666	462
ROURKELA STEEL PLANT	1939	2059	1944	1969	1454
BOKARO STEEL PLANT	3612	3592	3274	3370	2368
IISCO STEEL PLANT	316	316	318	326	240
RASHTRIYA ISPAT NIGAM	3042	2899	2558	2959	2109
ALLOY STEEL PLANT	29	30	35	24	30
SALEM STEEL PLANT	183	231	180	146	78
VISVESVARAYA I & S PLANT	131	133	89	65	68
Less INTERPLANT TRANSFER	15	27			
SUB TOTAL (A) :	13176	13521	12673	12881	9464
B. PRIVATE SECTOR					
TATA STEEL LTD.	4423	4472	4543	5019	3825
MAJORS	11629	13000	12086	16789	13013
OTHERS	28418	30332	34143	30776	25424
Less Own Consump.(Majors and Others)	5117	5250	6281	5773	4430
SUB TOTAL (B) :	39353	42554	44491	46811	37832
TOTAL PRODUCTION FOR SALE(A+B)	52529	56075	57164	59692	47296
%age SHARE OF PRIVATE SECTOR	74.9%	75.9%	77.8%	78.4%	80.0%
<i>* Provisional</i>					

ANNEXURE - IX

CATEGORYWISE PRODUCTION FOR SALE OF FINISHED STEEL (NON-ALLOY)

CATEGORY	2006-07					2007-08					2008-09					2009-10*					2010-11* (Apr - Dec 2010)					Total OWN Conspn.
	Main Prods.	Others Prods.	IPT/ OWN	Total		Main Prods.	Others Prods.	IPT/ OWN	Total		Main Prods.	Others Prods.	IPT/ OWN	Total		Main Prods.	Others Prods.	IPT/ OWN	Total		Main Prods.	Others Prods.	IPT/ OWN	Total		
1. Non-Flat Products																										
Bars & Rods	5161	13650		18811		5313	14875		20188		5186	15241		20427		5621	16696		22317		4224	13857		18081		
Structurals/Spl.Sec.	1104	3780		4884		1003	4040		5043		935	4431		5366		822	4380		5202		592	3528		4120		
Rails&Rly.Materials	918	120		1038		951	135		1086		1012	170		1182		862	179		1041		666	139		805		
TOTAL (Non-flat product)	7183	17550		24733		7267	19050	0	26317	0	7133	19842	0	26975	0	7305	21255	0	28560	0	5482	17524	0	23006		
2. Flat Products																										
Plates	2450	892		3342		2688	1369		4057		2498	1506		4004		2521	1458	2	3977		1898	1145	3	3040		
H R Coils/Skelp/Strips	4526	8464	1809	11181		4707	8977	2010	11674		4577	9633	3043	11167		4884	10278	3717	11445		3644	7835	2798	8681		
H R Sheets	292	411		703		302	455		757		277	338		615		283	342	22	603		192	255	27	420		
C R Coils/Sheets/Strips	1936	5511	3125	4322		1891	560	3012	4439		1657	5941	2983	4615		1761	5797	1822	5736		1290	4643	1383	4550		
GP/GC Sheets	813	3578		4391		729	3652		4381		711	3843		4554		765	3705		4470		489	2914	3403			
Elec. Sheet	76	72	5	143		81	78		159		71	75		146		79	87		166		58	75	133			
Tin Plates	17	155		172		15	168		183		19	182		201		18	192		210		6	168	174			
T M B P	9	11	11	9			6		6		0	4		4		0	0		0				0			
Tin Free Steel	2			2					0		0	6		6		0	0		0				0			
TOTAL (Flat Products)	10119	19096	4950	24265		10413	20265	5022	25656		9810	21528	6026	25312	10311	21859	5563	26607	7577	17035	4211	20401				
3. Pipes (Large dia)	88	1110		1198		85	1250		1335		77	1788		1865		60	1576		1636		57	1315	1372			
TOTAL (Fin. Carbon Steel)	17390	37756	4950	50196		17765	40565	5022	53308		17020	43158	6025	54152		17676	44690	5563	56803		13116	35874	4211	44779		
TOTAL (Fin. Alloy/ Stainless Steel)	224	2291	182	2333		255	2767	255	2767		196	3071	255	3012		224	2875	210	2889		173	2563	219	2517		
TOTAL FINISHED STEEL (Non-alloy+Alloy)	17614	40047	5132	52529		18020	43332	5277	56075		17216	46229	6281	57164		17900	47565	5773	59692		13289	38437	4430	47296		
* Provisional																										

ANNEXURE -X
**IMPORT OF IRON AND STEEL THROUGH
MAJOR INDIAN PORTS**

		('000 tonnes)				
Sl.	CATEGORY	2006-07	2007-08	2008-09	2009-10*	2010-11* (Apr-Dec.)
I	Semi-finished Steel(Non-Alloy)					
	Semis	268.7	156.3	481.9	327.3	228.3
	Re-rollable Scrap	154.7	200.8	98.4	95.9	60.6
	Finished Steel (Non-Alloy)					
	Bars & Rods	290.1	436.0	433.2	588.3	385.2
	Structurals	86.2	75.7	55.4	90.7	77.2
	Rly.Materials	2.0	20.0	23.4	11.7	6.9
	Plates	1124.0	1461.9	991.4	886.0	641.6
	HR Sheets	56.9	29.0	55.2	23.5	60.9
	HR Coils/skelp/Strips	1571.7	2947.5	2293.0	2938.6	1940.6
	CR Coils/Sheets	605.8	820.8	710.2	881.9	830.8
	GP/GC Sheets	195.2	268.2	294.3	286.8	263.7
	Elec.Sheets	252.4	241.9	222.3	280.3	247.9
	TMBP	1.8	3.4	2.3	1.0	1.2
	Tin Plates	124.1	100.9	101.5	155.5	117.5
	Tin Plates W/W	25.0	46.6	36.2	41.4	26.3
	Tin Free Steel	32.2	44.0	31.8	34.0	47.9
	Pipes	69.0	85.1	21.0	42.1	31.8
	TOTAL Fin. Steel (Non-Alloy)	4436.4	6580.9	5271.2	6261.8	4679.5
II	Alloy/Stainless Steel	491.0	448.0	569.0	1034.5	681.8
	TOTAL Steel (I + II)	4927.4	7028.9	5840.2	7296.3	5361.3
III	Other Steel Items.					
	Fittings	137.2	170.2	25.2	38.4	43.1
	Misc.Steel Items	317.7	399.2	302.9	974.4	1041.4
	Steel Scrap	2185.3	2557.9	3161.9	4403.6	2772.5
IV	Iron					
	Pig Iron	3.7	10.7	7.8	10.8	7.1
	Sponge Iron	0.1	0.8	0.5	0.2	0.2
	H.B.Iron	-	-	-	-	-
V	Ferro-Alloys	105.9	199.0	144.6	95.2	114.7
	GRAND TOTAL :	7677.3	10366.7	9483.1	12818.9	9340.3
* Provisional						

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ANNEXURE-XI CATEGORY-WISE EXPORTS

Sl. CATEGORY	('000 tonnes)				
	2006-07	2007-08	2008-09	2009-10*	2010-11* (Apr-Dec.)
SEMIS (Non-Alloy)	665.3	373.0	661.0	355.0	235.0
FINISHED STEEL (Non-Alloy)					
Bars & Rods	329.0	213.0	187.0	212.0	100.0
Structurals	75.0	73.0	73.0	55.0	22.0
Plates	106.5	153.0	264.0	66.0	48.0
H R Coils/Sheets	1580.3	1391.0	943.0	540.0	365.0
C R Sheets/Coils	386.4	510.0	341.0	345.0	181.0
GP/GC Sheets	2173.3	2026.0	1849.0	1287.0	824.0
Elec. Sheets	1.5	25.0	8.0	3.0	0.0
Tinplates	37.0	36.0	88.8	75.0	50.0
Pipes	203.5	200.0	504.0	495.0	236.0
Total Finished Steel (Non-Alloy)	4892.5	4627.0	4257.8	3078.0	1826.0
Total Finished Steel (Alloy/Stainless)	349.0	450.0	179.0	157.0	239.0
Total Finished Steel (Non-Alloy+Alloy)	5241.5	5077.0	4436.8	3235.0	2065.0
PIG IRON	706.7	560.0	350.0	278.0	186.0
SPONGE IRON	55.6	38.0	34.0	25.0	7.0
<i>* Provisional</i>					

ANNEXURE -XII

AUDIT REPORT NO. CA 23 OF 2010-11 (COMPLIANCE AUDIT)

Disposal and Pendency of Audit Paragraph

Sl. No.	Year	No. of Paras/PA reports on which ATNs have been submitted to PAC/COPU after vetting by Audit	Details of Paras/PA reports on which ATNs are pending		
			No. of ATNs not sent by the Ministry even for the first time	No. of ATNs sent but returned with observations and Audit is awaiting their resubmission by the Ministry	No. of ATNs which have been finally vetted by Audit but have not been submitted by the Ministry to PAC/COPU

Civil Audit Paragraphs of the Ministry of Steel

1)	2009	3	Nil	Nil	Nil
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Commercial Audit Paragraphs pertaining to PSUs under Ministry of Steel

1)	22 of 2009	1	Nil	5	Nil
2)	24 of 2009	9	1	3	Nil
3)	2 of 2010	Nil	26	Nil	Nil
4)	9 of 2010	Nil	5	Nil	Nil

Recent Important Audit Observations

Summary of important observations pertaining to the Ministry of Steel which has been made available by C&AG through Ministry of Finance for inclusion in the Ministry's Annual Report 2010-11.

KIOCL Limited

Failure of the company to get railway siding declared as 'other than stations/sidings serving port' immediately on starting the operations resulted in payment of higher tariff of ₹ 6.05 crore and surcharge of ₹ 73.15 crore on transportation of iron ore.

Para 19.1.1 of CA 9 of 2009-10

Rashtriya Ispat Nigam Ltd.

The cancellation of tender for export of pig iron despite huge stock level resulted in loss of revenue of ₹ 3.63 crore.

Para 19.2.1 of CA 9 of 2009-10

Steel Authority of India Limited

The amendment to the LTC rules was not followed uniformly across the company. The Durgapur Steel Plant (DSP), Alloy Steel Plant (ASP) and Bhilai Steel Plant (BSP) of Steel Authority of India Limited in deviation to Company's rules allowed their employees to avail the facility of air travel while availing LTC to Andaman & Nicobar Islands for the second time resulting in an irregular expenditure of ₹ 42.46 crore.

Para 19.3.1 of CA 9 of 2009-10

Steel Authority of India Limited made irregular payment of reward of ₹ 8.60 crore to its employees in contravention of the guidelines issued by Department of Public Enterprises.

Para 19.3.2 of CA 9 of 2009-10

The failure of the Company in taking timely action during the pendency of the contract to get the supply of material as per the delivery schedule and delay in taking legal action against the supplier, resulted in an extra expenditure of ₹ 3.50 crore on procurement of 1103 MT of Silico Manganese at higher rate.

Para 19.3.3 of CA 9 of 2009-10

ANNEXURE -XIII

POSITION OF IMPLEMENTATION OF THE JUDGEEMENTS / ORDERS OF THE CENTRAL ADMINISTRATIVE TRIBUNAL

There are no judgements/orders of the Central Administrative Tribunal pending for prompt implementation in respect of the Ministry of Steel and the public sector undertakings and companies under its administrative control.

ANNEXURE - XIV

COMPARATIVE PBT (PROFIT BEFORE TAX) PSUs/BIRD GROUP OF COMPANIES

		(₹ in crore)				
Sl.No.	PSU/Company	2007-08	2008-09	2009-10	2010-11 (Apr-Dec)	2010-11 (Jan-Mar- Ested)
A- Profit earning PSUs/Companies						
1	SAIL	11468.73	9404.001	10132.03	4969.41	N.A.
2	RINL	2995.36	2026.59	1247.65	419.55	N.A.
3	NMDC	4947.47	6648.23	5207.32	6563.61	2059.00
4	MOIL	734.91	1006.76	706.79	656.18	131.36*
5	MSTC	134.47	129.53	135.99	83.66	8.14
6	FSNL	2.01	4.31	5.76	0.86	0.64
7	SIIL**	9.88	(-) 1.29	(-)12.55	Merged with the NMDC Ltd.	
8	OMDC\$	224.46	286.24	112.26	19.78	2.72
9	EIL ##	10.17	10.04	11.93	6.28	0.07
10	MECON	39.53	74.76	124.69	94.43	30.00
11	KIOCL	156.51	24.18	(-)194.95	54.54	6.84
B. Loss making PSUs/Companies						
12	HSCL	(-) 26.72	(-) 6.88	(-)54.59	(-)39.12	(-)3.20
13	BSLC\$	(-) 81.61	(-) 91.38	620.63	(-)3.89	(-)1.31
Total		20595.63	19422.65	18042.96	12822.09	

*Provisional, **SIIL was merged with NMDC during 2010

COMPARATIVE PAT (PROFIT AFTER TAX) PSUs/BIRD GROUP OF COMPANIES

		(₹ in crore)				
Sl.No.	PSU/Company	2007-08	2008-09	2009-10	2010-11 (Apr-Dec)	2010-11 (Jan-Mar- Ested)
A- Profit earning PSUs/Companies						
1	SAIL	7536.78	6174.81	6754.37	3374.13	N.A.
2	RINL	1942.74	1335.57	796.67	285.43	N.A.
3	NMDC	3250.98	4372.38	3447.26	4383.31	1373.00
4	MOIL	479.82	663.79	466.35	435.21	87.72
5	MSTC	92.20	85.05	86.09	55.34	5.24
6	FSNL	0.73	2.23	4.18	0.57	0.43
7	SIIL**	6.48	(-) 0.92	(-) 31.62	Merged with the NMDC Ltd.	
8	OMDC \$	148.84	181.81	74.44	11.58	15.00
9	EIL ##	9.67	9.19	11.07	6.06	0.14
10	MECON	33.32	65.88	82.62	63.06	20.00
11	KIOCL	108.16	22.01	(-)177.27	36.33	4.41
B. Loss making PSUs/Companies						
12	BSLC\$	(-) 81.61	(-) 91.38	620.63	(-)3.89	(-)1.31
13	HSCL	(-) 26.72	(-) 6.88	(-)54.59	(-)39.12	(-)3.20
Total		13482.37	12763.17	10838.94	8604.81	

*Provisional, ** SIIL was merged with NMDC during 2010, @ company under liquidation. ## Eastern Investment Ltd. (EIL), \$ Orissa Mineral Development Company Limited (OMDC), Bisra Stone Lime Company Limited (BSLC), are constituents of the Bird Group of Companies.

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ANNEXURE - XV

CONTRIBUTION MADE TO THE CENTRAL GOVERNMENT AND GOVERNMENT INSURANCE COMPANIES BY THE PSU_s AND BIRD GROUP OF COMPANIES

Sl.No.	PSU/Company	2007-08	2008-09	2009-10	(₹ in crore)	
					2010-11 (Apr-Dec)	2010-11 (Jan-Mar- Estd)
1	SAIL	11723.00	10374.00	8973.00	6134	N.A.
2	RINL	2522.08	1920.74	1344.63	1339.94	N.A.
3	NMDC	1880.42	2959.78	2668.59	2851.36	1300.00
4	MOIL	265.17	368.47	341.55	227.72	75.9
5	MSTC	48.12	62.76	76.94	65.88	N.A.
6	FSNL	7.73	5.33	22.17	17.47	2.00
7	SIIL**	13.98	5.64	7.89	Merged with the NMDC Ltd.	
8	MECON	41.85	57.83	60.00	61.23	20.40
9	KIOCL	28.55	114.68	85.54	123.54	95.97
10	HSCL	0.35	49.57	0.16	0.12	0.08
11	BGC	80.30	116.67	30.84	44.38	2.89
Total		16643.74	16071.8	9421.82	10865.64	
<i>*Provisional **SIIL was merged with NMDC during 2010.</i>						

CONTRIBUTION MADE TO THE STATE GOVERNMENTS BY THE PSU_s AND BIRD GROUP OF COMPANIES

Sl.No.	PSU/Company	2007-08	2008-09	2009-10	(₹ in crore)	
					2010-11 (Apr-Dec)	2010-11 (Jan-Mar- Estd)
1	SAIL	1900.00	2021.00	2160.00	1603.00	N.A.
2	RINL	379.08	372.25	340.36	287.93	N.A.
3	NMDC	239.78	239.68	454.09	710.35	250.00
4	MOIL	84.17	90.84	93.79	76.60	25.50
5	MSTC	NIL	NIL	97.53	82.88	N.A.
6	FSNL	0.46	0.47	0.53	0.30	0.10
7	SIIL**	2.07	1.32	Merged with NMDC		
8	MECON	0.16	0.61	1.51	2.92	1.00
9	KIOCL	9.21	6.10	4.13	7.26	4.00
10	HSCL	1.21	118.87	1.04	0.75	0.25
11	BGC	10.07	13.23	9.47	19.74	3.40
Total		2424.59	2629.18	2867.84	2791.73	
<i>*Provisional, **SIIL was merged with NMDC during 2010.</i>						

ANNEXURE - XVI

BUDGET AND EXPENDITURE ON CSR

PSU	2007-08		2008-09		2009-10		2010-11 (Apr - Dec)	
	Budgeted	Exp.	Budgeted	Exp.	Budgeted	Exp.	Budgeted	Exp.
(₹ in lakhs)								
SAIL	10000	11961	11400	8303	8000	7879.4	9400	3674.46
RINL	3400	1372	3882	2283	900	937	1540	849
NMDC	8930	2721	12440	9884	8000	8307	8156*	3654
MOIL	300	287	734	542	300	157	542	255
KIOCL	200	205	216	212	150	271	100	23.28
MSTC	118	86	248	242	110	67.75	62	62
FSNL	6	10.84	10	10	2.00	2.00	10.00	
MECON	20.96	27.41	35.92	40.26	140.00	80.71	135.75	76.00
SIIL**	0	3.32	5	1.07	Merged with NMDC			
HSCL	0	1.5	20	6.35	10	0	2.5	1.87
BGC	0	964.02	0	497.93	3.00	0.34	1.50	0.83
Total	22991.97	16723.07	29010.92	22900.61	17615.00	17702.20	19949.75	8696.44
Exp. = Expenditure								
* Provisional, **SIIL was merged with NMDC during 2010,								
*Budget of ₹8156 lakhs towards CSR is for 2010-11 (Apr'10 to March'11)								

ANNEXURE-XVII

ADOPTION OF 'SEVEN STEP MODEL FOR CITIZEN CENTRIC-SEVOTTAM', AS PER RECOMMENDATION OF THE 2nd ADMINISTRATIVE REFORMS COMMISSION

The Second Administrative Reforms Commission in its 12th report "Citizens Centric Administration - the Heart of Governance" in paragraph 4.6.2 recommended for making organization transparent, accountable and citizens friendly through making citizens charter more effective and mandatory. The Department of Administrative Reforms and Public Grievances has developed a model for benchmarking Excellence in Public Service Delivery (Sevottam). The model provides the framework to organizations to assess and improve the quality of service delivery for the citizens. It involves the identification of the services delivered to the citizens, quality of service, its objective, improvement of quality, by using innovative methods for developing business process more informative with the help of information technology.

The Ministry of Steel has brought out its 'Citizen Charter' and this is periodically updated in tune with the changing requirements and expectations from the stakeholders. The Charter is placed on the Ministry website www.steel.nic.in. The Public Sector Undertakings and Companies under the Ministry are in various stages of implementation of the respective Charters and the Seven Step Model. Brief progress in respect of various companies is described below:

Steel Authority of India Limited (SAIL)

The Citizen's Charter is a commitment of SAIL to raise the standard of public services, and is an endeavor to work with the citizens in a more collaborative manner. The aim of bringing this charter is to enhance citizen satisfaction by delivering effective and efficient service and continuous improvement in its products and service delivery process.

Citizen may be understood as any stakeholder with significant impact and influence on the company ranging from customers, vendors, investors, employees, alliance partners, Government to society at large.

SAIL's Citizen Charter is being framed in three broad areas. First part outlines scope of the Charter and General Information about the company. Second part contains the information on management commitment to the citizens, details of company business and expectations from citizens, thereby making citizens better informed and empowering them to demand better products and services. In the last part, it describes Citizen's Service Delivery, by managing the key ingredients for good product and service delivery, and building its own capacity to continuously improve delivery through feedback mechanism.

RINL Ltd.

As envisaged in Citizen's/Client's Charter, the employees' grievances/public grievances are broadly categorized as Procedural delays (PD), Service matters (SM), Misbehaviour of Staff and Others (MSO) and dealt with/redressed under the system of Public Grievance Redressal by the concerned in the organization. This mechanism is centrally monitored by a Senior Executive at the level of General Manager.

MOIL Ltd.

Sevottam Compliant Citizen's Charter has been formulated in MOIL. MOIL has taken steps for implementation of the Charter and the same has been uploaded on Company's website and also circulated amongst Heads of Departments and Mines of the company. MOIL has also displayed copy of the Citizen's Charter at prominent places in the organization.

MOIL has organised training programmes/workshops in Company's Training Centre for interaction, creating awareness and proper implementation of the Citizen's Charter. The Citizen's Charter will be evaluated in due course and the same will be improved, as may be required.



MSTC Ltd.

To emerge as a dominant B2B player in trading with particular emphasis on Steel industry, MSTC has also taken up steps to ensure full adoption and compliance with the Seven Step Citizen Centric Model.

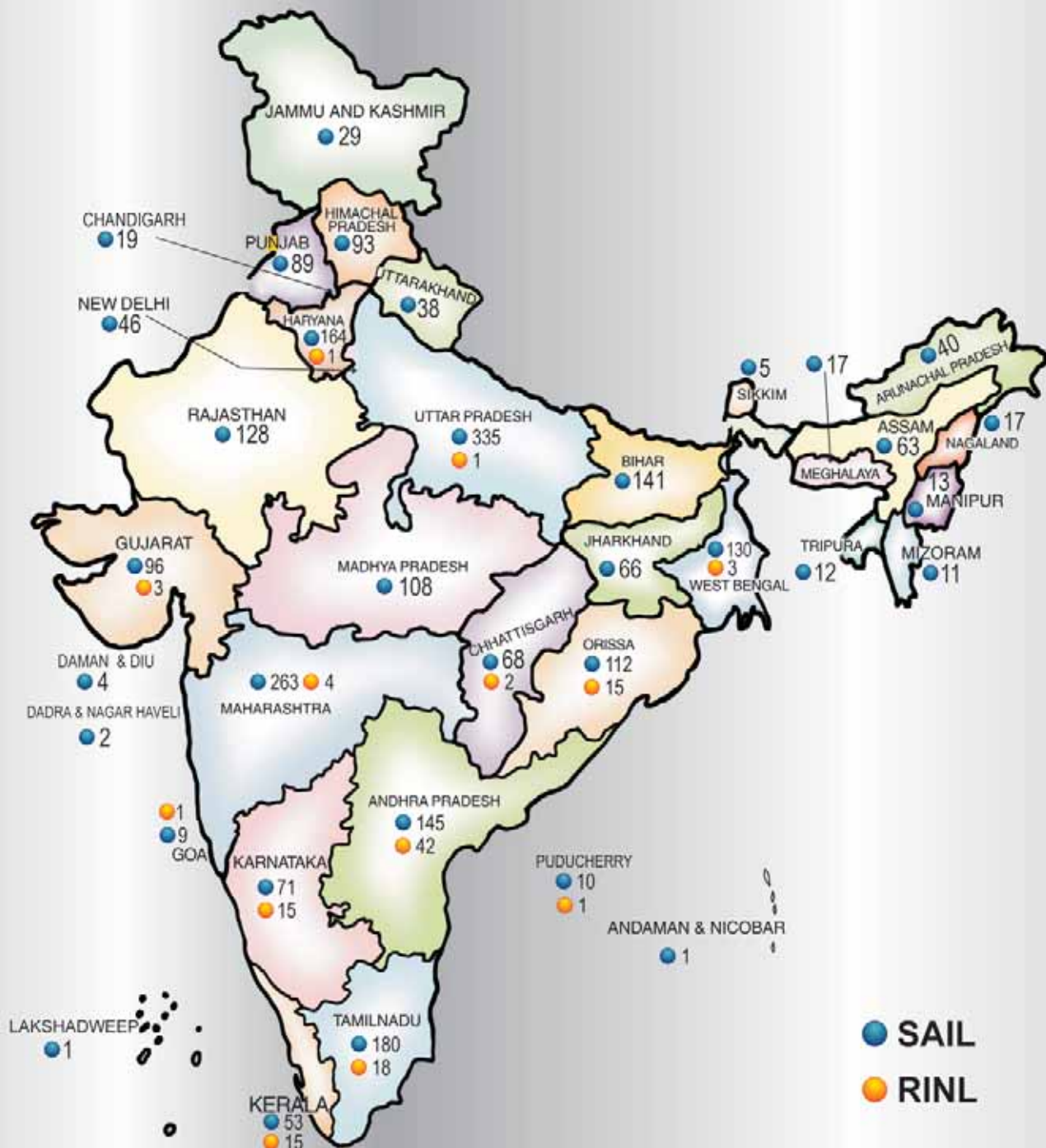
KIOCL Ltd.

In pursuance to Ministry of Steel directives, KIOCL has developed a Citizen Charters (SEVOTTAM) and implemented in the Company. The copy of the same is hoisted in the Company's website for information of citizens.

Bird Group of Companies (BGC)

The citizen's charter or Clients charter shall be drafted suitably for Bird Group of Companies to obtain approval from the Competent Authority.

Steel Distribution Network of SAIL and RINL across the country



+ Figures denote number of Dealers in each State.

+ SAIL had 2579 District Dealers in 630 districts and RINL had 120 District Dealers as on 01.01.2011.

*Map not to scale

SAIL had 2579 District Dealers in 630 districts and RINL had 120 District Dealers as on 01.01.2011.



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MINISTRY OF STEEL

GOVERNMENT OF INDIA

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