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2016-17



सत्यमेव जयते

Ministry of Steel
Government of India

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The production, financial and other related figures for 2016-17 are Provisional.



CHAPTER-I

HIGHLIGHTS

1.1 TRENDS AND DEVELOPMENTS IN STEEL SECTOR

- India is currently the world's 3rd largest producer of crude steel against its 8th position in 2003 and is expected to become the 2nd largest producer of crude steel in the world soon.
- India is the largest producer of direct reduced iron (DRI) or sponge iron in the world.
- The country is also the 3rd largest consumer of finished steel in the world preceded by China and the USA.
- Capacity for domestic crude steel production expanded from 90.87 million tonnes per annum (mtpa) in 2011-12 to 121.97 mtpa in 2015-16, a CAGR growth of 9% during this five year period.
- Crude steel production grew at 5% annually (CAGR) from 74.29 mtpa in 2011-12 to 89.79 mtpa in 2015-16.
- The steel sector contributes to over 2% of the country's GDP and employs around 20 lakhs employed in steel/allied sectors.
- During April-December 2016-17 (provisional; source: JPC), the following is the industry scenario as compared to same period of last year:
 - i. Production of crude steel was at 72.349 million tonnes (mt), a growth of 8.8% compared to same period of last year. SAIL, RINL, TSL, ESSAR, JSWL & JSPL produced 40.376 mt during this period, which was a growth of 15.7% compared to last year. The rest i.e. 31.973 mt was the contribution of the Other Producers, which was a growth of 1.1% compared to last year.
 - ii. Pig iron production for sale was 7.072 mt (a decline of 0.5% compared to last year), after accounting for own consumption/IPT. The Private Sector accounted for 94% of the same, the rest (6%) being the share of the Public Sector.
 - iii. In case of total finished steel (non-alloy + alloy/stainless):
 - ❖ Production for sale stood at 73.96 million tonnes, a growth of 10.8% compared to last year.
 - ❖ Exports stood at 4.976 million tonnes, a growth of 58% compared to last year.
 - ❖ Imports stood at 5.495 million tonnes, a decline of 37.4% compared to last year.
 - ❖ India was a net importer of total finished steel.
 - ❖ Consumption stood at 61.54 million tonnes, a growth of 3.4% compared to last year.

Data on production for sale, consumption, import and export of total finished steel (alloy + non-alloy) and production of crude steel for the last five years and April-December 2016-17 (provisional) are shown in the table below:

(in million tonnes)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	April-December 2016-17*
Total finished steel[^]						
Production for sale	75.70	81.68	87.67	92.16	90.98	73.96 (10.8)
Consumption	71.02	73.48	74.09	76.99	81.52	61.54 (3.4)
Import	6.86	7.93	5.45	9.32	11.71	5.49 (-37.4)
Export	4.59	5.37	5.98	5.59	4.08	4.98 (57.8)
Crude steel production	74.29	78.42	81.69	88.98	89.79	72.35 (8.8)

Source: JPC; *prov.; Note: figures in bracket () indicate % change over same period of last year; [^](non-alloy + alloy/stainless)



Hon'ble Steel Minister and Hon'ble Minister for Railways flagging off Vizag Steel Samta Express

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

- Shri Birender Singh, Minister of Steel and Shri Suresh Prabhu, Minister of Railways flagged off the inaugural run of the daily Hazrat Nizamuddin - Visakhapatnam, Vizag Steel Samta Express at Nizamuddin station on 8th December 2016. The Vizag Steel Samta Express has been emblazoned with eye-catching Vizag Steel promotional visuals across its entire length. The train runs in both directions and covers 5 States from North to South India, thus effectively promoting the brand name of Vizag Steel as also Steel usage.
- Hon'ble Union Minister for Steel, Shri Birender Singh inaugurated Ministry of Steel (MoS) Pavilion at the 36th India International Trade Fair (IITF) 2016 along with Dr. Aruna Sharma, Secretary, Ministry of Steel. The Steel Pavillion showcased the Steel making process and myriad uses of steel.
- Minister of Steel inaugurated the Pelletisation lab at RDCIS, which is the first of its kind in India. The lab has equipment which can be used by Pelletisation Plants to optimise their parameters for making pellets from various types of iron ore fines to be used in blast furnace as well as DRI plants.
- A trend setting project to generate power with green technology in collaboration with NEDO, Japan was successfully commissioned at RINL. This is the first of its kind in the country.
- On 31st August 2016, MOIL has commissioned 48 KW capacity grid connected rooftop PV Solar System project with net-metering at its Corporate Head Quarter, MOIL Bhavan, Nagpur. It is the first grid connected rooftop solar system in Vidarbha with net-metering facility installed at Corporate Office Building.
- MECON successfully completed the project to supply in-house R&D developed Cooling Helmets to Bhilai Steel Plants. This is the first commercialization of R&D Product of MECON.
- Metal Scrap Trade Corporation (MSTC) Limited and the Ministry of Steel have jointly launched an e-platform called 'MSTC Metal Mandi' under the 'Digital India' initiative on 22nd October 2016 at New Delhi, which will facilitate sale of finished and semi-finished steel products. 42 principals (Sellers) and 460 buyers have been registered on this portal so far and successful business transactions have also taken place through this portal.
- Ministry of Steel in association with NITI Aayog conducted a workshop on "Ushering in Cashless Transaction Environment" on 30th November 2016 to sensitize use of various existing electronic means/mechanisms for cashless transactions such as RTGS, IMPS, UPI, Paytm, various Credit/Debit cards etc.



Hon'ble Steel Minister inaugurating Steel Pavilion at IITF, 2016 at Pragati Maidan, New Delhi

- Minister of Steel inaugurated Manganese Museum on 19th December, 2016, the first of its kind in India at Nagpur (Maharashtra) showcasing not only the over 100 years heritage of Manganese ore mining in the country but also its utility in the steel making process. The museum will also serve as an outreach to the public especially to the youth for inspiring them to take up career in mining. The museum also provides a replica and a feel of the conditions of an underground mine & oral history as video of three generations of MOIL miners.
- A Steel Museum was set up in the premises of Technical Training Institute at RINL, which was inaugurated on 1st April 2016. The Museum will serve to create awareness about the steel industry to the general public as well as motivate school children and budding engineers to select the steel industry as their career option.
- Kids corner introduced on the website of MOIL (for Manganese Ore), RINL (for steel production) and KIOCL in order to raise awareness, open career choices, and take nuances of mining, ore production and steel making to the new generation.
- Ministry of Steel has got its presence in various social media platforms such as Facebook, Twitter, LinkedIn, Instagram, MyGov etc.
- To provide information and facilitate investment, an Investment Facilitation Cell has been set up in the Ministry, details of which have also been placed on the Ministry's Website.
- Sevottam Compliant Citizen's Charter being implemented by the Ministry of Steel to provide prompt services to citizens/clients has been updated.

1.3 Major Expansion/Acquisitions/Joint Ventures by PSEs

1.3.1 Steel Authority of India Ltd. (SAIL)

- Steel Authority of India Ltd. has undertaken Modernisation & Expansion of its integrated steel plants at Bhilai, Bokaro, Rourkela, Durgapur & Burnpur and special steel plant at Salem. In the ongoing Modernisation & Expansion, the crude steel capacity is being enhanced from 12.8 Million Ton to 21.4 Million Ton per annum. The indicative investment for this is about Rs.61,870 crore. In addition, Rs.10,000 crore (approximately) has been earmarked for modernization and expansion of SAIL mines.
- Cumulative expenditure for various Modernisation & Expansion packages till December, 2016 has been Rs.64,562 crore including expenditure of Rs.2,324 crore during the financial year 2016-17 till Dec'16.
- Expansion of Salem Steel Plant, Rourkela Steel Plant, IISCO Steel Plant, Durgapur Steel Plant and Bokaro Steel Plant has been completed. The new facilities are under operation and production ramp up.



Hon'ble Union Minister of Steel Shri Birender Singh ji flagged off the first rake of Long Rails from the modern Universal Rail Mill at SAIL Bhilai Steel Plant in presence of Chairman SAIL Shri P K Singh and other dignitaries

- At Bhilai Steel Plant, Universal Rail Mill for supply of world's longest single-piece 130-meter long rail along with Rail Welding Line for production of 260 meter Long Rails has been completed. The Long Rail Welding Complex had been inaugurated by the Hon'ble Union Minister of Steel & Mines in Jul'16. Other facilities like Ore Handling Plant Part-A, 2nd Sinter Machine in Sinter Plant-3 and Coke Oven Battery -11 are in regular operation and balance facilities viz. Bar & Rod Mill, Blast Furnace-8, Steel Melting Shop-III etc. are at advanced stages of execution.

1.3.2 NMDC Ltd.

- NMDC Ltd. is setting up a 3.0 MTPA Greenfield integrated steel plant at Nagarnar, District-Bastar in Chhattisgarh. All major technological packages and auxiliary packages have been awarded and construction work is in progress.
- NMDC is in the process of expanding its business through forward integration in both Greenfield and Brownfield projects by setting up (a) 1.2 MTPA Pellet Plant at Donimalai in Karnataka (b) 2 MTPA Pellet Plant at Nagarnar along with 2 MTPA Beneficiation Plant at Bacheli interconnected by a Slurry Pipeline between Bacheli and Nagarnar in Chhattisgarh.
- The construction of 1.2 MTPA Pellet Plant at Donimalai is completed and trial production commenced. Regarding 2 MTPA Pellet Plant at Nagarnar all the statutory clearances has been received and site development work commenced. Statutory clearances for slurry pipeline system and Ore processing plant at Bacheli are being obtained. NMDC has already diversified its activities in the field of renewable energy by setting up Wind Mill in Karnataka and is exploring the possibilities of solar energy.

1.3.3 Rashtriya Ispat Nigam Ltd. (RINL)

- The 6.3 Mtpa expansion of the company has been completed with the commissioning of the two finishing Mills under Stage-2. The units are under various stages of stabilization and ramp up.
- Under Modernization/up-gradation programme, Category-1 Capital Repairs of Blast Furnace-1 and Revamp of Converter-1 of Steel Melt Shop-1 have already been completed and the units are under operation. Balance modernization works are underway to progressively enhance liquid steel capacity to 7.3 Mtpa.

1.4 Highlights of PSEs during 2015-16

1.4.1 Steel Authority of India Ltd. (SAIL)

- Net worth of the Company was Rs. 39281 crore as on 31.03.2016.
- No Dividend was paid by SAIL for FY 2015-16.



- Sales turnover of Rs. 22611 crore in the first Six months of the Financial Year 2016-17, which is lower by 8.9% as compared to corresponding period of last year (CPLY).

1.4.2 Rashtriya Ispat Nigam Ltd. (RINL)

- Achieved Sales turnover of Rs. 8786 Crore up to December, 2016 in 2016-17 - a growth of 4% over CPLY.
- Net worth of the Company as on 31.12.2016 was Rs.8895.83 crores.
- No Dividend was paid by RINL for FY 2015-16.
- Secretary (Steel) inaugurated the 5 MW Solar Plant installed by RINL in its premises on 20.12.2016, which is an initiative taken by RINL for foraying into Solar energy in tune with the government thrust to tap renewable energy sources.

1.4.3 NMDC Ltd.

- Domestic sales of NMDC during 2016-17 (upto Dec.'16) was 32.81 million tonnes.
- Export sales of NMDC during 2016-17 (upto Dec.'16) was 2.05 million tonnes valued at Rs.600 crore.
- Total Sales during 2016-17 was 25.86 million tonnes (upto Dec'16).
- Production of iron ore during 2016-17 (upto Dec.'16) was 23.63 million tonnes.
- NMDC has earned profit before tax of Rs 3310 crores (upto Dec.'16) during the year 2016-17.
- NMDC has completed the construction of 1.2 million tonne per annum Pellet Plant at Donimalai in Karnataka and 12500 MT of pellets were produced and sold through auction.
- Ushering in cashless transaction environment through awareness campaign: A total of 21 villages have been covered upto 22.12.2016 with 5890 households having 25,484 population in 19 villages in Chhattisgarh and 2 villages in Karnataka.

1.4.4 MOIL Ltd.

- MOIL Ltd. produced 7.21 lakh tonnes (prov.) of manganese ore during 2016-17 (upto Dec'16).
- The total income of the company was Rs. 886.06 crore (prov.) during 2016-17 (upto Dec'16).
- The Profit Before Tax of the company was Rs. 208.79 crore (prov.) during 2016-17 (upto Dec'16).
- The Profit After Tax was Rs.183.61 crore (prov.) during 2016-17 (upto Dec'16).
- MOIL has paid dividend of Rs.84.00 crore for the financial year 2015-16.

1.4.5 MSTC Ltd.

- MSTC became the first company in the history to have successfully auctioned 39 and allotting 46 (total 85) coal mining blocks to steel, cement & power sector and State owned entities respectively in a transparent and fair manner.
- Governments of Gujarat, Rajasthan, Maharashtra, Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Andhra Pradesh and Karnataka have signed agreements with MSTC for e-Auction of mineral blocks in the respective states.
- MSTC conducted E-Auction for Diamond mineral block. Hatupur Diamond mineral block in Panna district of Madhya Pradesh was successfully auctioned on October 5, 2016. This is the first diamond mineral block of the country which went under the hammer. The block witnessed aggressive bidding from the companies which lasted approximately eight hours and a final bid at 22.31 per cent was received.
- MSTC has conducted successfully global e-tender cum e-auction in multicurrency for sale of confiscated Red Sanders for a value of Rs.352 Crore on behalf of Govt. of Andhra Pradesh to the entire satisfaction of the government. In this e-Auction bidders from foreign countries also participated.
- MSTC also finalized the national portal for e-bidding for power procurement which has been named as Discovery of efficient electricity price (DEEP). The portal was formally inaugurated by



Signing of Joint Venture Agreement between MSTC Ltd and Mahindra Intertrade Ltd.

the Hon'ble Minister for Coal and Power in April 2016 in New Delhi. The portal is aimed at bringing uniformity in the procurement process being followed by various DISCOMs in the country and reduces their electricity procurement bills. Distribution companies of U.P., Kerala, Assam, W.B., Uttarakhand, Gujarat, Bihar, Chhattisgarh & Jharkhand etc. are availing this service.

- MSTC has embarked upon setting up of the first mechanized Shredding plant in India to bring a whole new method of processing of scrap from the End of Life Vehicles (ELV). Mahindra MSTC Recycling Private Limited, joint venture Company between MSTC and Mahindra Intratrade Limited incorporated for setting up Auto Shredding Plant, on 16th December, 2016. This will be first of its kind Auto Shredding Plant in India for the processing of End of Life Vehicles (ELVs) and other White Goods for the production of ferrous and non-ferrous shredded scrap. The output of the plant will be used as the raw material for secondary steel production and lead to sustained development of the Secondary Steel Industry in India. This will save valuable foreign exchange towards import of scrap. India is going to have security of raw materials for secondary steel sector besides conserving the scarce minerals resources, forest and energy spent in excavating them.

1.4.6 Hindustan Steelworks Construction Ltd. (HSCL)

- HSCL was incurring losses upto the financial year 2014-15. With the financial restructuring of HSCL and its proposed takeover by National Building Construction Corporation Limited (NBCC), approved by the Union Cabinet, HSCL has earned profits for the financial year 2015-16 and its Net worth has become positive.
- Achievement against overall Turnover target set in the MOU for FY17 till QR-III is Rs.935.25Cr. (91.83%).
- Achievement against Order Booking target during FY17 till QR-III is Rs. 1521.35 Cr. (181.11% w.r.t the target set in the MOU) .
- Operational Profit of FY17 till QR-III recorded Rs.67.96 Cr. (108.57% w.r.t the target set in the MOU). (unaudited).
- Unaudited net profit (PAT) during FY17 recorded Rs.41.76 Cr. (122.61% w.r.t the target set in the MOU) till QR-III.

1.4.7 MECON Ltd.

As per audited accounts, the company has incurred losses (PBT) to the tune of Rs.174.71 crores and the loss after tax of Rs.162.41 crores during the FY 2015-16. The Net Worth of MECON as on 31.03.2016 is Rs.235.22 crores.



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 Steel. 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. Details of the subjects allocated to the Ministry may be seen in Annexure-I. 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 8 PSUs, their subsidiaries and one Special Purpose Vehicle.

2.1.2 Allocation of Responsibilities

The Ministry of Steel has a Secretary, Additional Secretary & Financial Adviser, 04 Joint Secretaries, 04 Directors, 03 Deputy Secretaries, 01 Joint Director (OL) and other supporting officers and staff as on 31.12.2016. The Ministry also has an Economic Adviser and a Chief Controller of Accounts. A Technical Wing, under the charge of Deputy Industrial Adviser, gives advice in respect of technical matters besides discharging some secretariat work of technical nature like Research and Development Scheme.

2.2 Key Divisions/Sections in the Ministry

SAIL, MFH, Projects and International Cooperation, Steel Development (Institutes), Technical Division, NMDC, Raw Materials, Trade and Taxation, Industrial Development, MECON, RINL, Bird Group, Board Level Appointments, KIOCL, MOIL, Budget and Finance, Economic Division.

2.3 Other Related Organs of the Ministry of Steel

2.3.1 Joint Plant Committee (JPC)

Accredited with ISO 9001: 2008 certification, Joint Plant Committee (JPC) is the only institution in the country, which is officially empowered by the Ministry of Steel / Government of India to collect data on the Indian iron and steel industry, resulting in the creation and maintenance of a complete databank on this industry.

JPC is headquartered at Kolkata with four regional offices in New Delhi, Kolkata, Mumbai and Chennai, engaged in data collection while the Economic Research Unit (ERU) at New Delhi serves as a wing of JPC to carry out techno-economic studies and policy analysis. JPC is headed by a Joint Secretary to Government of India, Ministry of Steel as its Chairman and has representatives from SAIL, RINL, Tata Steel and Railway Board as its Members.



The four Regional Offices of JPC play a pivotal role in close association with the headquarter at Kolkata:

- Collection of production, stock and raw material data from the producers.
- Collection of import and export data from the custom houses.
- Collection of domestic market prices.
- Regular follow-up/monitoring and related liaison activities with industry.
- Visit to defaulting steel producing units for on-spot data collection.
- Active role in field level collection during segment surveys.
- Organizational support to seminars/exhibitions including Ministry of Steel events like the Steel Consumers' Council meetings, steel pavilion at IITF.

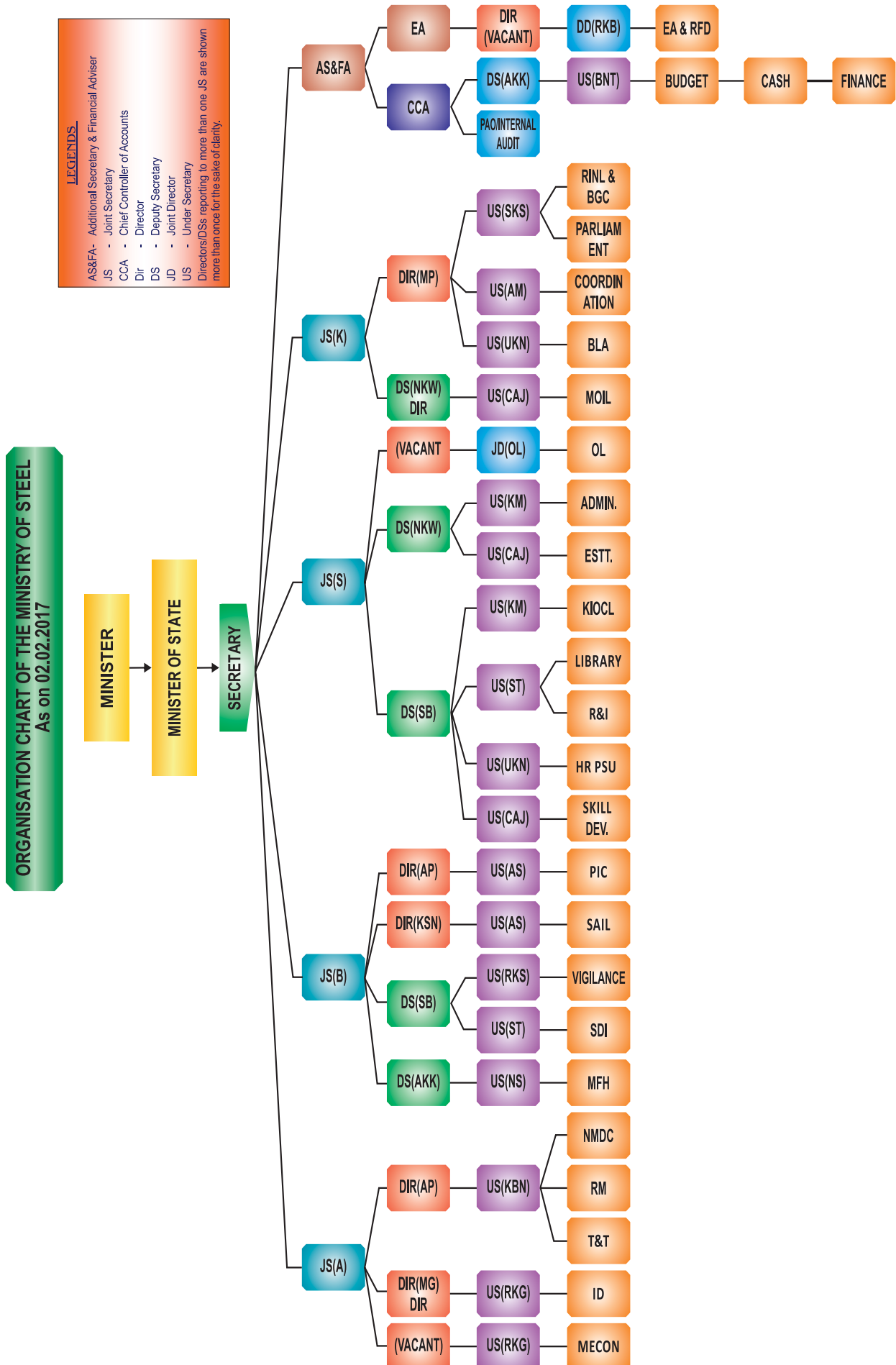
2.3.2 Economic Research Unit

Research support, forecasting exercises and examination of policy matters/techno-economic studies are provided by the New Delhi based Economic Research Unit of JPC. The ERU also functions as the Secretariat to the prestigious Prime Minister's Trophy and the Steel Minister's Trophy. In recent times, the ERU has completed the work on demand-supply estimation for the 12th Five Year Plan for Steel. The ERU is the secretariat of Steel Exporters' Forum, which is an association of the industry and various government bodies, set up to facilitate exports of the steel from the country.

2.4 Public Sector Units 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	SAIL Refractory Co. Ltd. Post Bag No. 565, Salem-636005 (TN)
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., 143-A, 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)	

CHAPTER-II





CHAPTER-III

THE INDIAN STEEL SECTOR: DEVELOPMENT AND POTENTIAL

3.1 Introduction

At the time of independence in 1947, 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 3rd 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). From a negligible global presence, the Indian steel industry is now globally acknowledged for its product quality. As it traversed its long history since independence, 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.
- Railway freight equalization policy: To ensure balanced regional industrial growth.
- Controls on imports of inputs, including technology, capital goods and restrictions on finances and exports.

3.1.1 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 tonnes 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 liberalization and deregulation. 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 per cent, subject to the foreign exchange and other stipulations governing such investments in general.
- Freight equalization scheme was replaced by a system of freight ceiling.
- Quantitative import restrictions were largely removed. Export restrictions were withdrawn.



3.1.2 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. 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 tonnes 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.

3.1.3 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 fulfill input requirements.

3.1.4 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 2005 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 2005 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 realized. The Policy needs to be in sync with changing times and is accordingly being updated and a New National Steel Policy is under formulation.



3.2 Production, Consumption and Growth of Steel

3.2.1 The table below shows the trend in production for sale, import, export and real consumption of total finished steel (alloy + non-alloy) in the country for the last five years and April-December 2015-16:

Year	Total Finished Steel (alloy + non-alloy) (million tonnes or mt)			
	Production for sale	Import	Export	Real Consumption
2011-12	75.70	6.86	4.59	71.02
2012-13	81.68	7.93	5.37	73.48
2013-14	87.67	5.45	5.98	74.09
2014-15	92.16	9.32	5.59	76.99
2015-16	90.98	11.71	4.08	81.52
April-December 2016-17*	73.96	5.49	4.98	61.54

Source: JPC; *provisional

3.2.2 Crude steel production has shown a sustained rise since 2011-12 along with capacity. Data on crude steel production, capacity and capacity utilization during the last five years and April-December 2016-17 is given in the table below.

Year	Crude Steel		
	Capacity (mt)	Production (mt)	Capacity utilization (%)
2011-12	90.87	74.29	82
2012-13	97.02	78.42	81
2013-14	102.26	81.69	80
2014-15	109.85	88.98	81
2015-16	121.97	89.79	74
April-December 2016-17*	124.77^	72.35	77#

Source: JPC; *provisional; ^full-year figure, #pro-rata, based on annual capacity data

- Crude steel production grew at 5% annually (CAGR) from 74.29 mtpa in 2011-12 to 89.79 mtpa in 2015-16.
- Such growth in production was driven by capacity expansion, from 90.87 million tonnes per annum (mtpa) in 2011-12 to 121.97 mtpa in 2015-16, a CAGR growth of 9% during this five year period.
- Production for sale of total finished steel (alloy + non-alloy) stood at 90.98 million tonnes during 2015-16, as against 75.69 million tonnes in 2011-12, an average annual (CAGR) growth of 6%.
- Domestic real consumption of total finished steel (alloy + non-alloy) was at 81.52 million tonnes in 2015-16 as against 71.02 million tonnes in 2011-12, growing at a CAGR of 4.2% during the last five years.
- Export of total finished steel (alloy + non-alloy) during 2015-16 stood at 4.08 million tonnes (4.59 million tonnes in 2011-12) while import of total finished steel (alloy + non-alloy) during the same year stood at 11.71 million tonnes (6.86 million tonnes in 2011-12).
- India has been a net importer of total finished steel every year since 2007-08.

3.2.3 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 30 per



cent of total crude steel production in the country during 2015-16 and 28 per cent during April-December 2016-17 (prov) and has emerged as a key driver of crude steel production. The shares of the different process routes in total production of crude steel in the country during the terminal years of the last five year span are shown in the table below along with data for April-December 2016-17 (prov):

Crude Steel Production by Process Route			
Process Route	Percentage share (%)		
	2011-12	2015-16	April-December 2016-17*
Basic Oxygen Furnace (BOF)	42	42	43
Electric Arc Furnace (EAF)	26	28	29
Induction Furnace (IF)	32	30	28
Total	100	100	100

Source: JPC; *provisional

3.2.4 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 and accounted for 89 per cent of total sponge iron production in the country in 2015-16 and 80 per cent during April-December 2016-17 (prov). Capacity in sponge iron making has also increased over the years and stood at 43.36 million tonnes in 2015-16. India has been the world's largest sponge iron producer every year since 2003. The table below shows the total production of sponge iron in the country, indicating the break-up of the share of coal and gas based route of production for the last five years and April-December 2016-17 (prov):

	Production of Sponge Iron (unit: million tonnes)					
	2011-12	2012-13	2013-14	2014-15	2015-16	April-December 2016-17*
Coal based	19.80	19.07	20.19	21.89	19.99	14.58
Gas based	5.17	3.94	2.68	2.35	2.44	3.69
Total	24.97	23.01	22.87	24.24	22.43	18.27

Source: JPC; *provisional

3.2.5 India is also an important producer of pig iron. Post-liberalisation, with setting up 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 accounted for 92 per cent of total production for sale of pig iron in the country in 2015-16. The domestic availability situation of pig iron is given in the table below for the last five years and April-December 2016-17 (prov):

	Pig Iron Domestic Availability Scenario ('000 tonnes)					
	2011-12	2012-13	2013-14	2014-15	2015-16	April-December 2016-17*
Production for sale	5371	6870	7950	9694	9228	7.072
Import	8	21	34	23	22	30
Export	491	414	943	540	297	146
Consumption	4975	6501	7110	9057	9021	6.932

Source: JPC; *provisional



3.3 Global ranking of Indian Steel

World crude steel production stood at 1628.5 million tonnes during 2016, an increase of 0.8 per cent over 2015 based on provisional data released by the World Steel Association (worldsteel). During 2016, Chinese crude steel production reached 808.4 million tonnes, a growth of 1.2 per cent over 2015. China remained the largest crude steel producer in the world, accounting for 73 per cent of Asian and 49 per cent of world crude steel production during 2015. India was the 3rd largest crude steel producer during 2016 and recorded a production growth of 7.4 per cent over 2015.

World Crude Steel Production			
Rank	Country	Qty: 2016*(mt)	% change over 2015*
1	China	808.4	1.2
2	Japan	104.8	-0.3
3	India	95.60	7.4
4	United States	78.6	-0.3
5	Russia	70.8	-0.1
6	South Korea	68.6	-1.6
7	Germany	42.1	-1.4
8	Turkey	33.2	5.4
9	Brazil	30.2	-9.3
10	Ukraine	24.2	5.2
	World	1628.5	0.8

Source: worldsteel; *provisional

3.4 Steel: Key facts

Indian Steel Scene: April-December 2016-17*		
Total Finished Steel (alloy+non-alloy)	Qty (million tonne)	% change**
Production for sale	73.96	10.8
Import	5.49	-37.4
Export	4.98	57.8
Consumption	61.54	3.4
Crude steel		
Production	72.35	8.8
Capacity Utilization (%)	77	-

Source: JPC; *provisional; ** over same period of last year

Besides being the rank of the 3rd largest global crude steel producer in 2015, 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. The data pertaining to production, consumption, import, export etc. of steel sector are at Annexure III-XI.



3.5 Trends in Production: Private/Public Sector

The following table highlights the total as also the contribution of the private and public sector in crude steel production in the country during the last five years and April-December 2016-17 (prov):

Indian Crude Steel Production							
Sector	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	April December 2016-17*
Public Sector	mt	16.48	16.48	16.77	17.21	17.92	13.63
Private sector	mt	57.81	61.94	64.92	71.77	71.87	58.72
Total Production	mt	74.29	78.42	81.69	88.98	89.79	72.35
Share of Public Sector	%	22	21	21	19	20	19

Source: JPC; *provisional; mt= million tonnes

3.6 Plan outlay for the 12th Five Year Plan (2012-17)

For the 12th Five Year Plan (2012-17), the Planning Commission has approved total outlay of Rs. 91174.64 crores (i.e. Internal and Extra Budgetary Resources (I&EBR) of Rs. 90974.64 crores and Gross Budgetary Support (GBS) of Rs. 200.00 crores.

(Rs. in crores)

Sl.No.	Name of the PSUs	12th Plan (2012-17) Approved Outlay		
		I&EBR	GBS	Total
A.	Central Sector Scheme			
1	Steel Authority of India Ltd.	45000.00	0.00	45000.00
2	Rashtriya Ispat Nigam Ltd.*	13373.00	0.00	13373.00
3	Hindustan Steelworks Con. Ltd.	0.00	0.00	0.00
4	MECON Ltd.	25.00	0.00	25.00
5	MSTC Ltd.	105.00	0.00	105.00
6	Ferro Scrap Nigam Ltd.	60.00	0.00	60.00
7	NMDC Ltd.	27872.17	0.00	27872.17
8	KIOCL Ltd.	3080.00	0.00	3080.00
9	MOIL Ltd	1459.47	0.00	1459.47
	Total (A)	90974.64	0.00	90974.64
B.	Centrally Sponsored Scheme			
1	Promotion of Research and Development in Iron & Steel Sector			
1(i)	Ongoing R&D Scheme	-	48.00	48.00
1(ii)	Development of Technology or Cold Rold Grain Oriented (CRGO) Steel Sheets and other value added steel products (new components)	-	150.00	150.00
1(iii)	Development of innovative iron/ steel making Process/Technology (new projects under existing scheme)	-	2.00	2.00
	Total (B)	-	200.00	200.00
	Grand Total (A+B)	90974.64	200.00	91174.64

* OMDC Ltd. and BSLC Ltd. were constituents of erstwhile Bird Group of Companies, which have become subsidiary PSUs of RINL and their figures have been clubbed with RINL.

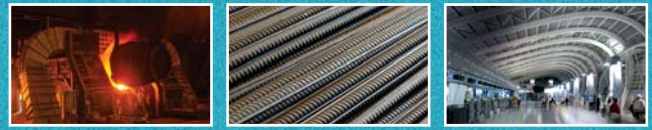


3.7 Role of the Ministry of Steel

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 skilful 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 concerned 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 12th Plan period.



CHAPTER-IV

PUBLIC SECTOR

4.1 Introduction

There are 08 (Eight) Central Public Sector Enterprises (CPSEs) under the administrative control of Ministry of Steel. Further, there are 04(four) subsidiary CPSEs. Detailed overview of these CPSEs and their subsidiaries is as under:

4.2 Steel Authority of India Ltd. (SAIL)

The Steel Authority of India Limited (SAIL) is a company registered under the Indian Companies Act, and is a Central Public Sector Enterprise (CPSE). It has five integrated steel plants at Bhilai (Chhattisgarh), Rourkela (Odisha), 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 Visvesvaraya Iron and Steel Plant at Bhadravati (Karnataka). SAIL has also several units viz. Research and Development Centre for Iron and Steel (RDCIS), Centre for Engineering and Technology (CET), Management Training Institute (MTI) and SAIL Safety Organisation (SSO) all located at Ranchi, Central Coal Supply Organisation (CCSO) located at Dhanbad, Raw Materials Division (RMD), Environment Management Division (EMD) and Growth Division (GD) all located at Kolkata, and SAIL Refractory Unit at Bokaro. Chandrapur Ferro Alloy Plant, (CFP) is located at Maharashtra. The Central Marketing Organisation (CMO), with its headquarters at Kolkata, coordinates the countrywide marketing and distribution network of the Company. The SAIL Consultancy Division (SAILCON) functions from New Delhi.

4.2.1 Capital Structure

The Authorized Capital of SAIL is Rs. 5000 crore. The paid up capital of Company is Rs. 4130.53 crore as on 31.12.2016, out of which 75% is held by the Government of India and the balance 25 % by the Financial Institutions, GDR holders, Banks, Employees, Individuals etc.



Hon'ble Minister of Steel visited Bokaro Steel Plant to review its performance



4.2.2 Financial Performance

The Company recorded turnover of Rs.35,101 crore in the first Nine Months of the Financial Year 2016-17. The post-tax net loss was Rs.2,062 crore for the first Nine Months of the Financial Year 2016-17. The Company has not paid any dividend for the Financial Year 2015-16.

4.2.3 Production Performance

The details of actual production are as under:

(million tonnes)

	2015-16	2016-17 (Apr-Dec'16)
Hot Metal	15.7	11.7
Crude Steel	14.3	10.7
Saleable Steel	12.4	10.2

4.2.4 Raw Materials

During 2016-17 (April-December'2016), Actual production of iron ore, fluxes, raw coal from SAIL captive mines and collieries is about 19.68 million tonnes, 1.49 million tonnes and 0.50 million tonne respectively.

SAIL has fulfilled the requirement of iron ore for its steel plants from its captive mines by producing about 24.83 million tonnes during 2015-16. The production of fluxes from captive mines during 2015-16 was 2.26 million tonnes. During 2015-16, raw coal production in captive collieries of SAIL was 0.71 million tonnes.

4.2.5 Manpower

The Manpower Strength of SAIL as on 1st April, 2016 was 88655. The Manpower strength of SAIL as on 01.01.2017 was 84092 (Executive 13084 / Non-Executive 71008), achieving reduction of 4563 manpower during the year 2016-17 (upto December, 2016).

4.3 Rashtriya Ispat Nigam Ltd. (RINL)

Rashtriya Ispat Nigam Limited (RINL), a Navratna PSE, is the corporate entity of Visakhapatnam Steel Plant - the country's first shore-based integrated steel plant at Visakhapatnam, Andhra Pradesh. RINL completed Expansion to 6.3 Mtpa capacity. Stabilization of the units is in progress for ramping up the production progressively. The expansion has been funded mostly through internal accruals. The enterprise employed 17,945 regular employees (executives 5907 non-unionized supervisors (JOs) 170 and Non-executives 11,868), as on 01.01.2017.

The Company has one subsidiary, viz. Eastern Investment Limited (EIL) with 51% shareholding, which in turn is having two subsidiaries, viz. M/s Orissa Mineral Development Company Ltd (OMDC) and M/s Bisra Stone Lime Company Ltd (BSLC). The Company has partnership in RINMOIL Ferro Alloys Pvt. Ltd., RINL Powergrid TLT Ltd. and International Coal Ventures Private Ltd in the form of Joint Venture with 50 %, 50% and 14.29 % shareholding respectively.

Main activities of RINL include production of steel products in the longs category from its operating unit at Visakhapatnam and marketing them through a wide marketing network of 5 Regional offices, 24 Branch Sales Offices, 23 Stockyards and 6 Consignment Sales Agents (CSAs) which cater to the delivery requirements across the country.

The principal products of RINL include Rebars, Wire Rods, Rounds and Structurals. The company also markets Billets, Blooms, Pig Iron and by-products like Coal Chemicals (Ammonium Sulphate, Benzol products etc.) and slag.



Revamp of Converter-1 of Steel Melt Shop-1 successfully completed as part of modernization and revamping.

4.3.1 Financial Performance

RINL had been making profits up to 2014-15. The company has recorded turnover of Rs.8786 crore up to December, 2016 in the current financial year. The company has reported Loss after tax of Rs.975 crore upto Dec.16 in 2016-17. The company has not paid dividend in 2015-16.

4.3.2 Production Performance

The physical performance in terms of production of Crude Steel and Finished Steel is given below:

Item	2015-16	2016-17(Apr-Dec)
Hot Metal	2991	3230
Crude Steel (000t)	3641	2921
Saleable Steel (000t)	3513	2763

Value Added steel production stood at 22.26 lakh tonnes (Apr'16 to Dec'16), - a growth of 19.5% over CPL.

4.4 NMDC Ltd.

NMDC Limited is a "Navratna" public sector company under the Ministry of Steel, Government of India, 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 the 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). Sponge Iron Unit of NMDC is situated at Paloncha, Andhra Pradesh.

NMDC Ltd. is setting up a 3.0 MTPA Greenfield integrated steel plant at Nagarnar, District-Bastar in Chhattisgarh. All major technological packages and auxiliary packages have been awarded and construction work is in progress.



NMDC is in the process of expanding its business through forward integration in both Greenfield and Brownfield projects by setting up (a) 1.2 MTPA Pellet Plant at Donimalai in Karnataka (b) 2 MTPA Pellet Plant at Nagarnar along with 2 MTPA Beneficiation Plant at Bacheli interconnected by a Slurry Pipeline between Bacheli and Nagarnar in Chhattisgarh.

The construction of 1.2 MTPA Pellet Plant at Donimalai is complete and trial production has commenced. Regarding 2 MTPA Pellet Plant at Nagarnar, all the statutory clearances have been received and site development work commenced. Statutory clearances for slurry pipeline system and Ore processing plant at Bacheli are being obtained. NMDC has already diversified its activities in the field of renewable energy by setting up Wind Mill in Karnataka and is exploring the possibilities of solar energy.

4.4.1 Capital Structure

The Authorized share capital of the company is Rs.400 crores. The paid up equity share capital is Rs.316.39 crores as on 31.12.2016, out of which 74.9% is held by the Government of India and the balance 25.1% by the financial institutions/banks/individuals/employees etc.

4.4.2 Financial Performance

The Company recorded turnover of Rs.6456 crore in the financial year 2015-16. The post-tax net profit for the year was Rs 3028 crore. The Company has paid dividend @ 1100% of paid up equity capital for the year 2015-16. The sales turnover and net profit after tax upto Decenver, 2016 were Rs 5870 crore (Prov) and Rs 2202 crore (Prov) respectively.

4.4.3 Production Performance

The details of the actual production are given below:

Items	2015-16	2016-17(upto Dec'16)
Iron Ore (in LT)	285.74	236.27
Diamonds (in carats)	35558	22058
Sponge Iron (in Tonnes)	6614	5719

4.4.4 Manpower

The Manpower strength of NMDC as on 31.03.16 was 5773 and as on 31.12.16, it was 5620.



A panoramic view of upcoming Nagarnar Iron and Steel Plant at Chhattisgarh



4.5 MOIL Ltd.

MOIL is a Schedule "A" Miniratna Category-I Company. It was originally incorporated as Manganese Ore (India) Limited in the year 1962. Subsequently, name of the Company was changed from Manganese Ore (India) Limited to MOIL Limited during the Financial year 2010-11.

MOIL is listed on National Stock Exchange and Bombay Stock Exchange. During the current year, the Company completed Buyback of shares after which the current shareholding of Govt. of India, Govt. of Maharashtra and Govt. of Madhya Pradesh is 66.21%, 4.81% and 4.56% respectively. Rest 24.42% shares are held by the public.

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

- 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 10,000MT per annum capacity of 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 also set up in 1998 by MOIL for value addition.

In order to promote non-conventional energy resources, MOIL has installed 4.8 MW Wind Energy Farm at Nagda Hills and 15.2 MW Wind Farm at Ratedi Hills, Dist. Dewas in Madhya Pradesh.

4.5.1 Capital Structure

The Authorized and Paid-up Capital of the Company is Rs. 250 crore and Rs.133.19 crore respectively, as on 31st Dec., 2016.

4.5.2 Financial Performance

The total turnover and profit after tax of the Company during the year 2015-16 was Rs. 628.74 Crores and Rs. 172.98 Crores respectively. The Company has paid a dividend of Rs. 84.00 crore in 2015-16.



Visit of Hon'ble Steel Minister at MOIL's Gumgaon Mine



4.5.3 Production Performance

Items	2015-16	2016-17 (up to Dec.16) (Unaudited)
Production		
a) Manganese Ore('000 Tonnes)	1032	721
b) E.M.D. (MT)	612	501
c) Ferro Manganese(MT)	6519	7209

4.6 MSTC Ltd.

MSTC Limited formerly known as Metal Scrap Trade 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 when 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 such items were decanalized and put under OGL with effect from August 1991.

4.6.1 Activities of the Company

E-commerce: Under this segment, the Company undertakes disposal of ferrous and non-ferrous scrap arisings, surplus stores, condemned plants, minerals, Agri & forest produce etc. from Public Sector Undertakings and Government Departments including Defence. The list of Principals includes Ministry of Defence, Ministry of Coal, State Governments, Forest Department and PSUs like Indian Oil Corpn. Ltd, Oil & Natural Gas Corpn. Ltd, State Electricity Boards, Bharat Sanchar Nigam Ltd, Hindustan Petroleum Corpn. Ltd. etc. and Tirupati Tirumala Devasthanam etc. The mode of disposal includes e-auction, e-tender etc. Besides, MSTC conducts e-auction for sale of coal from Coal India Ltd. (CIL), Singareni Coalfields Ltd. (SECL) & Jharkhand State Mineral Development Corporation Ltd. (JSMDC), Ferro Manganese and Manganese Ore from Manganese Ore India Ltd. (MOIL), Iron Ore from mines of Karnataka, Odisha & Goa. MSTC also conducts e-auction for sale of Red sanders, Timber forest produce from forests departments of different States.



Launching of MSTC's Metal Mandi Procurement Portal by Hon'ble MoS (Steel) in the presence of Secretary, Steel



In order to promote transparency in Government purchases, is providing service in e-Procurement to various Central / State Government Departments and Public Sector Undertakings.

Trading: MSTC is engaged in Import and domestic trade of mainly bulk industrial raw material for actual users. This division looks after sourcing, purchase and sales of industrial raw materials like Heavy Melting Scrap, Low Ash Metallurgical Coke, HR Coil, Naphtha, Crude Oil, Coking Coal, Steam Coal etc. on behalf of purchasers in secondary steel sector & petrochemical sector.

4.6.2 Capital Structure And Share Holding Pattern

As on 31.03.2016, the Authorized Capital of the Company is 5,00,00,000 Equity Share of Rs.10/- each of Rs.50.00 Crore and Paid up Capital 88,00,000 Equity Share of Rs.10/- each of Rs.8.80 Crore. Shareholders approved issue of bonus shares @ 1:1 in the Annual General Meeting held in September,2015. Therefore, Paid-up-Capital has been increased to Rs.17.60 Crore as on date.

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

4.6.3 Financial Performance

(Rs. in crore)

Items	2015-16	2016-17* (estimated)
Turnover	2891.55	1547.29
Operating Profit	94.95	60.18
Profit before Tax	91.34	58.18
Profit after Tax	59.88	38.04

* Provisional

4.7 Ferro Scrap Nigam Ltd. (FSNL)

FSNL is a wholly owned subsidiary of MSTC Ltd. with a paid up capital of Rs.3200 lakhs. FSNL is rendering its specialized services of Scrap & Slag management to plants throughout India. The main objective of FSNL is to generate "Wealth from Waste" by recycling Slag & Scrap generated during Iron & Steel making process as a waste. FSNL is not only saving country's valuable mineral resources but also contributing to protect the environment. In addition, the company is also providing Steel Mill Services such as Scarfing of Slabs, Hot Slag Pit Management and Custodian Services, etc. FSNL is also providing services for Valuation of Plant & Machineries/Scrap/Surplus, movable & immovable materials/ properties.

FSNL is a multi locational company having its Registered & Corporate office at Bhilai-Chhattisgarh and presently providing services at SAIL - Rourkela, Burnpur, Bhilai, Bokaro, Durgapur, Bhadravati, Salem, RINL-Vishakhapatnam, NINL-Duburi, BHEL-Hardiwar, RWF-Bengaluru & Air India- Mumbai.

4.7.1 Physical Performance

Items	2014-15	2015-16 (Apr-Dec)
Recovery of Scrap (lakh metric tonnes)	28.20	18.92
Market Value of Production (Rs. in crore)	2489.85	1664.67*

* Provisional

**4.7.2 Financial Performance**

(Rs. in Lakhs)

Item	2015-16	2016-17* (Apr-Dec)
Total Turnover i.e, Service charge realised including misc. Income, etc.	34706.87	23582.38
Gross Margin Before Interest & Depreciation	4315.83	3278.14
Interest & Depreciation	1063.29	945.43
Profit Before Tax	3252.54	1539.71

* Provisional

4.8 Hindustan Steelworks Construction Ltd. (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 and opencast mining etc. The Company undertook and successfully completed a number of Turn Key Projects also for various clients. The Company has entered into Solar Power installation business in association with formidable agencies in the respective field. Today, HSCL is an ISO 9001-2008 Company and its capabilities cover almost every field of construction activities.

At present, the Company carries 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.

HSCL is currently executing major projects like construction of Educational Infrastructure of KVS, NVS, BHU, CUTS at Sarnath, Law University in Bhubaneswar, Jawaharlal Nehru Technical University at Ananthapur in Andhra Pradesh, ITI s and Engineering Colleges in West Bengal, Aligarh Muslim University Centre at Jangipur in West Bengal (1st Phase completed) and infrastructure development for AMU at Aligarh is in progress, Engineering College at Purulia has been inaugurated, Sri Hari Singh Gaur University at Sagar in MP, Food Godowns at different locations and other Building and Commercial Complexes under State Government Departments and PSUs. Railway embankments with minor and bridges are also being executed by HSCL under Railways.

4.8.1 Capital Structure

The financial performance of the company during the period 2015-16 and till QR-III of 2016-17 (Unaudited) are as under:

(Rs. in crore)

Year	2015-16	Till QR-III of 2016-17 (Unaudited)
Turnover	1413.02	935.25
Operational Profit (PBIDT)	93.82	67.96
Net Profit	30.19	41.76

After taking into consideration the impact of the provisions in the Financial Restructuring Package the financial health of the Company significantly improved in all respects. The Company earned Net Profit for the first time after more than 30 years, generating Rs.30.19 Crore during 2015-16. Net worth turned positive with Rs.64.48 Crore and Reserve and Surplus of Rs.31.35 Cr as on 1.4.2016.



4.9 MECON Ltd.

MECON Limited, a Miniratna CPSE under Ministry of Steel, is one of the leading multi-disciplinary Design, Engineering, Consultancy and Contracting organization in the field of Metals and Mining, Power, Oil & Gas, Infrastructure, Refineries & Petrochemicals, Pipelines, Roads & Highways, Railways, Water Management, Ports & Harbors, General Engineering, Environmental Engineering and other related/ diversified areas with extensive overseas experience. MECON provides full range of services required for setting up of Greenfield and Brownfield projects from Concept to Commissioning including Turnkey execution. MECON is an ISO:9001-2008 accredited company and is registered with International Financial Institutions like the World Bank, Asian Development Bank, African Development Bank, European Bank of Reconstruction & Development and United Nations Industrial Development Organization. MECON has collaboration agreements with leading International organizations for gaining requisite resources for enhancement of its cutting edge technology.

MECON has successfully delivered / delivering landmark projects of National importance like Second Launching Pad at Shriharikota, India's first indigenous launching pad at Satish Dhawan Space Centre, SHAR; Integrated Engine Testing Facility in Mahendragiri for performing static tests on semi cryogenic propulsion system for ISRO; Specialized blast proof and protected underground structure and specialized EMP protected over ground structure for BEL; Setting up of Pilot Plant for the development of production technologies for CRGO steel; Integrated infrastructure for New Helicopter Facility for HAL; Modernization of Indian Naval Aircraft Yards at Goa & Kochi for Indian Navy; Forged Rail Wheel Plant for RINL; State of Art Campus for Nalanda University, IIT Indore, Geo-Technical Centrifuge Facility at IIT Bombay (the 6th of its kind in the world), funded by DST, DRDO & Ministry of HRD; Asia's biggest coal handling facility from harbor to power plant with belt conveyor system of 11 kms for TNEB; Project Seabird of Indian Navy (India's 1st Ship repair facility) are to name a few.

MECON has also strengthened its footprint in International market by providing World Class Design, Engineering & Consultancy Services for about 130 Projects in different countries.

4.9.1 Financial Performance

The company recorded a turnover of around Rs.317.28 crores during the FY 2015-16 which is about 19% less than previous year. However, during FY 2015-16 the company could not make any profit. Further, slow post recovery development and nominal growth in steel sector have impacted the company's Net Worth too, which stands at Rs.235.22 crores as on 31.03.2016.



Panoramic view of MECON Head Office



4.10 KIOCL Ltd.

KIOCL Limited, a flagship Company under Ministry of Steel, Government of India was established on 02.04.1976 with an objective to mine & beneficiate low grade magnetite iron ore at Kudremukh Iron Ore mine in Chickmagalur District of Karnataka State. KIOCL Limited is presently engaged in Iron Ore beneficiation and Pelletization conferred with the "Mini-Ratna-category-I" status in 1999 under schedule-A & accredited with ISO-9001:2008, ISO-14001:2004 and compliant with OHSAS: 18001:2007.

Government of India holds 98.99% of its equity. The Company has a capacity to produce 3.50 million tonnes of Iron Oxide Pellets and 2.16 Lakhs tonnes of Pig Iron annually. The Company has its captive berth and ship-loading facilities at Mangalore. The Mining Operations at Kudremukh was stopped with effect from 01.01.2006 pursuant to the order of Hon'ble Supreme Court. Due to this, Company depends mainly on NMDC & other private source for raw materials viz. iron ore to feed to its Pellet Plant.

4.10.1 Production Performance

The target set for production during the year 2016-17 is 13.00 Lakh tonnes of Pellets. Target set for production upto December, 2016 during 2016-17 is 9.75 Lakh tonnes. Actual production upto December, 2016 is 7.25 Lakh tonnes which represents 74.36% of the target.

4.10.2 Financial Performance

Sales Revenue

(Rs. in crore)

Year	Pellet	Pig Iron	Total
2016-17 (April - December, 2016)	399.98	0.07	400.05
2015-16	198.45	1.35	199.80

An overview of the performance of KIOCL during the year 2016-17 upto December, 2016 and actuals for the previous year is indicated below:

(Rs. in crore)

Particulars	2016-17 (Apr-Dec.16)	2015-16
Total value of Sales	400.05	199.80
Gross Margin	18.20	-66.46
Profit after Tax	0.51	-77.66



Pellet reclaimer at KIOCL



4.11 EIL, OMDC and BSLC

EIL, a subsidiary of RINL, is a Non Banking Financial Company and the holding company of OMDC and BSLC. EIL, BSLC and OMDC became PSU's w.e.f. 19.03.2010.

(a) Eastern Investment Limited (EIL)

Financial Performance

(Rs. In Crore)

Description	2015-16	2016-17 (Apr-Dec)
Income	2.24	1.50
Expenditure	0.53	0.36
Profit After Tax(PAT)	1.44	0.84

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

OMDC 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 dominated area of Keonjhar District, Odisha. Mines are presently not operational due to ongoing litigations.

The Authorized as well as Paid up Capital of the Company is Rs. 0.60 Crore.

Financial Performance

(Rs. In Crore)

Description	2015-16	2016-17 (Apr-Dec)
Other Income	69.97	48.17
Profit After Tax (PAT)	10.63	4.95

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

BSLC operates one lease of limestone and dolomite in Sundargarh District of the State of Odisha.

The Authorized Capital of the company is Rs 87.50 Crore and Paid up Capital is Rs 87.29 Crore.

Physical Performance

(in tonnes)

Description	2015-16	2016-17 (Apr-Dec)
Production		
Dolomite	476391	308800
Limestone	5636	243
Despatch		
Dolomite	531255	381746
Limestone	0	9399
Minor Mineral	23328	35600

Financial Performance

(Rs. in Crore)

Description	2015-16	2016-17 (Apr-Dec)
Income	38.91	28.45
Profit/Loss After Tax (PAT)	(16.17)	(10.27)



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 large scale steel producers on one hand and relatively smaller and medium scale units such as Sponge Iron Plants, Mini-Blast Furnace Units, Electric Arc Furnaces, Re-rolling Mills, Cold-rolling Mills and Cooling Units on the other. They contribute substantial value addition in terms of quality, innovation and cost effectiveness.

5.2 The leading steel producers in the private sector are given in the table below:

(In million tonnes)

Sl. No.	Name of Steel Company	Existing Capacity*	Proposed Brownfield Capacity Expansion upto 2017-18	Proposed Greenfield Capacity Expansion upto 2017-18	Proposed Total Capacity in 2017-18* [Col 3+4+5]
		(mt)	(mt)	(mt)	(mt)
1	2	3	4	5	6
1	JSW Steel Ltd.	18	0	0	18
2	Tata Steel Ltd	12.50	0.40	0	12.59
3	Essar Steel Ltd.	10.00	0	0	10
4	Bhushan Steel Ltd.	5.60	0	0	5.6
5	Bhushan Power & Steel Ltd	2.50	0	0	2.5
6	Electrosteel Steels Ltd. *	1.88	0	0	1.88
7	Monnet Ispat & Energy Ltd	1.80	0	0	1.8
8	Jindal Stainless Ltd	1.00	0.15	0	1.15
9	Jindal Stainless (Hissar) Ltd	0.78	0.08	0	0.86
10	VISA Steel Ltd	0.50	0	0	0.5

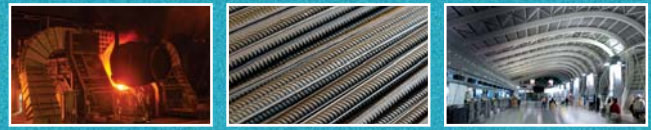
Note:

- (i) Source of data in col. 3 is JPC (prov.).
- (ii) Data on upcoming capacity pertains to 2017-18 only, as reported by the Steel companies.

5.3 JSW Steel Ltd.

JSW Steel is one of India's leading integrated steel manufacturers. It has six state-of-the-art manufacturing facilities located at Vijayanagar in Karnataka, Salem in Tamil Nadu and Dolvi, Vasind, Tarapur in Maharashtra. JSW offers a wide gamut of steel products that includes Hot Rolled, Cold Rolled, Electrical Steel, Bare & Pre-painted Galvanized & Galvalume®, TMT bars, Wire Rods and Special Steel.

JSW has entered into technological collaboration with JFE Steel Corp, Japan to manufacture high strength and advanced high strength steel for the automobile sector. To strengthen its global network, the Company has also acquired a Pipe and Plate making steel mill in Baytown, Texas in USA. By end of next decade, JSW Steel aims to produce 40 million tons of steel annually. JSW Steel has been Awarded Steelie Award 2016 (in the innovation category) by the World Steel Association for the development of advanced high strength automotive steels with speed and innovation.



5.4 TATA Steel Ltd.

Tata steel is one of the largest producers of steel in India. Tata Steel Kalinganagar plant has started its commercial production in June, 2016. The Company has global presence. Tata Steel was awarded First Prize in the National Energy Conservation Award - 2016 amongst Iron and Steel Sector during National Energy Conservation Day celebration at New Delhi on 14th December. The award was given for the efforts put in by Tata Steel to reduce thermal & electrical energy consumption over 5% during the year.



5.5 Essar Steel India Ltd.

The Essar Steel complex at Hazira houses the world's largest Gas-based single location sponge iron plant with a capacity of 6.8 MTPA. The MIDREX Direct Reduction Process converts iron oxides, in the form of pellets or lump ore, to highly reduced product suitable for steel making.



Aerial view of 10 MTPA Essar Steel complex at Hazira, Gujarat, India



Essar Steel is also the second integrated steel complex in India having Corex technology for iron making. - Corex is Environment friendly technology as listed by Central Pollution Control Board (CPCB).
- Corex technology does not require Sinter Plant & Coke oven, thereof its pollution is less as compare to Blast Furnace, Sinter plant & Coke oven.

Essar Steel is one of the few integrated steel companies in world to have the distinction of using the Compact Strip Production (CSP) technology to produce high-grade finished steel like hot rolled coils (HRCs).

5.6 Jindal Stainless Limited

Jindal Stainless Limited is one of the largest integrated manufacturers of stainless steel in India with a capacity of 1 million tons per annum. A leader and a name synonymous with Enterprise, Excellence and Success, the company's ethos mirrors most characteristics similar to the metal it produces; Akin to stainless steel Jindal Stainless Limited is innovative and versatile in its thought process; strong and unrelenting in its operations. Company's Jajpur plant envisages complete integration from mining to cold rolling along with captive power plant. Production facilities for Ferro Alloys, Coke Oven, Captive Power Plant, Stainless Steel Melt Shop, Hot Rolling Mill and Cold Rolling Mill have been set-up and are in operation progressively since year 2005.





CHAPTER-VI

RESEARCH AND DEVELOPMENT

6.0 Research and Development for Steel Sector

R&D in the Indian Steel sector is carried out mainly by the steel plants, R&D laboratories and academic institutions. Ministry of Steel is supplementing R&D efforts/ investment of the steel industry by providing financial assistance from (1) Steel Development Fund and (2) Plan Fund/ Government Budgetary Support. Besides specific R&D projects, Ministry of Steel is also facilitating several capacity building initiatives like Ministry of Steel Chair Professor, Ministry of Steel Scholarships, Centre of Excellences, Steel Research & Technology Mission of India (SRTMI) etc. to promote human resource development and R&D in Indian steel sector.

6.1 Governments Initiatives for Promotion of R&D in Iron and Steel Sector

6.1.1 SDF Funded R&D Scheme:

- Under the Scheme with financial assistance from SDF, R&D projects are pursued by reputed Research Laboratories, Academic Institutions & Industries, for basic/ fundamental research as well as applied research i.e to find out ways to solve the technological problems being faced by the industry.
- Under this scheme so far 91 R&D projects have been approved with a total cost of Rs. 950 crore with SDF contribution of Rs. 536 crore. Out of the approved projects, 55 projects have been completed and 24 projects are in progress. 12 projects have been stopped after mid course review.
- The R&D projects include basic/ fundamental research as well as applied research i.e to find out ways to solve problems being faced by the industry. Research results of several R&D projects have already been implemented by plants under SAIL and in Tata Steel, resulting in improvement in productivity, reduction in energy consumption and pollution etc.

6.1.2 Government Funded R&D Scheme:

- The Government started a new scheme with Plan Fund support viz. "Promotion of R&D in Iron and Steel Sector", during the 11th Five Year Plan, to pursue R&D projects on national importance concerning the Iron & Steel Sector with particular reference to beneficiation of iron ore, coal, production of quality steel in induction furnace, development/production of CRGO electrical steel and any other projects of national importance.
- In the 11th Plan, 8 R&D projects of national importance were approved with a total cost of Rs. 123.27 crore with Government funding of Rs. 87.28 crore. In the 12th Plan, 15 more projects with a total cost of Rs. 53.33 crore and Government funding of Rs. 33.05 crore were approved.
- So far 7 projects completed and the remaining are in progress. Through the completed projects, processes/ technologies have been developed in laboratory/ pilot scale for beneficiation & agglomeration of iron ore & coal for the benefit of the iron & steel sector.
- Process has also been developed in laboratory scale for production of low Phosphorus steel in laboratory scale Induction Furnace, for which industrial trials are being carried out. Further, feasibility of smelting reduction of iron ore/fines using hydrogen plasma has been explored in laboratory/ pilot scale.

6.1.3. Development of Cold Rolled Grain Oriented (CRGO) Steel:

- Ministry of Steel is pursuing a joint collaborative R&D project to set up a R&D Pilot plant to pursue indigenous development of the technology of CRGO steel sheets. Ministry of Steel, DSIR (CSIR-



NML), Tata Steel & RINL are the stakeholders in the R&D project. The estimated cost of the project is around Rs 494.65 crores which will be shared by the stakeholders.

- DPR of the project has been prepared and submitted by MECON which have been approved by the stakeholders.
- Project will commence after getting approval of the necessary funds by the stakeholders and also signing of the Memorandum of Agreement.

6.1.4 Centre of Excellences at IITs with financial assistance from SDF:

- Ministry of Steel has taken a major initiative to setup Centre of Excellences in leading academic Institutions in the country, to create world class research facilities with the main focus to encourage R&D and also promote human resource in the field of metallurgy required for the industry, academia and research laboratories.
- The fund is given from the SDF for initial setting up of the centre and its running cost for initial five years. The fund for building & related infrastructure is provided by the institutes.
- So far, one centre is operational at IIT Kharagpur with a total approved cost of Rs.20.26 crore (SDF Rs 16.20 crore and balance contribution from DST). Another centre is being set up at IIT Bombay with a total cost of Rs 33.06 crore (100% SDF). Creation of a third centre at IITBHU with a total cost of Rs. 30.98 crore (100% SDF) and fourth center at IIT Chennai with a funding of Rs. 35.55 crore have been approved.

6.1.5 Ministry of Steel Chair Professor and Scholarships Scheme:

- Ministry of Steel has launched an innovative scheme with an aim to address the problem of shortage of faculties in academic institutes and also to attract students towards studying Metallurgical Engineering.
- The Scheme provides financial assistance from SDF to appoint Chair Professors and to provide scholarships to undergraduate students of Metallurgy for each Institute teaching Metallurgical Engineering.
- Scholarship scheme has presently been implemented in 16 institutes and Chair Professors have been appointed in 12 institutes.

6.1.6. Steel Research & Technology Mission of India (SRTMI):

- Ministry of Steel is facilitating an industry led institutional mechanism to spearhead R&D of national importance. SRTMI is an industry driven initiative and has been setup as a Registered Society. Total Corpus envisaged for SRTMI is Rs. 200 crore out of which 50% i.e. Rs. 100 crore is to be funded from SDF/ Ministry of Steel.
- The participating companies shall pay an initial entry fee @ Rs 25/tonne of crude steel produced during 2013-14, or, Rs 5 Cr, whichever is higher.
- The Society has been registered on 14th October 2015. The Registered Office of SRTMI is Corporate Office of SAIL. Director (Technical), SAIL, is the Acting Director & Member Secretary of SRTMI, till the appointment of regular incumbent.

6.1.7 Statement of Expenditure from Plan Fund and SDF for R&D during last 3 years

Sl.No.	Year	Plan Fund (Rs Crore)	SDF (Rs Crore)
1	2013-14	8.00	17.41
2	2014-15	2.03	17.00
3	2015-16	10.26	18.21
4	2016-17 (upto Dec 2016)	10.05	15.09



6.1.8 Participation in Impacting Research Innovation & Technology (IMPRINT) & (Uchchatar Avishkar Yojana) UAY Schemes:

- Ministry of Steel is actively participating in the IMPRINT & UAY Schemes launched by MHRD. Under the IMPRINT Scheme 3 R&D projects with total cost of Rs. 11.05 crore have been approved with 50% funding from Ministry of Steel. Under the UAY scheme, 3 R&D projects have been approved with total cost of Rs. 10.09 crore with 25% funding from Ministry of Steel.

6.2 R&D by Steel Companies

6.2.1 Steel Authority of India Limited (SAIL)

Research & Development Centre for Iron & Steel (RDCIS) is pursuing 95 R&D projects in the current year 2016-2017, out of which 51 projects are scheduled for completion by March, 2017. 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 18 patents and 17 copyrights during April to December, 2016. As many as 49 technical papers were published and 91 papers were presented.

In recognition of the contributions made by the Centre, RDCIS has bagged several prestigious awards during April, 2016 to December, 2016 like Metallurgist of the Year, Indranil Award etc.

R&D Efforts and Achievements

- Cost Competitiveness / Quality Improvement
- Development of low cost flux practice and reduction in pipe defect in bloom/billets at SMS-I, BSP.
- Development of seismic resistant HCR grade TMT rebars and stabilisation of Fe 415 S/ 500 S grade TMT rebars at BSP.
- Development of special steel products (ASTM A 537 Cl.2, ASTM 517 Gr F, Hardox 400, Weldox 700 etc.) at RSP.
- Improvement in coke quality through process optimization of coke oven at DSP.
- Introduction of hot metal temperature measurement system in Cast House of BF# 3 at DSP.
- Investigative study of cyanide and ammonia in effluent of BF # 5 GCP at ISP.
- Development of Fe 500S grade TMT rebars at ISP.
- Improvement in refractory lining performance of EAF roof at ASP.



Hon'ble Union Steel Minister Sh. Birender Singh enquiring about 'The SCADA Control' at SAIL RDCIS.



- PLC based instrumentation and control system for performance improvement at Chasnala Washery, Collieries
- Characterization of new indigenous coal and creation of a coal testing laboratory at CCSO, Dhanbad,
- Development of procedure for Pilot Oven carbonisation test for producing coke having properties similar to that of commercial ovens at RDCIS
- Creation of databank on melting behavior of various steelmaking slags of SAIL Plants at RDCIS, Ranchi

Development & Commercialization of 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:

- IS 1786 Fe 500S TMT rebars (20 mm)
- HARDOX 400 Q&T Plates (20 mm)
- SAIL Forming 250 grade HR coil
- High Strength LPG (IS 15914 HS 345)
- DMR 249 Gr A thicker plates (24 mm)
- IS 1786 Fe 500S TMT rebars (12 mm)
- SAIL HT 600 HR coil
- IS 1786 Fe 500S TMT rebars (25 mm)
- Non micro-alloyed IS 2062 E 350 BR & B0 grade plates (15-30 mm)
- API 5L X65 PSL1 grade HR Coils
- IS 2062 E350 B0 (non micro alloyed) grade Parallel Flange Beams
- AB3 grade steel plates

Expenditure on R&D

(Rs. in crore)

Year	SAIL's Turnover	R&D Expenditure			% of Turnover
		Capital	Revenue	Total	
2013-14	51866	4.38	106.05	110.43	0.21
2014-15	50627	32.14	232.06	264.20	0.52
2015-16	43337	50.78	225.22	277.0	0.64

Patents filed: 18

6.2.2 Rashtriya Ispat Nigam Ltd. (RINL)

R&D initiatives are directed towards meeting the present and future requirements of the plant. The R&D initiatives during the year (Apr-Dec, 2016) are given below:

- Development of Carbon Dioxide (CO₂) Sequestration technique using LD slag to control the Green House Effect of Carbon Dioxide.
- Development of thermo-mechanically treated bars having improved corrosion and seismic resistance.
- Development of boron steel grades.
- Identifying causes for crack development in billets and rounds during hot rolling.
- Utilization of fly ash pellets as Ladle & Tundish covering compound.
- Development of CO₂ Welding steel grade.
- Briquetting of coke dust and solid wastes of CO&CCP
- Optimization of Aluminum consumption in steel refining process in SMS-2



Expenditure on R&D

(Rs. in Crore)

Year	Actual Expenditure	Expenditure as % of Turnover
2013-14	50.27	0.37
2014-15	33.09	0.28
2015-16	21.74	0.18
2016-17 up to Dec'16	13.20*	0.15*

* Provisional

6.2.3 NMDC Ltd.

NMDC has its own R&D Centre extending technological support to their existing operating mines, other organizations in India and abroad. The Centre is committed to maintaining its excellence in undertaking product and technology development missions related to ore and minerals through continual improvement in process performance for enhanced customer satisfaction.

R&D efforts and initiatives:

- Development of technologies for enhanced utilization of iron ore fines and for utilization of iron ore tailings.
- Technical solutions related to quality and productivity of its mines.
- To extend its expertise to in-house projects of NMDC and other domestic & foreign organizations in the field of Mineral processing, Hydrometallurgy, Agglomeration, Bulk solids handling, Mineralogy and Chemical analysis.
- Identification of new projects and development of cost effective process technology in tune with the long term objectives and strategic plans of the corporation.
- Studies on the influence of moisture and temperature on flow properties of bulk solids.
- Beneficiation studies on slimes from Donimalai mines.
- Study on improvement in feeding system for Donimalai pellet plant.
- Preparation of nano-structured iron from lean tailings.
- Modeling and simulation studied for sinter making using fines from Bailadila.
- Development of special grade ferrite for NMRL (DRDO).
- Characterization and beneficiation studies on slime samples received from Bailadila.
- Characterization and beneficiation studies on iron ore samples received from Bailadila.
- Pelletization study with iron ore concentrate from various mines in India.

Expenditure on R&D

(Rs. in Crore)

Year	NMDC turnover	R&D Expenditure			
		Capital	Revenue	Total	% of turnover
2013-14	12058	2.32	14.42	16.74	0.14
2014-15	12356	1.33	17.16	18.49	0.15
2015-16	6456	0.63	16.01	17.64	0.27
2016-17 (up to Sep,16)	3460	0.22	8.85	9.07	0.25



6.2.4 MECON Limited

R&D efforts and achievements:

- Localized induction heat treatment of steel blank for automotive application.
- Design optimization of NEST-IN roof structures with cold formed Steel structure
- Development of Lab view based temperature scanner.
- Indigenous portable Ozone Monitoring System for measurement of Real Time Ozone Concentration in and around Industrial area of Ranchi.

Expenditure on R&D

Year	Turnover (Rs. in Crore)	R&D Expenditure (Rs. in Crore)	% of R&D Expenditure w.r.t. Turnover
2013-14	341.29	2.70	0.79
2014-15	389.92	2.07	0.53
2015-16	317.28	2.96	0.93
2016-17 (April-November)	135.00*	1.39	1.03

6.2.5 MOIL Limited

MOIL has carried out R & D activities to improve the safety and productivity in the mines by introducing modern technology with CSIR-R&D Laboratory, Academic and R&D institutions of the country. Major activities are:

- Ventilation reorganization studies for deeper levels to improve the face ventilation and productivity of underground sections of Gumgaon Mine.
- Modified Stope design to increase mineable reserve for exploitation.
- Mechanized stopping operation support systems at Ukwa Mine.
- Mill tailings of Malanjkhad Copper Projects for hydraulic stowing operation at Ukwa Mine.
- Collaborative research program for slope stabilization with National Institute of Technology, Raurkela for Slope Monitoring Instruments.

Expenditure on R&D

(Rs. in Crore)

Year	Expenditure on R&D	% of Turnover
2013-14	9.19	0.90
2014-15	6.00	0.73
2015-16	7.33	1.16
2016-17 Apr-Dec, 16 (Prov.)	4.5	0.61

6.2.6 JSW Steel Limited

JSW has a well established R&D centre and has taken up 25 R&D projects for process improvements, energy optimization and product customization. Out of these, 18 projects (15 projects relating to process, energy and product optimization and 3 technology development projects) have been completed till Dec 2016 yielding benefit to the plant.



Major R&D activities in process

- Development of Fluidized bed reduction roasting process for maximization of Iron recovery from low grade iron ores and slimes using thermal grade coal in collaboration with IIT, Madras
- Development of reagents for alumina floatation in iron ore in collaboration with BASF, Germany.
- Inducing coking properties in non coking coals by catalytic reaction in collaboration with BITS, Goa
- Development of technology for conversion of CO₂ captured from industrial flue gases to methanol in collaboration with BITS Pilani-Goa & IITH

Patents filed during 2016-17

- Vijaynagar Works : 7
- Dolvi Works : 3

Expenditure on R&D

Vijaynagar Works

(Rs. in crore)

Year	Annual Turnover	Investment in R&D	% of Turnover
2013-14	29897	22.04	0.074
2014-15	31430	17.44	0.055
2015-16	31195	8.06	0.026

Dolvi Works

(Rs. in crore)

Year	Investment in R&D	% of Turnover
2013-14	2.44	0.02
2014-15	1.445	0.014
2015-16	1.97	0.03

Salem Works

(Rs. in crore)

Year	Annual Turnover	Investment in R&D	% of Turnover
2013-14	3147.20	3.70	0.117
2014-15	3423.34	2.85	0.083
2015-16	2661.41	3.20	0.120

6.2.7 Tata Steel Limited (TSL)

Tata Steel Ltd. has its own R&D centre at Jamshedpur pursuing basic & applied research in different areas relevant to iron & steel including raw materials like iron ore, coal etc. during the FY 2016-17 up to Dec'16.

123 new projects were taken up and 71 projects completed in the area of process and product research development.

R&D Initiatives:

- Compaction of slime for enhanced slime dam life and water recovery
- Cleaner steel production of low carbon Al killed grade at LD#2



- Wearable sensors for personal safety in industry
- Improvement of r-bar Value (Drawing Property) of IF and IFHS Steels by Addition of Extra Aluminium
- New generation fuel tank material
- Reduction in Sinter RDI: Plant trials for nitrogen injection on the sinter strand at Tata Metaliks Limited
- Development of anionic complex compound for cyanide removal
- Development of Ultrasonic Based Cast Steel Slab Thickness Measurement Technique - (first of its kind in the world)
- Performance Enhancement of Ammonia Still to Reduce Cyanide Loading for the BOT unit
- Development of low silicon hot rolled dual phase steel through TSCR-
- VA / VE (Value Analysis/ Value Engineering) with Nissan and Tata Motors-
- Development of Armor Grade Steel

R&D Initiatives with National/International collaboration

- Enhancement of Quality of Coal Tar, IIT Kharagapur
- Feasibility Study on Utilization of Ferro Chrome Slag in Road making, Central Road Research Institute
- Feasibility Study of High Pressure Catalytic Conversion of Non-coking Coals to Produce synthetic coal, CSIR-North East Institute of Science and Technology

Expenditure on R&D

(Rs. in crore)

Year	Recurring	Capital	Total	Turnover
2013 - 14	68.45	12.06	80.51	0.19
2014 - 15	107.87	25.93	133.8	0.32
2015 - 16	116.25	13.06	129.32	0.34

Patents filed: 57

6.2.8 Bhushan Steel Limited

Bhushan Steel has tied up with IIT Bombay for optimization of High Carbon, 75Ni8, 75Cr1 & C76 steel grade w.r.t end applications of the product after cold rolling and heat-treatment.

R&D Initiatives:

- Developed the IF grade steel for auto application as inner and outer panel in various sizes of 3.2 x 1260 - 1700 mm and 4.0 x 1260 - 1700 mm.
- Developed Boron treated Low carbon Steel for cold rolling application
- Developed new Steel Grades for Automotive industries and Boiler Grade (moderate temperature application)



6.2.9 Jindal Steel & Power Ltd. (JSPL)

R&D Initiatives:

- Development of New Product : R350HT, C43, S355G11, SAE1541, A106GRC, JSL2D, E350BR, EN8A-B, SAE9254-M, R260, AMJ-21B, AMJ-24, 50CrV4, SAE1010, 23MNB4M, SAE1045, ST30AL, MSLI(GR-6)AMD
- Development of New Section: RUBM: NPB500x180x 66 kg/m, NPB500x150x52.2kg/m, Crane rail- CR120, Crane rail A150, MLSM: WPB 150X150X34.6, UB 152X89XX16, ISMC 100, IPE 160
- Development of Head Hardened Rails" complying the National and International standards
- Implementation of the lean chemistry in micro alloy grades steels.
- Installation of ultrasonic flow meter in flare stack in Blast Furnace.
- Design modification of transfer chute of Sinter machine.
- Use of char as a fuel in DRI Kilns in place of coal for reduction process
- Design Modification of BiVi Tech Single Deck Screen To Double Deck Screen in RMHS DRI#2

6.2.10 Essar Steel India Limited

The R&D unit is located at Hazira, Surat, Gujarat inside the factory premises of Essar Steel India Ltd.

R&D Initiatives

- Development of armour protection plates for passenger and defence vehicles
- Development of Roll bonded clad plates (Mild steel and Stainless steel)
- Hot Forming grade (30MnB5 / 35 MnB5) for Agricultural Application
- Medium and high carbon steel for automobile application (C45/55/60E/80)/ C55 & C80
- High strength structural steel at 900 MPa - S890QL, for load-bearing structures, where low weight is needed.
- Development High Strength (S420N) thick plate 110/115mm in normalized condition
- Development of self- reducing briquettes of HBI fines/ CDRI fines using different types of binder.



CHAPTER-VII

ENERGY, ENVIRONMENT MANAGEMENT AND CLIMATE CHANGE

7.0. Introduction

Environment management and energy efficiency constitute an important benchmark for evaluation of a company. The Ministry of Steel, through various schemes and regulations, is facilitating reduction in energy consumption and emission of environment pollution in steel plants. Some of the steps /initiatives being taken by the Ministry of Steel through various forums and mechanisms are:

7.1 Government Initiatives

7.1.1 Charter on Corporate Responsibility for Environment Protection (CREP)

This is an initiative of Ministry of Environment & Forests/ Central Pollution Control Board (CPCB) in association with Ministry of Steel and the main/ major steel plants to reduce environment pollution, water consumption, energy consumption, solid waste & hazardous waste management etc as per mutually agreed targets with the purpose to go beyond the compliance of regulatory norms for prevention & control of pollution through various measures including waste minimization, in-plant process control & adoption of clean technologies. A National Task Force (NTF) has been formed for implementation of CREP recommendations. Ministry of Steel facilitates compliance of CREP action points in association with the steel plants. National Task Force (NTF) has recently been reconstituted.

7.1.2 National Action Plan on Climate Change (NAPCC)

National Action Plan for Climate Change (NAPCC) has been launched in 2008 to address the Challenge at national level. NAPCC outlines 8 National Missions, one of them being the National Mission for Enhanced Energy Efficiency (NMEEE). Perform Achieve & Trade (PAT) is the flagship scheme under NMEEE. PAT is a market based mechanism through certifications of energy savings which could be traded. PAT has become effective from April 2012.

Total Energy Consumption in India in 2010 was estimated at around 450 Million Tonnes of Oil equivalent (Mtoe) of which around 135 Mtoe i.e. approx 30% was accounted for by the Industrial Sector. The Energy Consumption in Iron and Steel Sector accounted for nearly 33.7 Mtoe i.e. 25% of the total energy consumption in the Industrial Sector.

During PAT Cycle-I, (2012 - 2015), 67 Designated Consumers (DCs) with total Energy Consumption of 25.32 Million toe were covered which works out to 45% of total Energy Consumption in the Steel Sector.

Under PAT Cycle-II (2016-19), 71 Designated Consumers in Iron Steel Sector have been notified by Ministry of Power. The share of Energy Consumption in respect of the 71 DCs works out to 72% of total energy consumption in the steel sector.

7.1.3 Promotion of Energy Efficiency in SME Sector:

UNDP-GEF-MoS Project: "Energy Efficiency in Steel Re-rolling Mills" (2004-2013):

The project has been completed and implemented. It has facilitated low carbon technologies in 34 steel re-rolling mills (model units) to bring down energy consumption and reduce GHG emissions by 25-50%. This has helped in replication of the energy efficient technological interventions in many other steel re-rolling mills.

UNDP-MoS-AusAID Project: Up scaling Energy Efficient Production in Small Scale Steel Industry in India" (June 2013-June2016)

Aims to further replicate energy efficiency in steel re-rolling mills and expand the interventions to other SME Sector like induction furnaces. The project is completed covering 300 mini steel mills (inclusive of



Signing of MOU between Ministry of Steel, Department of Economic Affairs, SAIL and NEDO, Japan

5 Induction furnace units) are covered in II phase at the investment of 50 Crore from private sector against Rs. 20 crore of funding from Ministry of Steel, AusAid and UNDP.

Third Phase: In the third phase for five years, 1200 units are proposed to be covered which will reduce 33 lakh tonnes CO₂.

7.1.4. NEDO Model Projects for Energy Efficiency Improvement.

Government of Japan through Ministry of Economy Trade & Industry provides funds i.e as Overseas Development Aid (ODA) under its Green Aid Plan (GAP) through Department of Economic Affairs in GOI for setting up of energy efficient, environment friendly projects known as Model Projects in various sectors including steel. These projects are routed through and managed by NEDO (New Energy & industrial technology Development Organisation), Japan. Ministry of Steel is coordinating the projects undertaken in the iron & steel sector. So far the following three projects have been commissioned, two at Tata Steel and one project at RINL.

- BF Stove Waste Heat Recovery: Completed at Tata Steel
- Coke Dry Quenching: Completed at Tata Steel
- Sinter Cooler Waste Heat Recovery: Completed at Rastriya Ispat Nigam Limited.

Further, two MoUs for two more Model Projects (i) Regenerative Burner System for reheating furnaces at Rourkela, SAIL and (ii) Energy Monitoring and Management System at ISP Burnpur, SAIL have been signed for implementation.

7.1.5. Iron & Steel Slag Utilization

The major wastes produced in integrated steel plants include BF Iron Slag Steel Melting Shop (SMS) Slag accounting for nearly more than half a ton for each ton of steel produced in ISPs. Most of the steel plants are utilising 100% of the iron slag produced (mostly in cement making and some portion as aggregate, both of which are permitted in BIS or IRC Standards Specifications) while others are closer to reach the 100% utilization.

The utilisation of SMS (particularly LD) slag is limited due to its (i) Phosphorous content (ii) high Free lime content and (iii) higher specific weight. To resolve these issues, Ministry of Steel has constituted a Task Force for promotion and utilization of Iron and Steel Slag.



7.1.6. Intended Nationally Determined Contributions (INDCs) for Indian Steel Industry

Government of India has submitted India's Intended Nationally Determined Contributions (INDCs) to reduce the emissions intensity of its GDP by 33 to 35 percent by the year 2030 from the level of the year 2005. Accordingly, Ministry of Steel has submitted INDCs for iron and steel in sector to MOEF&CC to reduce GHG emission by adopting clean and green technologies.

7.2 Initiatives of Steel Companies

7.2.1 Steel Authority of India Limited (SAIL)

Energy Management

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

Plant	2014-15	2015-16	2016-17 (Apr. - Nov.)
BSP	6.46	6.44	6.59
DSP	6.35	6.42	6.36
RSP	6.57	6.50	6.50
BSL	6.69	6.69	6.71
ISP	-	-	7.33
SAIL	6.53	6.51	6.63

Environment Management

- Reduced Particulate Matter (PM) emission load by more than 6%
- Reduced specific water consumption by more than 2%
- Reduced specific effluent discharge by more than 10%
- Reduced specific effluent load by more than 6%
- Increased BF slag utilisation by more than 1%





Low carbon usage technologies / facilities adopted

As a measure towards reducing the CO₂ emissions and to achieve higher energy efficiency, SAIL plants have introduced various clean technologies at its plants over the years, mainly during the recent expansion/modernization projects. The notable among them are:

- Taller Coke Oven Batteries with Computerised Combustion Control System (CCCS)
- Coke Dry Cooling Plant
- Multi Slit Burners and Waste Heat Recovery systems in Sinter Plants
- Top Pressure Recovery Turbine at Blast Furnace
- Coal Dust Injection in Blast Furnaces
- Waste Heat Recovery from Blast Furnace Stoves
- Cast House Slag Granulation Plant with Blast Furnace
- Gradual shifting from Open Hearth /Twin Hearth Furnaces to Basic Oxygen Furnaces for steel making
- Gradual shifting to continuous casting of steel phasing out soaking pit/ingot route.
- Walking Beam type Reheating Furnace (RHF) by gradually replacing pusher type RHF.
- Recovery and Reuse of By Product gas for use as fuel for power generation
- Thyristorisation of Motor Generator sets
- Installation of VVVF drives

Specific CO₂ Emission (T/tcs)

(Unit: T/tcs)

2013-14	2014-15	2015-16	2016-17 (Apr.-Dec.)
2.69	2.65	2.60	2.65

Highlights of compliance to national/CPCB/SPCB norms/regulations during (Apr - Dec, 2016)

Stack Emission: Particulate Matter (PM) emissions from the stacks of all the major production shops were meeting the respective norms.

Fugitive Emissions: Fugitive emissions from the Coke Oven batteries, Blast Furnaces and the Basic Oxygen Furnaces were within the norms.

Ambient Air Quality: Ambient Air Quality remained within the norms.

Effluent discharge quality: Effluent discharge quality was well within the norms.

Solid Waste Generation/Utilisation: Utilisation (%) of BF slag, LD slag and total solid waste during April - December, 2016

BF Slag	LD Slag	Total Solid Waste
88.75%	76.02%	84.39%

To enhance utilisation of BF Slag and LD Slag, the following initiatives have been taken:

BF Slag: Installation of Cast House Slag Granulation Plants (CHSGPs)

LD Slag:

- Use of Weathered LD Slag as Rail track Ballast
- Artificial Weathering of BOF slag by using steam



Other Initiatives:

Implementation of Environment Management System

- Eco-restoration of mined out areas
- Bio-sequestration of CO₂
- Non-conventional energy sources
- Initiatives to achieve Zero Liquid Discharge (ZLD)

7.2.2 Rashtriya Ispat Nigam Limited (RINL)

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

Year	SEC (Gcal/tCS)	CO ₂ emissions (Tons/tCS)
2013-14	6.19	2.66
2014-15	6.37	2.793
2015-16	6.40	2.787
2016-17 (up to Dec'16)	6.45	2.83

Measures Taken/being taken for reduction in Energy Consumption (2016-17 till Dec'16)

- Commissioning of 5MW Solar Power Plant
- Decrease in total fuel rate at BF's from 560.9 Kg/THM to 539.5Kg/THM.
- Increase in Power generation from Top Pressure Recovery Turbine (BF-3 TRT) from 2.31 MW to 6.75MW
- Increase in LD gas recovery from SMS-2 from 14.0 Ncum/tcs to 75 Ncum/tcs.
- Stabilization of Energy efficient Vertical Shaft Kilns (1 nos.) at CRMP.
- Power generation of 14.3 MW from 120 MW BF gas based power plant.
- Revamping of Blast Furnace
- Commissioning of Pulverized Coal Injection in Blast Furnace after revamping
- Stabilization of Power generation from waste heat of hot sinter from straight line cooler

Waste Heat Recovery Systems (Apr-Dec'16)

Energy Saving Facility	Units	Energy Recovered	Boiler Coal Saved (tons)	Reduction of CO ₂ Emission(Tons)
LD Gas recovery plant-1&2	MNCum	254.296	136811	214794
Back Pressure Turbine Station (BPTS)	MWH	151019	120815	189680
Gas Expansion Turbine Station (GETs) & TRT	MWh	44594	35675	56010
Sinter plant straight line cooler	MWh	3810	3084	4785



Usage of By product gases in Thermal Power Plant up to Dec, 2016

Units: MNcum

Name of Fuel used	Value	Boiler Coal Saved(tons)	Reduction of Co ₂ emission(tons)
CPP-1			
Coke Oven Gas	288.16	403135	632923
BF gas	2176.1	554179	870061
CPP-2			
Coke Oven Gas	23.58	32988	51791
BF gas	266.82	67950	106681

Environment Management

Highlights of compliance to national/CPCB/SPCB norms/regulations (Apr - Dec, 16.)

Complied with all environment related statutory requirements of National/CPCB/SPCB Norms/Regulation in respect of stack emissions, ambient air quality and fugitive emissions. In respect of effluent quality, the concentrations of Amm. N₂, Phenol, Oil, Grease, COD & TSS were within norm as prescribed by APPCB/CPCB.

BF slag: 81.11% of slag generated was put to use by selling to industries.

LD slag: About 17.37% of total LD Slag generated and utilized in Sintering as a substitute to Lime stone / Dolomite.

Other wastes: Other metallurgical wastes i.e. Dusts from DE systems & ESPs, sludges from waste water treatment plants and Mill Scales are being fully utilized.

Environmental initiatives under implementation:

- Revamping of Stock House Dust Extraction systems for Blast Furnace-2 is taken up at a cost of Rs 33.83 Cr. to reduce the stack emissions from 115 mg/NM³ to 50mg/NM³.
- Revamping of Cast House Fume Extraction system for Blast Furnace-2 is taken up at a cost of Rs 39.50 Cr. to reduce the stack emissions from 115 mg/NM³ to 50mg/NM³



Secretary, Steel inaugurating 5 MW Solar Power Plant at RINL



- Revamping and Up gradation of Electrostatic Precipitators of Air cleaning plant and Gas cleaning plant of sinter plant-1 is taken up at a cost of Rs 76.76 Cr. to reduce the stack emissions from 115 mg/NM3 to 50mg/NM3.
- Modification/augmentation of ESP's of Thermal Power Plant for two Boilers is taken up with BHEL at a cost of Rs 68.0 Cr. to bring down the emissions below 50 mg/Nm3.
- Planted 2, 75,400 trees under this program by 31st Dec '2016 and is in the process of completing the balance plantation.
- Zero discharge

7.2.3 NMDC Ltd.

All the mines of NMDC centre have been accredited with Integrated Management System Certificate comprising of (QMS)ISO 9001:2008, (EMS)ISO 14001:2004 and (OHSMS) OHSAS 18001:2007 and SA 8000:2008 standards.

The initiatives made by NMDC towards Environment conservation and pollution control are given below:

Air Pollution

- Dust suppression on mine haul roads & use of atomized mist water spray at dumper platform and at transfer points for suppression fugitive dust generation.
- Use of wet drilling for drilling the blast hole.
- Use of conveyors which are completely covered for transportation of run of mine iron ore from crushing plant to screening plant to loading plant.
- Continuous Ambient Air Quality Monitoring System installed at Bailadila Deposit - 14./11C project, Deposit-5 and 10/11A project for online monitoring of PM10 , PM2.5, SO2, NOX and CO.

Water Pollution

- Installed Effluent treatment Plants at auto work shop and service centre in all mines for treatment of waste water, which contains suspended solids and oil & grease.
- Constructed tailing dams at all mines for impoundment of slime generated during wet screening operations.
- Constructed Sewage Treatment Plant in all townships for treatment of domestic sewage
- Constructed check dams and check bunds to prevent flow of turbid water during monsoon season.
- Constructed Buttress walls to prevent flow of waste material during rainy season at all iron ore mines.

Noise Pollution

- Use of rubber coated screens and rubber lining at transfer points to prevent undue noise generation.
- Constructed sound proof chambers at tertiary crushing plant areas where operator cum mechanic can sit and oversee the operation of the plant.

Afforestation

- Released funding of Rs 15 crores to Chhattisgarh Harihar Tree Plantation Programme, a state government initiative .

Sustainability Initiatives

- Carbon foot print studies are being conducted every year at all iron ore mining projects and disclosing GHG emissions in Carbon Disclosure Project (CDP).
- Wildlife conservation plans are being prepared for all Iron Ore Projects.

Energy conservation

- Energy audits at all production projects viz Bacheli, Kirandul, Donimalai, Panna, and Paloncha are in progress and the recommendations will be implemented for energy conservation.
- LED luminaries are being installed in all the production projects and other offices.
- Power factor is being maintained above 0.96 with static capacitors on HT and LT side.



7.2.4 MECON Limited

MECON has taken up implementation of its Sustainable Development (SD) Policy and Plans as per the guidelines of Department of Public Enterprises. The following initiatives have been taken:

- Replacement of existing AC System for IT facilities with energy efficient AC System :
- Permanent Disconnection of Ceiling and Exhaust Fans:
- Replacement of existing T12 FTL with T5 FTL -LED :
- Afforestation in residential colony
- Replacement of street lights with LED lights at the residential colony in phased manner
- Installation ETC based solar water heating system for Ispat Hospital, Ranchi
- Solar Energy based Grid Free Light posts.

7.2.5 MOIL Limited

Various measures are undertaken for control of pollutants:

Air Pollution Control:

- Wet drilling of blast holes.
- Sprinkling of water on Haulage roads by truck mounted water tankers with sprinkler arrangement.
- Maintaining drilling speed to control dust produced during deep large blast hole .
- Regular maintenance of vehicles and machineries is carried out in order to control emissions.

Water Pollution:

- Used underground water in mining operation is fully utilized for plantation and sand stowing operations.
- Collection of rain water for dust suppression and plantation activity.
- No discharge of water from any of the mine in the nearby water sources.

Noise Pollution:

- Noise is abated at source by choosing machinery and equipment suitably, by proper mounting of equipment & ventilation systems and by providing noise insulating enclosures or padding where practicable.



Installation of Solar Panels at MOIL Head Office

**Solid Waste Management:**

- Adopted system to segregate solid waste in two categories namely (i) 'white waste and' (ii) 'black waste'. Both the wastes are dumped separately and systematically.
- After stabilization, white dumps are covered with plantation in consultation with National Environmental Engineering Research Institute (NEERI).
- 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.

Plantation:

Planted more than 18.66 lakhs trees in all the mines over the last recorded 23 years with an average 75% survival rate of plants.

7.2.6 JSW Steel Limited

JSW Steel has formulated an energy policy in line with the vision of the organization & towards greener environment. Much of the emphasis is given for sophisticated energy management systems to ensure efficient use, recovery of energy and reuse waste generated during various processes of Iron & steel making.

Vijaynagar Work**Energy Management**

Year	Energy (Gcal/Tcs)	CO ₂ emissions (Tons/tCS)
2014-2015	6.423	2.58
2015-2016	6.397	2.52
2016-2017 (Till Nov 2016)	6.437	2.56

Energy Management Highlights up to Nov 2016:

- Installed top pressure recovery turbine @ BF 1 of 5 MW capacity.
- Reduced Stack flaring by increasing the gas consumption.
- Enhanced Gas mixing capacity of GMS I from 180 KNm³/Hr to 240 KNm³/Hr.

Information on CPCB / SPCB Norms/Regulations and plantation projects

JSW Steel is in compliance with CPCB/ KSPCB standards for stack emissions and also complies with CREP requirements.

Environmental Highlights**Air Pollution:**

- Installation of additional bag filters
- Implementation of system to reduce roof top emissions.

Water Pollution:

- Reuse of process water through cascaded usage in less critical applications.
- Installed RO plants to make use of contaminated process water & conserve as make up water.
- Treatment of oily contaminated alkaline water in cold rolling mills.
- Achieve zero water discharge.

Solid waste Management:

- Commissioning of the "waste to wealth" plant for processing iron bearing dusts & sludge.
- Efforts to provide processed granulated blast furnace slag as an alternate to river sand.
- Developed steam aging process for accelerated weathering of steel slag using steam to convert steel slag into high quality aggregates.



Dolvi Works

Highlights of reduction in energy consumption

- Utilization of BF Gas for Electricity Generation
- Partial replacement of Natural Gas (NG) for production of Direct Reduced Iron (DRI).
- Replaced Natural Gas with Coke oven gas at Tunnel Furnace for slab heating.
- Increased PCI coal injection and Oxygen enrichment in BF.
- Installation & commissioning of Sinter #1 Waste Heat Recovery Boiler.
- Usage of mix feed to reduce specific power, fuel & operational consumables in Pellet plant..
- Replacement of bentonite screw feeder with higher capacity (40 TPH).
- Design of Ignition furnace burners for Propane with BF gas for achieving calorific value of 2000 kCal/Sm³.

Salem Works

Specific energy consumption

Year	Gcal/TCS
2013 - 14	7.194
2014 - 15	7.485
2015 - 16	7.517
2016 - 17	7.253

Energy Highlights

- Commissioning of Waste Heat Recovery Boiler in Coke Oven Battery.
- Reduction in gas venting through optimization of process and compressor operation
- Reduction in coke consumption by increasing the hot blast temperature.

Environment Management system

- Online continuous emission monitoring systems with 70 stack parameters connected real-time to Care Air Centre (CAC), TNPCB.
- Installation of 5KW capacity plant for street light.
- 10% Reduction of chemical consumption in main raw water treatment plant.
- Commissioning of secondary de-dusting system to reduce fugitive emissions

7.2.7 Tata Steel Limited (TSL)

Highlights of reduction in energy consumption and low Carbon usage technologies are as under:

Jamshedpur Steel Works (TSJ),

- Reduction of carbon rate by optimisation of Blast Furnace Operation (process control and in-house improvement) from 454 kg/thm to 451 kg/thm.
- Enhanced recovery & utilisation of by-product gases.

Parameter	2014-15	2015-16	2016-17 up to Dec,16
Energy emission (Gcal/Tcs)	6.01	5.78	5.70
CO ₂ emissions (Tons/tCS)	2.46	2.29	2.31



Environment Management Highlights

Parameter	2014-15	2015-16	2016-17 up to Dec,16
Dust Emission (Kg/tcs)	0.57	0.51	0.45

CREP Compliance

- Up gradation of ESP and Bag Filters.
- Commissioning of DE systems at various locations.
- Commissioning of Dust suppression (DS) system covering 225 dust generation points
- Commissioning of Industrial Vacuum Cleaners (IVC) at Metal Recovery & Slag Processing Plant, Raw Material Bedding & Blending Plant, Sinter Plant 3 and Blast Furnace.
- Installation of Tyre washing facilities to reduce dust emission on roads.
- Installation of Land based fume extraction, desulphurization facilities, online charging with HPLA (High Pressure Liquor Aspiration), water sealed caps on Ascension Pipes and emission control facilities (charging and pusher sides) in coke oven battery to minimize fugitive emissions
- De-Sulphurisation of Coke Oven Gas from Coke Oven Battery

Air Pollution, Ambient Air Quality, Effluent Discharge

Year	Ambient Air Quality (µg/m3)				Effluent Discharge m3/tcs	Specific Water Consumption m3/tcs
	PM10	PM2.5	SOx	NOx		
2013-14	79.5	-	43.7	44.8	2.3	5.6
2014-15	74.0	-	43.0	38.0	2.3	5.5
2015-16	78.5	50.6	24.7	47.7	1.2	4.4
2016-17 (up to Dec,16)	128.9	70.6	29.5	41.5	1.0	3.9

Waste Management

Parameter	2013-14	2014-15	2015-16	2016-17 up to Dec, 16
Generation (kg/tcs)				
BF Slag	351	350	366	389
LD Slag	183	185	161	182
Total Waste	662	670	659	669
Utilisation (%)				
BF Slag	93	99	99	96.9
LD Slag	98	44	43	53.2
Total Waste	95	78	78	79.9

Kalinganagar Steel Works (TSK)

Energy consumption : 2.9 Gcal/Tcs
CO₂ emissions : 8 Tonn/tcs
Stake particulate emission : 1.7 Kg/tcs



7.2.8 KIOCL Limited

Energy Management:

- 10 No's 24 W LED Well Glass Non Flame Proof Industrial Fittings have been replaced in place of old 24 W LED Defective Light Fittings and conventional light fittings in various locations of Pellet Plant
- 10 No's 64 W LED Medium Bay Light Fittings have been replaced in place of 9 No's 4 X 40 W Fluorescent Tube Light Fittings and 02 No's 70 W Metal Halide Light Fitting respectively in various locations of Pellet Plant
- 20 No's 45 W CFL Light fittings have been replaced in place of 20 No's 4 X 40 W Fluorescent Tube Light Fittings
- 01 No 75 KW, 415 V, 3 PH, 50 HZ, 315 L, 750 RPM Energy Efficient SCI Motor has been replaced for Compressor Drive CA 3.1.1 at LCG Plant in Pellet Plant
- Fanless cooling towers have been introduced in both blast furnace area and Captive Power Plant (CPP).

7.2.9 Bhushan Steel Limited

Energy Conservation Initiatives

- 100% Hot Charging of Steel Slab
- Top Gas Recovery Turbine in Blast Furnace
- Installation of LED lamps:
- Installation of Solar Lighting System:
- Installation of CDQ

Environment Management

Solid Waste Generation & Utilization

Particulars	2013-14	2014-15	2015-16
Total Waste generation (t/tcs)	0.9	0.75	0.72
Total Waste utilization (t/tcs)	0.73	0.72	0.67
% of waste utilization	80.9	96	93.18

Specific Water Consumption (m3/tcs)

2013-14	2014-15	2015-16
5.9	4.7	4.44

7.2.10 Jindal Steel and Power Ltd. (JSPL)

Environment Management

Year	Energy (Gcal/Tcs)	CO2 emissions (Tons/tCS)
2013-14	9.021	4.052
2014-15	9.099	4.182
2015-16	8.745	3.982
2016-17 (till Dec-16)	8.625	3.912



Environment Management

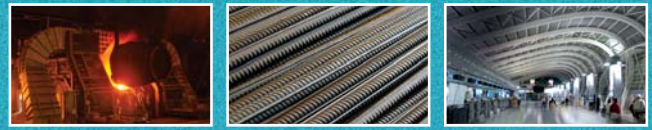
- Conversion of Electric Arc Furnace to New Oxygen Furnace
- Installation of LV VFD in Power plant
- Installation of 15 KW PV Solar Power Panel in DCP
- Replacement of Cooling Tower Fan Blades from GRP to FRP in DCP
- Installation of control valve in instrument air header for diverting air to AHP in DCP
- All CREP Action points are complied.

Adoption of Clean & Green Technologies -

- 134 MW power generation from solid waste (middling and pond fines) of coal washeries
- 165 MW power generation from waste heat recovery boilers of DRI kilns and Coke Ovens
- Nearly 95% of Blast Furnace Gas as fuel in boilers and furnaces.
- Captive brick plant to utilize fly ash and slag.
- Bio-methanation plant (3 TPD) for scientific disposal of bio-degradable waste and generation of renewable energy.
- Utilization of SMS slag in Slag Atomizing Technology (SAT) by producing Precious Slag Balls.
- 100% reuse of industrial as well as domestic wastewater after proper treatment.
- 100% reuse of kitchen wastes by installing Bio-methanation plant. The gas generated from this plant is alternatively used as LPG.
- Own Green Building Platinum Award from IGBC for Jindal Center at JSPL Raigarh

Afforestation

Planted 5.10 lakh trees in JSPL Raigarh, 32500 trees in cement plant and 4.73 lakh trees in Industrial Estate, Punjipathra,



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 with high end Server, Client Systems, Local Area Network (LAN) & Wifi setup is operational to provide ICT support to officials and staff in the Ministry.
- A LAN of about 250 nodes with Gigabit backbone is operational in the Ministry and is being extensively used for:
 - ❖ eOffice File Management & Tracking, Knowledge Management and Leave Management Systems
 - ❖ Collecting information/material on Annual Reports, Parliament Questions, Pendency, Tracking and Monitoring Applications (VIP/PMO References, Cabinet Notes, Court Cases, Audit Parars & Parliament Assurances etc,) from Divisions
 - ❖ E-Requisition, Stock & Inventory Management System and Officer on Tour Information System are operational on Ministry wide Intranet Portal
- Internet Connectivity with Email facility in nic/gov domain has been provided to all Officials/Divisions in the Ministry.

E-Governance applications and promoting the concept of paperless office in the Ministry

- As a part of the National e-governance Plan of DARPG, "e-office" software (a mission mode project of Govt. of India) modules such as Electronic File Management System, Knowledge Management System, Leave Management System and Sparrow (eAPAR) have been implemented to achieve less-paper office initiative in the Ministry.
- As part of the e-governance programme, a Ministry-wide Internet portal is also operational in the Ministry; The portal facilitates various monitoring applications in the area of Action Plans, Ushering In Cashless Transaction Environment, Court cases, important references, cabinet notes & parliament assurances etc in the Ministry.
- E-Requisition, Stock & Inventory Management System has been implemented by automating the Requisition process, filing and its approval by Admin Genl section and maintaining the Stock & Inventory at backend
- 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/ Divisions in the Ministry, organization chart etc., are also provided on the Intranet portal for the Officials/Staff of the Ministry.
- Biometric Attendance System based on Aadhaar Authentication with real time monitoring is operational in the Ministry.
- High Definition VC setup has been made operational in Steel Conference Room and O/o Secretary(Steel) for monthly PRAGATI VC of Hon'ble Prime Minister
- As a part of E-Governance plan, the following Centralised Citizen Centric Web Based systems have also been implemented in the Ministry :
 - ❖ Centralized Public Grievance Redressal & Monitoring System (CPGRAMS) has been implemented for facilitating Public & Pensioners Grievances in the Ministry and its PSUs.



- ❖ Right to Information Act - Management Information System (RTI-MIS) - facilitates monitoring of Requests and Appeals received under RTI Act 2005. The system is implemented in the Ministry and it's PSUs.
- ❖ ACC Vacancy Monitoring System(AVMS), eVisitor Monitoring System(eVMS), eSamiksha portal, Sparrow for online filing of APAR and Annual Property Returns have also implemented.

Ministry's Official Website

- The bilingual web-site for Ministry of Steel (<http://steel.gov.in>) is operational.
- Migration of re-designed Ministry of Steel website under Content Management Framework(CMF) of NIC is in progress.

8.2 Steel Authority of India Ltd. (SAIL)

The business of SAIL is carried out on its robust Information Technology (IT) infrastructure with an objective of bringing in efficiency & transparency of operations of the company.

- SAIL with its consistent efforts has been able to cover the major spectrum of business operations under the sphere of Enterprise Resource Planning (ERP). SAIL's 4 Integrated Steel Plants i.e. Bhilai Steel Plant, Durgapur Steel Plant, Bokaro Steel Plant, Rourkela Steel Plant and Central Marketing Organization (CMO) have already implemented ERP. ERP implementation at 5th Integrated Steel Plant i.e. IISCO Steel Plant & Corporate Office for data consolidation through integration of Plant/Unit is under progress.
- Maximizing Cashless Transactions through e-Payments & e-Receipts for efficient cash realization & financial reconciliation.
- To promote 'Digital India Initiative' following steps were taken:
 - ❖ Automatic SMS/e-mail facility to communicate with employees, customers & suppliers.
 - ❖ Usage of e-Procurement being maximized.
 - ❖ Online customer enquiry system to cater to customers queries.
 - ❖ Launched various mobile apps for ease of access to employee related services.
- Executive Performance Management System (EPMS) for appraisal of executives across SAIL is already functional and has now been extended to General Managers and Executive Directors of SAIL.



Dr. N. Mohapatra, Director (Personnel) SAIL, receiving Certificate of recognition from Shri Birender Singh, Hon'ble Union Minister of Steel for successfully implementing Customer Relationship Management (CRM) & Supplier Relation Management (SRM) modules.



- MIS for preventive vigilance has been implemented to strengthen existing system.
- Preparatory activities being done for Indian Accounting Standards (Ind AS) & Goods and Services Tax (GST) implementation on IT platform at transactional level.
- SAIL has extended the benefit of National Pension Scheme (NPS) by integrating it with payroll system at Plants.
- To minimize risk and ensure business continuity by pro-actively limiting the impact of a security breach, major Plants/Units of SAIL have obtained ISO 27001:2013, Information Security Management System (ISMS) certification.

8.3 Rashtriya Ispat Nigam Ltd. (RINL)

RINL has been making continuous efforts in development of IT infrastructure and various IT systems / applications for improving the overall organizational efficiency. Achievements in this regard during the year 2016-17 are given below:

- Payroll in ERP went live from March'16 onwards. Implementation of HCM module with payroll is first in Indian Steel Industry.
- Executive Performance Management System (EPMS) was developed and implemented.
- Enterprise Plant Production Performance System, Mobile App for Production and Delays was also developed.
- e-tendering was started in Marketing, MM and Work Contracts. E-Auction for Vessel Chartering was deployed. Commercial Invoice output in Hindi was implemented across all the Marketing branches and SMS Alert to customers on Sales Order also introduced.
- Obtained ISO 27001 certification for implementing Information Security Management System (ISMS) in IT and ERP services.
- RINL has been recognized for its IT initiatives by various institutions which include National Award for e-Governance 2016-17 by DARPG, Government of India and Express Intelligent PSU Award 2016 by Indian Express Group under Big Data category for demonstrating innovative use of technology to gain competitive edge and improve operations.

8.4 NMDC Ltd.

In Human Resource Management System and Financial Accounting System following modules are added.

- License to Operate
- Corporate Social Responsibility
- Sales Accounting for Pellet Plant
- On-Line Recruitment
- Improved Performance Management System
- The Corporate and Intranet websites were made Bi-Lingual.

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. In order to ensure an adequate IT infrastructure, Steps taken by the System Department are as under:

- Installation of 500 Nos. of Computers, out of which 260 Computers at Head Quarter and 240 Computers 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, Employee's payment and HR, Production & Quality and Cost & Finance of the Company.



- Ethernet based Local Area Networks (LAN) on Windows and Linux platform is 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.
- For effective sharing of Applications, databases/ information and other resources on regular basis all the Mines and HO are connected through MPLS VPN and VPN over Leased line and Broadband.
- For continuous knowledge acquisition, e-mailing and for inter unit data transfer facilities all the concerned officials of Head Office have been provided with internet connection through a 8 Mbps (1:1) internet leased line on OFC. All the mines are provided with leased line/broad band internet connections.
- All Procurement of goods valuing Rs. 2 lakhs and above is through e-procurement portal of MSTC to bring transparency in procurement process.
- Necessary initiatives taken for Implementation of ERP in the Company.

8.6 MSTC Ltd.

The developments at MSTC Ltd. as far as IT infrastructure is concerned, are as under:

- STQC Certification on e-Procurement services was received.
- ISO 27001 certification is in place and the same was upgraded from ISO 27001:2005 to 27001:2013 and the upgradation was audited by STQC.
- Maintaining ISO 9001:2008 certification.
- Developed in-house a mobile app for EMD management & other few facilities for the Coal Bidders who are taking part in the on-line e-Auction of Coal being conducted by MSTC on behalf of all subsidiaries of Coal India Limited along with the Singareni Collieries Company Limited.
- Developed in-house and implemented Inventory Management System at MSTC Head Office.
- Developed in-house Bill tacking system and implemented the same on 01.01.2016 across all MSTC offices.

8.7 Ferro Scrap Nigam Ltd. (FSNL)

- Integrated Information Management System a complete integrated package is under implementation phase.
- fsnl.nic.in domain based Web Mail service has been implemented for all executives of FSNL.

8.8 Hindustan Steelworks Construction Ltd. (HSCL)

HSCL has its own web site at www.hscl.co.in through which it conducts its business activities in a transparent manner. HSCL has more than 25 units spread all over the country. All the units maintain separate accounts of receipt and expenditure. Finally, Accounts of individual units are compiled for arriving at the overall accounts of the company. To streamline the financial operations and control of the company, the following Financial Systems have been introduced:

- Centralized cash Management System (CMS)
- Contract Reporting Management System (CRMS)
- Profitability Reporting Management System (PRMS)
- Billing Management System (BMS) and
- Material Management System (MMS).

HSCL is a fully e-procurement complied organisation, with all tenders for awards are decided on line through CPP Portal. Besides this, Bill payment status is reflected on the web site to ensure transparency in the business practice of the Company.



8.9 MECON Ltd.

MECON's offices at Ranchi, Bangalore and Delhi are equipped with state-of-the-art hardware, network and various Engineering softwares like REBARCAD, TEKLA, AERMODVIEW, STAAD.PRO, AUTOCAD, ETAP, CAESAR, PVLITE, AUTOPLANT, PDS 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 applications like HR, Corporate Finance, Project Finance, MIS, Competency Mapping, e-Archive are in use for day to day activities.

8.10 KIOCL Ltd.

The use of IT in KIOCL has been in vogue since its inception in 1976 and spans across all its plants and offices. The main areas of computerization are:

- **Inventory and Materials Management:** The Company is using computerized inventory accounting and control system since 1980s. The design by Canadian mining companies which has unique procedures, forms and the codification with check digits was adopted. Later the System was upgraded and migrated to a web based platform.
- **Finance and Accounting:** The payroll accounting and generation of pay slips were computerized in the 80s. Now all major activities of Finance and accounting system are fully automated on a web based platform with required reporting features. All major payments are done through RTGS.
- **IT- Infrastructure:** The infrastructure hardware and software are periodically upgraded and maintained. The company has deployed all-IP structured UTP based data networks with a fiber optic backbone at Mangalore and Bangalore. The 8 MBPS leased line at Mangalore and Bangalore and the internet connectivity at Kudremukh is through VPN to provide internet connectivity at the locations. The VPN connectivity thus provides a single network access to all the applications through different locations of the Company.
- **Video Conferencing:** The internet leased line and the ISDN connections are used for Video Conferencing at Mangalore and Bangalore. The facility enables the meetings to be held across the locations periodically online.
- **E-Commerce:** Introduction of E-tendering, E-procurement and RTGS has resulted in reduced paperwork, increased transparency and reduced time. The sale of pallets is carried through E-Tender by a Class i/ii RSA/SA agency with SQTC certification. This has reduced the price discovery time considerably. All the procurements above a threshold value are done through e-Tender.
- **Plant Process Automation:** All the plants of KIOCL are fully automated and controlled from the Central Computer Rooms. This has resulted in reduced Manpower requirement, higher Man and machine safety and increased life of the equipments. The data collected through computerized control system is used in carrying out, periodic preventive maintenance, estimation of components life thus resulting in increased productivity.

8.11 EIL, OMDL and BSLC

These companies have taken initiative to publish all tenders /EOI in Companies Corporate Website and Central Public Procurement Portal (CPP Portal). Procedure for Sale of Iron Ore and Manganese Ore is designed through e-auction mode only. Biometric based Attendance System and CCTV based surveillance system is installed at Corporate office. Maintenance of Leave records and processing of salaries is being done through customized payroll system. Tally based Accounting Package is being used to payment vendor bills and different employee entitlements through RTGS and e-payment mode.



CHAPTER-IX

SAFETY

9.1 Introduction

Safety is an important aspect in 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.

Salient aspects of Safety Management System & Practices in SAIL include the followings:

9.2 Steel Authority of India Limited (SAIL)

9.2.1 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.

SAIL is implementing OHSAS-18001, an advanced Safety Management system and they also have an 'Occupational Health and Safety Policy'.

9.2.2 Safety set up in SAIL

Full-fledged Safety Engineering Department looks after the safety management aspects under respective Head of Works of all Plants & Units of SAIL. At corporate SAIL Safety Organization (SSO), Ranchi also coordinates and monitors the operational/fire safety activities undertaken at different plants/units of SAIL and provides appropriate corporate thrust on safety management at organization level.

9.2.3 Systems & Procedures

- Conformance with Management systems like OHSAS-18001:2007 and SA 8000:2008.
- Safety aspects are incorporated in Standard Operating Procedures (SOPs), Standard Maintenance Procedures (SMPs) and Safe Work Instructions (SWI) and adhered.
- Work permit system followed for safe execution of jobs.
- Protocols framed and adhered for Capital / Major repair jobs.
- Unsafe acts and conditions are identified during preventive inspections/surprise checks and control measures taken and followed up.
- Joint inspections are conducted for fire prone areas including Cable galleries, Oil cellars etc and functioning of fire detection & protection systems are closely monitored. Mock drills are conducted for emergency preparedness.
- Worker's participation in Safety Management is encouraged through Apex/ Departmental Safety Committees at Plants / Units. Also at National Steel Industry level through Joint committee on Safety, Health and Env't. in the Steel Industry (JCSSI), secretarial functions of which is managed by SSO.
- Specific Medical examination made mandatory for issuance of Height Pass for Working at Height and also for Crane Operators and Mobile Equipment Operators.
- Inter plant networking in Occupational Safety & Health for coordination and monitoring established by SSO for which NOHSC, BSP is functioning as the Central agency.



9.2.4 Safety Audit/ Monitoring

Safety Audits are conducted at Plants and units in following manner.

- Internal Safety Audits by Safety Engineering Deptt. of respective Plants.
- Safety Audits by SAIL Safety Organisation associating representatives from sister Plants/Units
- Safety Audits by external agencies e.g. NSC, India, agencies recommended by Regional Statutory Authorities, OHSAS auditors etc.
- Management review for sustaining accreditation to OHSAS-18001, SA 8000 etc.
- Meeting of 'Heads of Safety' and 'Heads of Fire Services' of Plants/ Units are organised at specified interval.
- APP for Safety and Fire Services activities are formulated for each plant/unit and SSO.
- Round the clock safety surveillance made for all major Capital repair / Shutdown jobs to ensure safe completion of the jobs.
- Videoconferencing started with all plants/units by SSO.

9.2.5 Awareness & Training

- Awareness generation drives and campaigns are launched time to time for enhancing the standard of Safety, Occupational Health & Work Environment.
- Information pertaining to Safety issues is telecast through local TV network of Plants.
- Skill oriented job specific safety training is imparted in plants/ units at regular interval.
- Audiovisual aids and Safety films are used during imparting Safety trainings.
- Need based Training programme e.g. 'Safety Management', 'Chemical Safety', 'HAZOP study', 'Safety Audit' and 'Process Safety Management' was organised by SSO with the help of external faculty for the Departmental Safety Officers/ Line Managers / Safety Inspectors of plants and units.
- Workshop on 'Roles and Responsibilities of GMs/ HODs' started.

9.2.6 Usage of Personnel Protective Equipment and Safety Devices

- User friendly Personal Protective Equipment (PPE) are provided and its usage are monitored.
- Full -body harness with double lanyard is used for height safety.
- Advanced PPEs, Safety devices, Gas monitoring devices are also introduced time to time.

9.2.7 Contractor Workers' Safety

Among the identified thrust areas, high priority has been accorded towards enhancing safety standards at contractor's work areas in view of their deployment in both Projects & Works related jobs. Concerted efforts are being made to train and educate the persons coming from different socio economic background about safe working inside works. Guidelines in vogue in this area include safety and penalty clause in contracts, system of site inspections and issue of safety clearance before start of jobs, deployment of safety officers etc. Two day Induction Training module has been prepared for implementation by all plants and units.

9.2.8 Accident Analysis , Investigation & Compensation

- Reportable Lost Time Injury Frequency Rate (RLTIFR)-For the period April 2016-Dec 2016 : 0.11
- All accidents are investigated, analysed and remedial actions taken to prevent recurrence.
- Recommendations of 'On- the- spot study' of fatal accidents are disseminated amongst all plants & units for implementation of relevant actions to prevent its recurrence. Responsibility for each fatal accident is fixed and actions are taken accordingly.
- In case of regular employees, the compensation is paid as per the company policy whereas for contract labour, compensation is paid as per the provisions of Employees State Insurance Scheme by the Employees State Insurance Corporation.



9.3 Rashtriya Ispat Nigam Ltd. (RINL)

9.3.1 Management Commitment

With the continuous efforts of RINL on the implementation of safety standards, monitoring of risk control and proactive measures have resulted in reduction / elimination of potential hazards. Several measures are being taken up to achieve zero accident and to bring positive safety culture in the company. Routine and non-routine activities in the plant have been identified including the Expansion area as part of OHSMS and Hazard Identification and Risk Assessment (HIRAs) was carried out. All the safety controls and measures are identified and same are being monitored and implemented for all the activities.

9.3.2 Safety setup in RINL:

To encourage employees' participation in Occupational Health and Safety Management, one Central Safety Committee and 30 Departmental Safety Committees have been formed with equal participation from recognized trade union representatives and management representatives.

9.3.3 Safety Promotion

The highlights / measures taken during the year 2016-17 (up to December, 2016):

- Disaster/Emergency Management Plan has been revised in line with the National Disaster Management guidelines. Separate Disaster Management plans were developed for mines, Schools, Township and market yards etc.
- For gas safety, an exclusive safety team has been formed to look after the Gas lines, utility lines across the plant.
- Safety Awareness campaigns were conducted covering all the departments.
- To create awareness on safe usage of Personal Protective Equipment, a "Padayatra" was organized where in ED, HoD, Safety Officers, employees participated in the event.
- Counseling of controlling officers of injured persons in work incidents was started
- Conducted a special campaign with the theme "NO CELL PHONE WHILE RIDING" and also 1000 nos of stickers were displayed in control rooms
- Surprise checks of height jobs was initiated by cross functional teams of SED
- Fabricated cabins are provided for Home Guards inside the plant.
- Received IspatSurakshaPuraskar awards in the year 2016, for no fatal accident in Mills & Coke Ovens Zones for the years 2014 & 2015.

9.3.4 Safety Audits and Inspections

Internal safety audits have been conducted as per the schedule in all major and minor departments by the concerned Departmental Safety Officer and by Qualified Internal OHSAS Auditors. External Safety Audits have been conducted once in a six months by the Lead Auditors of OHSAS Certifying Agency. All the non-conformities raised by the Auditors were complied. As part of statutory requirement, External audit is being conducted by an External Expert Agency in the field of Safety.

All accidents and incidents were investigated and remedial measures were implemented in all departments. Round the clock monitoring is done by safety personnel during capital repairs and major activities in the plant.

9.3.5 Emergency Management Plan

To ensure the emergency preparedness during the emergency situations, comprehensive emergency management plan is devised in Visakhapatnam Steel Plant. A Central Control Room at Plant Control is identified to co-ordinate various activities during any emergency situations.



9.3.6 Safety Training and Awareness Campaign

Regular employees were covered in regular safety training programmes. Contract workers were given safety induction training and refresher training. Apart from that, specialized safety training programmes were conducted regularly in the area of Behavioural Based Safety, Legal & Other requirements, Safety in Material Handling, etc.

9.4 NMDC Ltd.

NMDC has its training centers in all its projects. 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. Safety Committees have been constituted in every operating mine and safety meetings are held every month discussing the safety matters and corrective actions related to work atmosphere.

Man days lost per 1000 man days worked for the year 2016-17 (upto Dec.16) is 0.27.

9.4.1 Integrated Management System (IMS):

All the NMDC Projects i.e BIOM, Kirandul Complex, BIOM, Bacheli Complex, Donimalai Iron Ore Mine and Diamond Mining Project, Panna and Research & Development Centre are accredited with Integrated Management System Certification comprising of (QMS) ISO 9001:2008; (EMS) ISO 14001:2004; (OHSMS) OHSAS 18001:2007 and SA 8000:2008 Standards.

9.4.2 Safety Management System:

Safety Management system has been implemented and Risk Assessment Studies are being conducted regularly at all mines.

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 H.O. Level is co-ordinating with DGMS & carries out inspection of the mines from time to time.



Inauguration of Mines Safety Week at MOIL



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

9.5.1 Risk Assessment and Risk Management: Risk assessment study has been conducted in all major manganese mines, underground as well as opencast mines by experts and safety management plan has been made as per the requirement of DGMS. The main purpose of risk management plan is to identify risk in various activities, analysis of risk evaluation and prioritization of risk management and mitigation plan of risk.

9.5.2 Occupational Health and Safety Management (OHSAS 18001:2007): In the area of occupational health and safety management system, MOIL received OHSAS 18001:2007 certificate for Balaghat, DongriBuzurg, Chikla, Kandri, Munsar, Gumgaon, Tirodi and Ukwa mines.

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)

Constant motivation of employees through regular monitoring is ensured to encourage observance of safety precautions & safe working practices. Safety & allied aspects are widely covered in the training calendar prepared for the whole year to ensure proper training of the employees on safety. The training is imparted to the employees through reputed & renowned agencies like National Safety Council etc.

Apart from training, Safety Day celebrations, consisting of debate competitions, Essay/Slogan writing competitions etc. are also organized by FSNL, wherein the employees take part enthusiastically.

9.8 Hindustan Steelworks Construction Ltd. (HSCL)

HSCL has revamped its Safety Management & Practices in line with the nature of activities and taken the following measures to ensure safety at work site:

- Publication of Safety Manual of the Company. This manual has been developed to identify the minimum requirement of safety practices for construction agencies that require personnel to perform construction activities.
- Publication of Safety Hand Book for construction workers outlining important issues on safety and health that should be paid attention to at construction sites.
- The Company has set up a Control Room at Head Office for monitoring Safety aspects of more than 25 units of the Company spread over the country. The set up is headed by a Nodal Officer (Safety) directly reporting to CMD.
- Fully dedicated Safety Officers have been posted at Company's major units, with one executive designated as Officer - in-charge, Safety. Small units have two Safety Officers each and at the big steel unit Bhilai, where major Capacity Expansion packages are under execution, has 11 Safety Officers along with one Safety Consultant.
- Safety Committees have been constituted at different major units for deliberation on the issues related to safety and take action for improvement and to ensure use of Safety appliances and conduct enquiries into accidents, if occurs any.
- Regular training programmes are organized at major steel plant units for workmen and supervisors and executives connected with project execution on Emergency Preparedness Plan, Hazard Identification and Risk assessment.



9.9 MECON Ltd.

MECON has design and consultancy offices and does not have a manufacturing unit. MECON has prepared Safety Policy Statement which is regularly communicated to the employees during orientation training. Some of the features of the Safety Policy Statement have been incorporated in the Conduct and Disciplinary and Appeals Rules of the Company so as to ensure proper compliance of Safety Rules. As a result, no untoward incident has taken place during the year in MECON.

9.10 KIOCL Ltd.

KIOCL Ltd. has a separate department called Training & Safety Department and Occupational Health Centre wherein an Engineer and a qualified Doctor together are in charge of looking after safety & health aspects of employees at Plant level.

- KIOCL is compliant with OHSAS : 18001 : 2007 certification for Occupational Hazardous and Safety Management System.
- The onsite emergency plan approved by Director of Factories is in existence for both Pellet Plant and Blast Furnace Unit.
- Safety Inspections are carried out regularly once in two months by the Safety Officer along with concerned department engineers and Safety Committee members. Safety aspects are discussed in the safety meetings, which are held once in every quarter and suitable actions are taken for implementations of the shortfall.
- 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. The Safety Committee meetings were conducted on regular intervals during 2016-17 i.e. on 07.04.2016, 07.07.2016 & 07.10.2016.
- Training programmes are being conducted for contractual workers who are coming for dismantling structures and other related works to inculcate safety consciousness among them. Standard Operating Procedure Manual for safety (SOP) prepared and distributed to other units. Refresher Training, First Aid Training, Fire-fighting and Safety awareness Training Programmes are conducted on need basis. The total training of 1571 mandays is provided for regular employees on above said subjects and 380 mandays for contractor's workmen on Work place Safety.
- The onsite Emergency Mock Drills are conducted once in 6 months in Pellet Plant and Blast Furnace Unit

9.11 EIL, OMDC and BSLC

These companies take safety measures according to provision of the Mines Act, 1952 in terms of Rules, Regulations and Guidelines towards safety of 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 displayed through participation of workers in safety exhibitions locally as well as regional basis. New practices are also regularly adopted by visiting similar mines. Basic and refresher training is imparted to the workers in the Vocational Training Center & from different disciplines and operational activities in the mines.



CHAPTER-X

WELFARE OF WEAKER SECTIONS OF SOCIETY

10.1 Introduction

The Ministry of Steel comply with the Government guidelines with regard to welfare of weaker sections of the society. Out of total manpower of 186 employees in the Ministry as on 31.12.2016, 33 belonged to SCs (17.74%), 7 belonged to STs (3.76%) and 18 belonged to OBCs (9.67%). During the period from 01.04.2016 to 31.12.2016, 01 SC employee was appointed. The posts belonging to Secretariat Services are filled by Department of Personnel and Training.

10.2 Steel Authority of India Ltd. (SAIL)

Presidential Directives on Reservation for Scheduled Castes and Scheduled Tribes in Appointments in Public Enterprises are continued to be implemented. As on 1.1.2017, out of total manpower of 84092, 13687 belonged to SCs (16.28%), 12168 belonged to STs (14.47%) and 10533 belonged to OBCs (12.53%).

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:

- Recruitment of non-executive employees, which comprise over 84% of the total employees, are carried out mainly on regional level and hence a large number of SCs/STs and other weaker section of the society get the benefit of employment in SAIL.
- 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.
- 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.
- 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.

SAIL has undertaken several initiatives for the socio-economic development of SCs/STs and other weaker sections of the society which are mainly as under:

- Special Schools have been started exclusively for poor, underprivileged children at five integrated steel plant locations. The facilities provided include free education, mid-day meals, uniforms including shoes, text books, stationary items, school bag, water bottles and transportation in some cases.
- No tuition fee is charged from SC/ST students studying in the Company run schools, whether they are SAIL employees' wards or non-employees' wards.
- 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.
- SAIL plants have adopted 306 tribal children. They are being provided free education, uniforms, textbooks, stationery, meals, boarding, lodging and medical facilities for their overall growth at residential hostels, such as Saranda Suvan Chhatravas Kiriburu, Gyanodaya Hostel Bhilai and an exclusive Gyan Jyoti Yojana for nearly extinct Birhor Tribe.



- For Skill Development and better employability, around 3330 youths & women of peripheral villages have been provided vocational & specialised skill development training at various ITIs, Nursing and other vocational training institutes.

Implementation of Presidential Directives on Reservation for SC/ST

- 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.
- Plants/Units of SAIL have SC/ST Employees' Welfare Associations which conduct regular meetings with Liaison Officers on implementation of reservation policy & other issues. In addition, an Apex level umbrella body namely SAIL SC/ST Employees Federation also exists in SAIL to represent the issues of SC/ST Employees in a coordinated manner.

10.3 Rashtriya Ispat Nigam Ltd. (RINL)

As on 31.12.2016, the total manpower with RINL was 17945 comprising of 2984 SCs (16.63%), 1326 STs (7.39%) and 2456 OBCs (13.69%).

Grant under Dr. B R Ambedkar Merit Recognition Scheme - SC and ST Categories

RINL Grants are meant exclusively for the children of employees belonging to Scheduled Castes and Scheduled Tribes. Under this, an award of Rs.1500/- per month for full duration of the course is given to those children who qualify 12th standard or intermediate exam and seek admission in Degree courses in Engineering/Architecture/Medical/Veterinary/Dentistry/ Agricultural Sciences/Pharmacy/Law. A total of 08 such awards are given to children of SC employees and 04 such awards to children of ST employees.

10.4 NMDC Ltd.

The total number of employees in NMDC as on 31.12.2016 was 5620 out of which 965 belong to Scheduled Castes (17.17%), 1200 to Scheduled Tribes (21.35%) and 1011 to OBCs (17.99%). 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.

10.5 MOIL Ltd.

MOIL is a labour intensive organization with 6239 employees on its rolls as on 31.12.2016. About 79.63% of the total strength belongs to SC/ST/OBC including 45.89% belonging to SC/ST. MOIL is also taking keen interest in development of the disadvantaged people living in the vicinity of the mines situated in remote areas by:

- Adopting villages near the mines and provided drinking water facilities, road maintenance, periodical medical check-ups and treatment to the people living in these villages.
- Provided tri-cycles to the physically challenged persons.
- Providing financial aid, stationery, books etc. to the school adjacent to the mining areas.
- Providing sewing machines to women for their development and self-employment.
- Organising training classes for self-employment scheme.

10.6 MSTC Ltd.

The total number of employees in MSTC Ltd as on 31.12.2016 was 312, out of which, 56 belonged to SCs (17.94%), 17 to STs (5.44%) and 61 to OBCs (19.55%). Out of 11 persons recruited during the year, 1 belonged to OBC, 1 to SC and 1 to ST.

The directives in matters concerning recruitment and promotion regarding the weaker sections have been duly complied with. Other directives issued from time to time regarding reservation, relaxation,



concession, etc. for the SC/ST/OBC/PWD candidates pertaining to the policies and procedures of the Government were duly observed. All Departmental Promotion Committees and Selection Committees (in case of recruitment) constituted during the year had representatives of SC/ST community.

During the year, 11 SC, 7 ST and 26 OBC employees of the Company, were sponsored for training programmes, both In-house and Institutional training programmes, out of which 4 employees were PWDs. 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.

10.7 Ferro Scrap Nigam Ltd. (FSNL)

Out of the total manpower with the Company i.e. 854 as on 31.12.2016, 167 belonged to SCs (19.55%), 98 belonged to STs (11.47%) and 123 OBCs (14.40%). The Promotion Policy as well as various welfare measures adopted by FSNL takes adequate care of welfare of the employees belonging to weaker sections of SC/ST/OBC communities.

10.8 Hindustan Steelworks Construction Ltd. (HSCL)

As on 31.12.2016, out of 44 employees on the strength of the company, 05 belonged to SCs (11.36%) & 07 to OBCs (15.91%). HSCL has been assisting in providing schools in areas where SC/ST/OBC & Physically Handicapped employees mostly reside. Children of SC/ST, OBC & Physically Handicapped employees get due preference in the matter of schooling at Projects. Plots were allotted to workers for making hutment in the land allotted at sites of client with electricity, water supply, and sanitation arrangement etc. Assistance is given for supply of drinking water. Directives of the Central Govt. with regard to recruitment and promotion in respect of SC/ST/OBC & Physically Handicapped employees are strictly adhered to. The Company also undertakes implementation of CSR projects on behalf of other PSUs for the benefit of the downtrodden people of the country.

10.9 MECON Ltd.

As on 31.12.2016, out of 1486 employees on the strength of the Company, 261 belonged to SCs(17.56%), 142 STs (9.55%) and 172 OBCs(11.57%). 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 programme, safe drinking water projects etc.

10.10 KIOCL Ltd.

The total number of employees in KIOCL as on 31.12.2016 is 925 out of which 141 persons belong to Scheduled Caste (15.24%), 51 persons belong to Scheduled Tribe (5.51%) and 154 persons belong to Other Backward Classes (16.64%).

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.

There is a regular interaction with the Management and SC/ST Welfare Association at Kudremukh, Mangaluru and Bengaluru. The grievances of SC/ST employees are discussed and appropriate action is taken to redress their grievances.

10.11 EIL, OMDC and BSLC

The total number of employees in Bird Group of Companies as on 31.12.2016 is 1195. About 81.17% of the total strength (970 out of 1195) belong to SCs/STs/OBCs, out of which, 265 belonged to SCs (22.18%), 612 to STs (47.11%) and 142 to OBCs (11.88%).



CHAPTER-XI

VIGILANCE

11.1 Activities of Vigilance Division of the Ministry of Steel

The Vigilance unit of the Ministry is headed by a Chief Vigilance Officer (CVO) of the rank of Joint Secretary appointed on the advice of the Central Vigilance Commission (CVC). The CVO with one Dy. Secretary, 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 CPSEs 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 CPSEs in consultation with CVC and DoP&T;
- 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;
- Eight CPSEs are functioning under the administrative control of the Ministry. The Vigilance Unit in all CPSEs is headed by a CVO appointed by DOP&T.

The Ministry reviews the vigilance activities in the Steel CPSEs 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 CPSEs on the need basis. All circulars containing instructions and guidelines on different aspects of vigilance management received from the CVC, were also circulated to the CVOs of the CPSEs for compliance. Progress thereon, in the form of follow up action taken, was monitored.

During 2016-17 (1.4.2016 to 31.12.2016), 20 CVC references were received and 18 CVC references were disposed off. From other sources, 67 complaints were received and 62 were disposed off.

During the period meetings were held with the CVOs of Steel CPSEs wherein the issues regarding transparency in recruitment process, adoption of fair promotion policy, transparency in public procurement, increasing of e-procurement, regular updation of purchase manual, conducting of DPCs within stipulated time, rotation of officers of occupying sensitive posts in CPSEs, disclosure of APARs of all executives were discussed and necessary instructions were issued to all CMDs/CVOs of Steel CPSEs. All CMDs of Steel CPSEs were requested to ensure full compliance of instructions/guidelines are issued by CVC, DoPT and DPE from time to time on various issues.

All CMDs/CVOs were also requested to ensure that 100% procurement should be shifted to e-procurement and all secondary items/material should be purchased/procured through GEM portal of DGS&D and all other items by using MSTC platform. They were also requested to install/provide POS like machines for digital payment from their CSR funds in line with GOI's recent initiative of less cash economy.



11.2 Steel Authority of India Ltd. (SAIL)

SAIL vigilance emphasizes on preventive vigilance through checks, scrutiny, examination and continuous review of existing systems and procedures and suggests system improvements thereby increasing organizational effectiveness. There is regular thrust on systemic changes & leveraging technology for transparent system and procedures. Following major thrust areas were identified and undertaken during the period April 2016 - December 2016:

- E-procurement in Contract Cell (Works & Non-works) including Township Contracts.
- Installation of CCTV cameras at Vigilance sensitive areas.
- Surveillance in the areas of receipt, sampling & testing of high value raw materials
- Development of Business Intelligence (BI) Modules in the existing ERP system in the Integrated Steel Plants and CMO for analytics in the areas of procurement & contracting, so as to generate exception alerts and red flags for corrective action / system improvements. BI Modules are assisting in Identification of various areas where Vigilance intervention is required
- Introduction of Geo Fencing using GPRS/GPS system for monitoring the movement of tippers / dumpers which are to be used by contractors for transportation of Iron ores to railway sidings which are at far off locations. The fleet monitoring system using geo fencing has been introduced in Kalta Mines and is being extended to Chiria Mines.
- In order to achieve 100% e-payment to employees as well as to suppliers / contractors, a comprehensive study was conducted by Vigilance and necessary actions have been suggested.
- A total of 120 training/awareness programme/workshops involving 2574 participants were organized at various plants and units of SAIL, for enhancing awareness on System and Procedures followed in SAIL.
- A total of 1912 periodic checks including file scrutiny and Joint Checks were conducted in vulnerable areas of different Plants / Units of SAIL, out of which 29 checks were taken up for detailed investigation, Preventive/Administrative recommendations were recommended in 406 cases and in five (5) cases System Improvements were recommended.



Sh. P.K. Singh, offering floral tributes to Sardar Vallabhbhai Patel at the opening ceremony of Vigilance Awareness Week-2016



- 24 system Improvements Projects (SIPs) were undertaken at different Plants/units of SAIL after identifying concern areas of system and decision making.
- Vigilance Awareness Week 2016 was observed from 31.10.2015 to 05.11.2015 across all the plants / units of SAIL on the theme of "Public Participation in promoting Integrity and eradicating Corruption".

11.3 Rashtriya Ispat Nigam Ltd. (RINL)

RINL took various measures to promote Transparency and Integrity in RINL with prime focus on Preventive Vigilance. IT was leveraged for bringing about greater transparency through e-initiatives like e-auction, e-reverse auction and e-payment etc. E-reverse auction is carried out in 100% of procurements through tenders (other than single tenders / proprietary cases) where the value is less than Rs. 2 Lakhs and more than one agency is qualified and e-auction constituted 100% of the disposals by Stores. 100% of Marketing transport contracts were finalized through reverse e-auction and 99.95% payments were made through e-payments.

The following activities were undertaken to promote transparency and integrity in RINL during the period April 2016 to December 2016:

- Conducted 257 system surveillance checks including 36 quality checks and 45 rail/road re-weighments.
- Organized 24 Vigilance Awareness Sessions on Preventive Vigilance / Ethics
- Observance of Vigilance Awareness Week - 2016 was done vigorously with the theme "Public participation in promoting Integrity and Eradicating Corruption". Introduced an 'On line Vigilance Clearance Module in ERP Package.
- Two Vigilance Officers of RINL bagged National Vigilance Excellence Award-2016

11.4 NMDC Ltd.

NMDC Vigilance Department guides and facilitates impartial, fair and transparent decision making and gives priority to preventive vigilance, with proactive measures. Department had taken several initiatives during the year. Various programmes were conducted for awareness on vigilance matters for the employees of the Corporation. Vigilance Department in NMDC is certified under ISO 9001:2008 conforming to the Quality Management System.

During the year (April - December 2016) 70 surprise checks, 67 regular inspections and 07 CTE type inspections were conducted by Vigilance Department. Complaints received were taken up for investigation and necessary disciplinary action wherever required was recommended.

As part of implementation of "Leveraging of Technology for transparency" in all the transactions, information about limited tender enquiries above Rs.30 lakhs, details of contracts concluded above Rs.10 lakhs, works awarded on nomination basis, single tender basis above Rs.1 lakh, information regarding bill payments to the contractors etc., are provided on the company's website. Efforts to encourage e-procurement, e-tender, e-auction are being made continuously.

NMDC has adopted implementation of Integrity Pact since November 2007. The threshold limit of Rs.20 crores in case of civil works and contracts and Rs.10 crores in case of procurement is being followed. Till date, the Integrity Pact is entered into 109 contracts with a value of Rs. 19,102 crore. As such, more than 90% of the total value of the contracts is covered under Integrity Pact.

The Vigilance Awareness Week 2016 was celebrated with theme of the year "Public participation in promoting Integrity and eradicating Corruption" from 31.10.2016 to 05.11.2016 with administration of pledge by all the employees on 31.10.2016.



Vigilance Awareness Week at MOIL

11.5 MOIL Ltd.

The functioning of vigilance department includes preventive as well as proactive vigilance with the main thrust on the "System Improvement" in the organization. Some of the important activities of the vigilance department during the year 2016 are as under:

- Surveillance audit of ISO-9001:2008 Certificate of vigilance department has been carried out in the month of May 2016.
- During 2016, 52 periodic and surprise inspections and scrutiny were carried out.
- E-procurement is being done for purchases and work contracts above threshold value. The threshold value for purchase is Rs. 10 lakhs and for Works contracts is Rs. 20 Lakhs. The disposal of scrap / surplus items and sale of some grade of Manganese Ore are being done through e-auction.
- Effective use of website and leveraging technology in discharge of regulatory, enforcement activities and dealing with complaints is being done. The main thrust areas are procurement of goods and contracts. Also, online vendor registration and status of bill payments to contractors / suppliers are published on website. All Tender documents, applications for recruitment and status, notices and other pro-forma were posted on the website.
- Various manuals such as Purchase Manual, Works and Contract Manual, Personnel Manual, Marketing Manual etc. have been prepared and put in practice. Purchase Manual, Works and Contract Manual, Personnel Manual are posted on the Company's website / intranet.
- Tenders / contracts issued above a threshold value of Rs. 30 lakhs are being posted on the website regularly every month, and the same is being monitored.
- 265 posts have been identified for job rotation considering the sensitivity of the posts and are being rotated by the management.
- Vigilance Awareness Week was observed from 31st October to 5th November 2016 at all Mines / offices of MOIL Limited. On this occasion, Vigilance Department came out with the 5th annual issue of vigilance magazine "Shuchita".



11.6 MSTC Ltd.

The prime focus of the Vigilance Department of MSTC has been on preventive Vigilance through the use of leveraging technology. The main thrust is to suggest systemic improvement in the identified vulnerable area of corruption in order to minimize the human interface in business transactions of the Company.

The highlights of some of the measures taken in this connection during 2016-17 are as under:

- Structured Meetings are being held quarterly by the CVO with the CMD.
- Vigilance Work/Disciplinary Cases were reviewed by the Board of Directors in the 256th Board of Directors Meeting
- Interactive Sessions were being organized with employees both at the Head office and various regional offices/branch offices to create vigilance awareness.
- Training Programmes/Workshops were being organized for Vigilance Officials.
- Two categories of Sensitive Posts have been identified. One category of sensitive posts which are to be rotated and the other category which are being kept under watch but not to be rotated.
- Risk Profile of the organization has been drawn up and Mitigation Plan is being formulated.
- Meeting with Independent External Monitor was held in the year to review the implementation of the Integrity Pact. The IP is part of the NIT document, Selling Agency Agreement which is uploaded on the MSTC Website in downloadable form and all bidders are required to submit signed IP along with their bids. So far no representation/ complaints/disputes have been received in the matters of contracts and tenders under IP.

11.7 Ferro Scrap Nigam Ltd. (FSNL)

Vigilance Department of FSNL had taken several initiatives during the period with specific focus on preventive vigilance and systematic improvement in the organization which is briefly mentioned below:-

- 06 nos. of complaints received, out of which 04 complaints were investigated and report submitted. Remaining 02 complaints are under investigation.
- 04 structured meetings between CVO and MD were held during the period.
- Agreed List for the year 2016 was finalized.
- Vigilance Awareness week 2016 was observed with the theme of "Public Participation in Promoting Integrity and Eradicating Corruption" from 31st October 2016 to 5th November 2016.
- Annual Performance Appraisal for Executive has been made online.
- Payments to vendors are made through RTGS/NEFT. Reimbursements of expenses to the employees are also made through RTGS/NEFT.

11.8 Hindustan Steelworks Construction Ltd. (HSCL)

The Vigilance Department of the Company is headed by CVO.

- HSCL observed 'Vigilance Awareness Week -2016' at various unit of HSCL throughout the country w.e.f 31st October to 5th November.
- Good initiatives like e-procurement, e-payment, e-receipt and on-line vendor registration system have been introduced resulting in greater transparency and accountability in the system.
- Vigilance activities were reviewed by the Board of Directors on half yearly basis.
- Integrity Pact meeting with Independent External Monitor is being done periodically. Till date total 243 Integrity Pacts have been signed. No complaint has been received by IEM till date.
- ISO Certification (Surveillance Audit) was done on 17.8.2016.



Pledge ceremony on the occasion of Vigilance Awareness Week at Mecon Ltd.

11.9 MECON Ltd.

The Vigilance Department of MECON Ltd. has taken a number of initiatives, briefly mentioned below:-

- The Vigilance Awareness Week-2016 was observed commencing from 31st October 2016 at MECON Head Office, Ranchi and MECON Site Offices at various other locations.
- Till December 2016, MECON has signed Integrity Pact (IP) with 113 suppliers/contractors [Threshold value lowered for wider coverage : Rs.1 Cr. & above for EPC Projects and Rs.25 Lakhs & above for Town Admn. as well as for Inhouse Procurement].
- Vigilance Department follows a well-established Quality Management System (ISO 9001:2008) and has its own Vigilance Quality Manual
- Sensitive departments have been identified in the organization and thrust is laid on conducting Surprise/ Regular Inspections and scrutiny of files in these areas.
- All tenders irrespective of value are uploaded on MECON Website along with the tender documents, drawings and data, technical specification, etc. in downloadable form for greater transparency, barring some small emergency procurements. All tenders are also uploaded on CPP Portal.
- All payments to vendors are made through electronic fund transfer (NEFT/RTGS mode) except some small bills to local vendors.

11.10 KIOCL Ltd.

- Integrity Pact Programme (IP) was introduced in KIOCL from 01.01.2008. No complaints have been received under IP.
- ISO-9001:2008 Certificate of Vigilance Department has been re-validated.
- Inspections are being carried out regularly to ensure adherence to norms and eliminate deviations. During 2016-17 (till December, 2016), 3 CTE inspections, 29 surprise checks, 28 general inspections and 36 scrutinizes were carried out.



- Disposal of scrap/ surplus items is being done through e-auction, since September, 2004. E-reverse auction commenced from Sep-2010. The threshold value for e-procurement is fixed at Rs. 5 Lakhs and above. During 2016-17 (upto December, 2016), 99.33% of contracts by value above the threshold are concluded under e-reverse auction. Payments above the threshold value of Rupees One Lakh are being made through electronic mode. During 2016-17 (upto December, 2016), 99.6% of payments above the threshold are made through e-payment.
- KIOCL has been using website in various areas from 2001. The main areas concerned 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.
- Accounts, Contracts, Projects, Technical Services, HR, Purchase and Stores manuals are posted on the Company's website. Updation of manuals is carried out on continuous basis.
- As per CVC circular, action is taken to ensure that tenders / contracts are posted in the website regularly every month, and are being monitored.
- During 2016-'17 (upto December, 2016), Vigilance Department conducted 13 training programmes at three different locations, covering 536 employees.
- Vigilance Awareness Week was observed from 31st October 2016 at all the locations / offices of KIOCL Limited.

11.11 EIL, OMDC and BSLC

These Companies have its Vigilance Department headed by the Chief Vigilance Officer (CVO) of RINL, and assisted by one Vigilance Officer and PSO to CVO in Head office, Kolkata. In addition two Vigilance Officers (additional charge) are appointed for both OMDC mines, Thakurani and BSLC mines, Birmiritrapur. The functions of Vigilance department include both preventive and punitive actions for all the mines of the company and for the Registered Office at Kolkata. Company's Vigilance department is continuing its efforts for systematic improvement to bring more and more transparency in working and conducted various training programme interactive sessions for creating Vigilance Awareness among the employees. As per the directives of Central Vigilance Commission the company observes "Vigilance Awareness Week" every year.



CHAPTER-XII

GRIEVANCE REDRESSAL MECHANISM

12.1 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 for the period from 01.04.2016 to 31.12.2016 are as under:

Outstanding as on 01.04.2016	Received during 01.04.2016 to 31.12.2016	Disposed of during 01.04.2016 to 31.12.2016	Pending as on 31.12.2016
143	1613	1640	116

A revised Sevottam Compliant Citizen's/Clients Charter has been finalized and implemented in the Ministry of Steel. Detailed status of adoption of 'Seven Step Model for Citizen Centric- Sevottam' in the Ministry and Steel PSUs is at Annexure XVI.

The position of the implementation of the judgment/orders of the Central Administrative Tribunal is given in Annexure-XII.

12.2 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 Public/Staff grievances for the period 01.04.2016 to 31.12.2016 is as under:

Types of Grievances	Grievances outstanding as on 01.04.2016	Grievances received during April to December 2016	Grievances disposed off during April to December 2016	No. of Grievances pending as on 31.12.2016
Public Grievances	17	929	928	18
Staff Grievances	1	280	268	13

12.3 Rashtriya Ispat Nigam Ltd. (RINL)

In RINL, structured formal and informal Grievance Handling System for redressal of grievances of employees exists, separately for Executives and Non-Executives. In the formal Grievance Redressal



Procedure for non-executives, a worker's representative is present in the committee. Further, both executives and non-executives grievance handling systems have a fixed time frame to redress the grievances.

Status of Public/Staff grievances for the period 01.04.2016 to 31.12.2016 is as under:

Types of Grievances	Grievances outstanding as on 01.04.2016	Grievances received during April to December 2016	Grievances disposed off during April to December 2016	No. of Grievances pending as on 31.12.2016
Public Grievances	0	48	47	1
Staff Grievances	0	0	0	0

12.4 NMDC Ltd.

The grievance redressal machinery in NMDC is headed by a 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. 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.

Status of Public/Staff grievances for the period 01.04.2016 to 31.12.2016 is as under

Category	Grievances outstanding on 01.04.2016	No. of Grievances received during the year (Apr - Dec. 2016)	No. of cases disposed off (Apr - Dec. 2016)	No. of cases pending as on 30.12.2016
Staff Grievances	0	37	37	0
Public Grievances	18	67	84	1

12.5 MOIL Ltd.

MOIL has its own grievance redressal procedure for Executives as well as non-executive employees. The redressal of grievance machinery in MOIL consists of one Grievance Officer nominated for at each unit/mine. The Grievance Officer nominated at Head Office co-ordinates with the Grievance Officers at the units for their effective performance.

Status of Public/Staff grievances for the period 01.04.2016 to 31.12.2016 is as under:

Types of Grievances	Grievances outstanding as on 01.04.2016	Grievances received during April to December 2016	Grievances disposed off during April to December 2016	No. of Grievances pending as on 31.12.2016
Public Grievances	0	0	0	0
Staff Grievances	0	05	05	0

12.6 MSTC Ltd.

MSTC has Public Grievance Redressal Cell in its each office. Each cell consists of three executives. There are total eight (08) cells in Head office, regions and branches of the organisation. There is facility of online registration for lodging grievance on the Company's website. MSTC has also implemented Centralized Public Grievance Redress and Monitoring System (CPGRAMS) for online receipt and disposal of public grievances, so that grievance can be sorted out immediately and to take action to solve the cases. Action is taken to address and redress grievances received from outside and from staff of the organisation. Periodical meeting is held for review of the status of grievances. Monthly and quarterly reports for Public Grievance Redress are sent to the Administrative Ministry.



Existing mechanism is working satisfactorily. Grievances from the employees are also taken care by the HOD's and Region/Branch Managers. Moreover, the HR Dept. attends to various formal/informal grievances received from employees in day to day running of the office in consultation with the HOD's & Staff Unions, wherever necessary. The organisation makes proactive disclosure of services it provides to the clients and common man and contact details of public grievance authority of the organisation.

Status of Public/Staff grievances for the period 01.04.2016 to 31.12.2016 is as under:

Types of Grievances	Grievances outstanding as on 01.04.2016	Grievances received during April to December 2016	Grievances disposed off during April to December 2016	No. of Grievances pending as on 31.12.2016
Public Grievances	0	34	31	3
Staff Grievances	0	0	0	0

12.7 Ferro Scrap Nigam Ltd. (FSNL)

Status of Public/Staff grievances for the period 01.04.2016 to 31.12.2016 is as under:

Types of Grievances	Grievances outstanding as on 01.04.2016	Grievances received during April to December 2016	Grievances disposed off during April to December 2016	No. of Grievances pending as on 31.12.2016
Public Grievances	1	0	1	0
Staff Grievances	0	1	1	0

12.8 Hindustan Steelworks Construction Ltd. (HSCL)

Compliance with regard to Public/Staff Grievance Redressal was made during 2016-17. 68 grievance applications received during the year were replied in time.

12.9 MECON Ltd.

Public Grievances

By and large MECON does not have dealings with the public in general. But any specific complaints 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. MECON has nominated Nodal Officer under Centralized Public Grievances Redressal and Monitoring System (CPGRAMS) for public grievances and the name of Nodal Officer is published in the website of Ministry of Personnel, Public Grievances.

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. 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.



12.10 KIOCL Ltd.

KIOCL has a well structured and multilayered Public Grievances Redressal Mechanism including Dispute Resolution Mechanism. The Public Redressal setup in KIOCL has been introduced right from the Corporate Office at Bangalore to all the production units, project offices and liaison offices. Customers & stakeholders having complaints or grievances can interact with the organization through the following for Public Grievance / Dispute settlements: -

- Public Grievance Officers are nominated at all locations. The complainant can approach these officers in person or through written complaints or communicate through e-mail or contact on telephones.
- Customers meets are organized at regular intervals.

The development of Sevottam Compliant Citizen's Charter has been put in place in our corporate website: www.kioclltd.in. Company has provided a linkage in its website to the portal of Centralized Public Grievance Redress and Monitoring System (CPGRAMS) of Department of Administrative Reforms & Public Grievances for lodging and redressal of grievances.

Status of Public/Staff grievances for the period 01.04.2016 to 31.12.2016 is as under:

Types of Grievances	Grievances outstanding as on 01.04.2016	Grievances received during April to December 2016	Grievances disposed off during April to December 2016	No. of Grievances pending as on 31.12.2016
Public Grievances	0	0	0	0
Staff Grievances	0	3	3	0

12.11 EIL, OMDC and BSLC

Grievance Redressal Mechanism is in these companies at Unit Level and at Corporate Level. Nodal Officer has been notified for this purpose. The name & designation of the officer have been posted in the company website. No Staff or Public Grievance has been received during the period from 01.04.2016 to 31.12.2016



CHAPTER-XIII

IMPLEMENTATION OF PROVISIONS OF PERSONS WITH DISABILITIES ACT, 1995

13.1 Ministry of Steel

The Ministry of Steel follows the Government's rules with regard to the implementation of provisions of the Disabilities Act, 1995. As on 31.12.2016, three persons (one visually handicapped (VH), one hearing handicapped (HH) and one orthopedically handicapped (OH) with disabilities are employed in the Ministry of Steel. The posts belonging to Secretariat Services are filled by Department of Personnel and Training.

13.2 Steel Authority of India Ltd. (SAIL)

- Provisions related to reservation for Persons with Disabilities in terms of The Persons with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act, 1995 is followed at Plants/units of SAIL.
- SAIL provides scholarship to the physically disabled children of its employees to support their education.
- Employee 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 disabled 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 disabled and dependent on the employee.
- Shops, STD booths, Milk booths, Hawkers licenses etc. are allotted to disabled persons in plants of SAIL.
- Various facilities for sports and cultural activities are provided exclusively for the disabled persons at plant locations. Separate playgrounds have been earmarked for the handicapped at some of the plant locations.

13.3 Rashtriya Ispat Nigam Ltd. (RINL)

The following actions have been taken up at RINL for the convenience of the differently-abled persons at different offices at main administrative building / corporate office.

- Providing Ramp Way
- Auditory Signal in the lifts of the Administrative building
- Provision of a wheel-chair at the Reception Centre located at the entrance of the Main Administrative Building
- Provision of exclusive parking place next to main entrance
- Conducted competitions for employees with disability in the categories of (i) Essay Writing (ii) Slogan (iii) Debate (iv) Various Sports and Games. The prize distribution function was held on the "International Day of Persons with Disability".



13.4 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 efforts are being made to induct PwDs in posts where field work is not involved and at present NMDC has 100 employees with disabilities in various posts. A special drive was conducted to fill up shortfall in Group D posts and 63 posts were filled up during the year.

NMDC has taken several steps for convenience of differently enabled persons visiting the Administrative Offices of the Company like providing ramp way, auditory signal in the lifts etc. During the year, Accessibility audit was conducted and where shortfall was noticed, the same was corrected. The differently enabled persons are also provided with the option of drawing allowances like Conveyance Allowance either as per NMDC's scheme or as per the Central Government's scheme. Employees in the Projects who become disabled while in service are redeployed in identified posts.

13.5 MOIL Ltd.

The Company has implemented the provisions of "Persons with Disabilities Act, 1995".

13.6 MSTC Ltd.

As on 31.12.2016, 09 persons with disabilities are employed in MSTC.

13.7 Ferro Scrap Nigam Ltd. (FSNL)

FSNL is a service organization, rendering its specialized services to the customer plants in scrap management & allied jobs. The activities of FSNL operations are carried out in open area in all the seasons. Further, heavy equipment such as Balling Cranes, Magnetic Separators, Dozers, Dumpers etc. are the main equipments used in carrying out operational activities. Thus, the atmosphere/working conditions of FSNL are not conducive for the persons with disabilities and hence engagement of disabled persons for carrying out jobs infield will not be safe for them.

However, in adherence of the Government directives, three posts each in Executive & Non-executive categories for persons with disabilities, one each for Visually Handicapped, Hearing Impaired and Orthopedically Handicapped under Group-A & Group-C categories in Ministerial Category have been identified. FSNL being a service organization, the recruitment in FSNL are made only on needbase, depending on availability of jobs from the customer plants.

13.8 Hindustan Steelworks Construction Ltd. (HSCL)

As on 31.12.2016, there is no employee with disability in HSCL Ltd.

13.9 MECON Ltd.

The Company has implemented the provisions of "Persons with Disabilities Act, 1995". Total employment strength of MECON as on 31.12.2016 is 1486, out of which 10 employees are persons with disabilities.

13.10 KIOCL Ltd.

As on 31.12.2016, 13 employees belonging to Persons with Disabilities category in different groups are in position in KIOCL.

13.11 EIL, OMDL and BSLC

EIL is only a shell company with only one employee on its strength. OMDL and BSLC are mining organizations governed by provisions of the Mines Act and rules and regulations thereof. Considering the safety factor it is not feasible to engage persons with disability in mines/plant.



CHAPTER-XIV

PROGRESSIVE USE OF HINDI

14.1 Introduction

Ministry of Steel has made considerable progress in use of Hindi in official work during the year 2016-17 keeping in view the Annual Programme prepared and issued by the Department of Official Language [Ministry of Home Affairs] for implementation of the Official Language Policy of the Union.

The work relating to the progressive use of Hindi in the Ministry is under administrative control of a Joint Secretary. Rajbhasha Division under direct charge of Joint Director (Official Language) looks after the work relating to implementation of Official Language Policy and Hindi Translation work and it consists of one Assistant Director (OL), two Senior Hindi Translators, two Junior Hindi Translators, one PS, one ASO and other supporting staff.

14.1.1 Official Language Implementation Committee

There is an Official Language Implementation Committee working under Chairmanship of a Joint Secretary in the Ministry. This Committee reviews the progress made in use of Hindi in the Ministry and its Public Sector Undertakings. Meetings of the Committee are held regularly. Four such meetings have been held during 2016-17.

14.1.2 Hindi Salahakar Samiti

Hindi Salahakar Samiti works under the Chairmanship of Union Minister of Steel with the main objective to advise the Ministry with regards to progressive use of Hindi in its official works. The first meeting of the reconstituted Hindi Salahakar Samiti was held on 19.11.2016.

14.1.3 Implementation of Section 3(3) of the Official Languages 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 Languages 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.



Meeting of Hindi Salahkar Samiti held under the Chairmanship of Hon'ble Minister of State for Steel



14.1.4 Hindi Divas/Hindi Fortnight

In order to encourage use of Hindi in official work amongst officers/employees of the Ministry, an appeal was issued by the Hon'ble Minister of Steel on 14th September, 2016 on the occasion of Hindi day. Hindi Fortnight was organized in the Ministry from 1st September to 15th September, 2016. During this period, eight Hindi competitions were organized to create an atmosphere conducive to use of Hindi in the official work and prizes were also distributed by Secretary (Steel) to the winners of the various competitions on 29.12.2016.

14.1.5 Cash Award Scheme for writing original books in Hindi

Cash award scheme for writing original books in Hindi in the matters concerning steel and being dealt with by Ministry of Steel is in operation comprising 1st, 2nd and 3rd prizes of 25,000/-, 20,000/- and 15,000/- respectively. Objectives of the scheme is to encourage the writers to write original books in Hindi. The entries for the cash award scheme for the years 2014-15 & 2015-16 have already been invited.

14.1.6 Official Language Inspections by the Officers of the Ministry

The Officers from the Ministry visited 36 various offices of the PSUs upto 23.01.2017 under the administrative control of the Ministry to adjudge the progressive use of Official Language in those offices and remedial measures were suggested for compliance of Official Language policy of the Union in these offices.

14.2 Steel Authority of India Ltd. (SAIL)

SAIL has continued its thrust on implementation of the Official Language Policy of the Government of India. Continuous efforts are being made by SAIL for the propagation of Hindi.

In the area of Hindi Computerisation, 53 jobs have been done through integrated system with the help of C & IT department (Software Group). Facility of online submission of forms for monthly Hindi incentive is being provided to SAIL employees.

SAIL was awarded with Ispat Rajbhasha Trophy (3rd prize) for 2014-15 for excellent work in Hindi by Hon'ble Minister of State for Steel during the Hindi Advisory meeting of the Ministry of Steel on 19th November, 2016 at New Delhi.



SAIL bagged Ispat Rajbhasha Trophy (3rd Prize) for 2014-15



'Ispat Bhasha Bharati', the in house Rajbhasha journal the form of e-Patrika is being made available on SAIL portal, as a result of which the magazine can now be viewed by all SAIL employees at our plant/ units.

SAIL Organized "Rajbhasha Pakhwada" from 14 to 28 September, 2016 during which Hindi Competitions like Noting/ Drafting, Essay writing, Dictation, Memoirs Writing, Poem Recitation, Quiz, etc. were organized, in which large number of employees participated. In addition, this year Poem recitation competition was organized for the children of the SAIL employees, in which there was overwhelming participation of the kids. This was first ever attempt to link families of the employees with the "Rajbhasha Pakhwada" directly. On the concluding day, a workshop on "Digital Madhyam: Hindi ki Sarthaktaa evam Sambhavnayen" was organized, in which employees were made aware of modern Hindi Tools and their usage.

Under the Chairmanship of SAIL, NARAKAS Upkram, Delhi was awarded with 3rd prize for 2015-16 in Region 'A' for excellent work in the progressive use of Hindi in the "Regional Official Language Conference & prize distribution function" organized by Official Language Department, Ministry of Home Affairs, Govt. of India on 6th October, 2016 at Agra.

14.3 Rashtriya Ispat Nigam Ltd. (RINL)

At RINL, Official Language Policy and Specified Rules are followed as per Annual Programme issued by Department of Official Language, Ministry of Home Affairs, Government of India.

Initiatives taken towards progressive use of Hindi and recognitions received during the year 2016-17 (till Dec'16) are given below:

- 198 employees were trained for Hindi Prabodh/Praveen/Pragya courses conducted by Hindi Teaching Scheme, Department of Official Language, Ministry of Home Affairs, Govt. of India.
- 47 employees were trained to work on computers in Hindi through Unicode.
- 47 Executives of E-7 and above grades were trained with regard to OL Policy and Rules by expert aculty.



RINL bagged Rajbhasha Keerti Puraskar for the year 2015-16



- Conducted Hindi Workshops at HQ & Regional/Branch Sales Offices/Liaison Offices/Mines where in 545 employees participated.
- A special workshop conducted on Parliamentary Questionnaire for member organizations of Town Official Language Implementation Committee, Visakhapatnam and also a special workshop was conducted for Women employees of RINL.
- In addition to periodical inspections conducted at 14 RO/ BSOs on OL usage by Rajbhasha Vibhag of RINL, officials from Ministry of Home Affairs & Ministry of Steel inspected in some of offices spread across the country.
- Quarterly Hindi Magazine 'Sugandh' is being published timely in order to meet the dual objective of implementing the Hindi usage and encourage the involvement of employees to write technical articles etc.
- First Prize of Rajbhasha Keerti Puraskhar for in-House Hindi Magazine 'Sugandh' under Gruha Patrika Category for the year 2015-16 by Department of Official Language, MoH, GOI.
- Second Prize of Rajbhasha Keerti Puraskar for effective implementation of Official Language in the year 2015-16 by Department of Official Language, MoH, GOI.
- First prize of Ispat Rajbhasha Shield for 2014-15 and Second Prize Ispat Rajbhasha Trophy for 2015-16 by Ministry of Steel, Government of India.
- First Prize for effective Implementation of Official Language in the year 2015-16 by TOLIC, Visakhapatnam.

14.4 NMDC Ltd.

NMDC Limited continued its efforts to successfully implement Official Language Policy of Govt. of India and related Act and Rules in its Headquarter, projects and units.

Hindi Workshops were conducted in every quarter at Headquarter and its Projects/units in order to impart training to Officers and employees to do their official work in Hindi. Training on Unicode Hindi Software was also imparted. Hindi Stenography training classes were conducted regularly.

To propagate use of Official Language, cash incentive schemes for noting and drafting in Hindi, entries in registers in Hindi, dictation in Hindi were operated. Hindi Fortnight was organized during which various competitions were conducted and prizes were distributed. To encourage use of Hindi, "Monthly Hindi Competitions for Non-Hindi speaking personnel" were conducted.

Meetings of Official Language Implementation Committees of Headquarter and various projects /units were conducted in every quarter. To monitor implementation of Official Language Policy and suggest ways and means to improve upon that, inspections of various projects and units were done and desk trainings were also conducted during such inspections. Various departments at Headquarter were also inspected and desk training imparted to personnel working in these departments.

During the year Rajbhasha Technical Seminars were conducted. House Journal in Hindi "Khanij Bharati" was published from Head Office. Hindi / bilingual magazines viz Sarjana, Takaneeki Sopan, Takaneeki Khitiz, Baila Samachar, Bacheli Samachar, Doni Samachar, Nisp Patrika and NMDC Samachar, SHE News were published from Head Office and Projects.

Ispat Rajbhasha Shield (First Prize) awarded to NMDC Limited for the year 2015-16 by Ministry of Steel in recognition of work done in field of implementation of Official Language. Rajbhasha Shield was awarded to NMDC Headquarter by Town Official Language Implementation Committee (Undertakings), Hyderabad-Secunderabad in recognition of commendable work done in field of implementation of Rajbhasha.

14.5 MOIL Ltd.

In all units of MOIL, majority of the work is being done in Hindi. The Unicode system has been installed in all computers. MOIL has provided Hindi language software in computers and is imparting training to its employees so that MOIL's employees can use the same in their day to day working.



Employees are being given re- training under the "Hindi Education Scheme" of Ministry of Home Affairs. 312 employees have already been given training for Pragya (High level).

The in-house Hindi magazine "SANKALP" which contains excellent works done by the company in the field of Hindi, has been appreciated by the Nagar Rajbhasha Karyanven Samiti, Nagpur. The officers and employees of MOIL participate in various competitions organized by the Samiti. Employees are encouraged to participate in various competitions in Hindi conducted by other institutes as well.

14.6 MSTC Ltd.

Rajbhasha Trimas was inaugurated on 14 September 2016. During this period, Hindi competitions and Hindi workshops were organised in head office and in regional and branch offices. Total 23 officers/ employees were awarded prizes for winning in Hindi competitions and for passing Hindi examinations. Total 16 employees were nominated for the Hindi examinations conducted by Hindi Teaching Scheme, Official Language Dept., Government of India and 07 employees were nominated for training in Hindi work on computer during the year.

Hindi Patrika "Sangati" was released by Hon'ble Minister of State for Steel in the Meeting of Hindi Salahakar Samiti held on 19.11.2016. Hindi Seminar was organised on 23.9.2016 at Scope Complex, New Delhi under the Chairpersonship of Secretary, Steel.

TOLIC meetings were attended regularly. Officials attended OLIC meetings of Ministry of Steel held during the year. OLIC meetings were arranged in the office. As per the Official Language Act, inspection was done in Head Office and regional and branch offices.

Surveillance Audit of ISO 9001:2008 of Official Language Department was arranged.

14.7 Ferro Scrap Nigam Ltd. (FSNL)

FSNL ensures strict adherence of the directives received from the Government time to time with regard to implementation of Official Language policy.

A month long "Hindi Mah", in place of fortnight (Hindi Pakhwada) was observed at Corporate Office & all units of FSNL in September 2016. During the Hindi Mah, the competitions like Hindi Essay writing, Hindi Gyan Pratiyogita, Hindi Debate competitions etc., were organized.

The Hon'ble President of India awarded Rajbhasha Kirti Puraskar (3rd Prize) to FSNL on 14th September 2016 at Rashtrapati Bhawan, New Delhi,

The "Town Official Language Implementation Committee", Rourkela, has awarded "Rajbhasha Shield - 2015" to FSNL, Rourkela Unit on 18th Oct.2016 for best implementation of official language policy.

FSNL's Hindi house journal "Ferro Jyoti" (April-Sept.'16 issue) was released by the Hon'ble Minister of State for Steel on 19th Nov.2016 on the occasion of Hindi Salahakar Samiti Meeting held at New Delhi.

14.8 Hindustan Steelworks Construction Ltd. (HSCL)

HSCL continued to encouraging the use of Hindi to implement the Official Language Policy and programme of the Department of Official Language, Government of India, Ministry of Home Affairs. Company's website has been made bilingual, House Journals and Circulars are published in Hindi and English both. Hindi Day is celebrated with debates and other competitions organized at the Head Office and at the units of the Company. HSCL is also an active member of Town Official Language Implementation Committee (PSUs), Kolkata and regularly contributing and participating in all the TOLIC activities. The Company was awarded with Rajbhasha Puraskar for the Year 2014-15 by the TOLIC for progressive use of Hindi and implementation of Rajbhasha policy programme as per directives issued by Department of Official Language, Govt. of India Ministry of Home Affairs. The award was conferred by Hon'ble Governor of West Bengal. Besides this, the Company was awarded with Ispat Rajbhasha Trophy for 2014-15 and 2015-16 by Hon'ble Minister of State for Steel. The scroll of honour was awarded to Rajbhasha Adhikari in recognition to his contribution for implementation of Rajbhasha in the Company. Hindi pakhwara was organized in HSCL from 14th September 2016 to 28th September 2016. Several competitions were held on writing abilities in different categories of employees. Successful participants



were awarded on the concluding day of the pakhwara. Writing of personal applications by the employees in Hindi has been made mandatory.

14.9 MECON Ltd.

MECON is effectively implementing the Official Language Policy of Govt. of India in its official work. There is an Official Language Implementation Committee under the Chairmanship of CMD. MECON is an important member of Town Official Language Committee, Ranchi and actively participates in all the programmes.

MECON has been awarded with 'Sarvotkrishta Rajbhasha Shree Shield' & Certificate by the Mahanagar Samanvay Samiti, Kolkata under the agies of Kendriya Sachiwalaya Hindi Parishad, New Delhi in the Rajbhasha conference, 2016 held in Kolkata on 12th August, 2016.

"Hindi Pakhwara" was observed in MECON at Head Office as well as in all the site offices of the company from 14.09.2016 to 28.09.2016. On this occasion, all employees took a pledge to increase use of Hindi in their day to day official work. During the "Hindi Pakhwara", competitions of various nature were also organized at Head Office and other offices of the Company. These include Hindi Essay and Extempore Speech competitions in Hindi. A special Hindi workshop and one Rajbhasha symposia on "Unicode ke jariye Hindi me Kam Kaj" were organised during the Pakhwara. Besides, the company also observed 'Rashtrakavi Ram Dhari Singh "Dinkar" Jayanti' during Hindi Pakhwara.

A Hindi House Magazine - "MECON BHARATI" is also being published. This magazine provides a platform for Employees for creative writing in Technical field in Hindi.

14.10 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, Government of India for the Progressive use of Official Language Hindi.

During the year, 04 Hindi workshops were conducted to impart practical training to employees for doing their official work in Hindi.

Hindi Fortnight was celebrated at all locations of KIOCL in September 2016. Hindi Programmes and several Hindi Competitions were held and prizes distributed to the winners.

KIOCL is Convener of Bangalore Town Official Language Implementation Committee (undertakings) and conducts regular meetings and Joint Hindi Month programmes for all Central PSUs in Bangalore. The meetings were conducted on 27th July, 2016 and 28th December, 2016.

Organized a Joint Hindi Month for Town Official Language Implementation Committee (Undertakings) members between 11th July to 10th August, 2016 and seventeen Competitions were conducted. Most of the PSUs Officers in Bangalore have participated in these Competitions.

Conferred with Regional award for the progressive use of Official Language at the town level for the year 2014-15 during the South & South West Regional Conference at Kochi on 19.02.2016 by Secretary of Department of Official Language, Ministry of Home Affairs, Govt. of India.

14.11 EIL, OMDC and BSLC

These Companies have taken positive steps to enhance awareness and usage of Hindi among employees. Companies had observed "Hindi Pakhwada" during September, 2016. These companies are ensuring steps under the directives of the Official Language Act to use and propagate the use of Hindi in all its offices. Bilingual Boards and advertisements are being issued. "Rajbhasha Shikshan Board" is put up at Head Office to appraise the employees with new words everyday. Companies have taken positive steps in to enhance awareness and usage of Hindi among employees. 'Rajbhasa Training classes were conducted under "Hindi Sikhsan Yojana" for learning Hindi and use of Hindi language for official use. Employees are putting signatures in attendance registers and despatch registers are maintained in Hindi. "Prabin , Pragya & Parangat" exams have been completed.



CHAPTER-XV

EMPOWERMENT OF WOMEN

15.1 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, recognized 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 Complaint Committee (Sexual harassment of women at work place) with representatives from outside the organization was constituted.

In compliance of the guidelines of the Supreme Court, Ministry of Steel has constituted a five-member Committee, headed by a Deputy 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 2016-17, and the same is a broad indicator of excellent environment for women work force in the Ministry.

Empowerment of Women

A 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 of implementation of the concept in this Ministry.

15.2 Steel Authority of India Ltd. (SAIL)

SAIL employs women employees in both technical and Non-technical area. There are women in managerial, technical (engineers) capacity, in medical, para-medical services and in academics. The Company does provide equal opportunities to both genders in selection, recruitment and placement or at promotion levels.

An equal career growth opportunity to all employees irrespective of the gender is the hallmark of SAIL's Policy towards professional development of its employees. The growing number of women in senior positions is an indication of this fact.



Women employees working diligently at SAIL



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

Benefits to Women Employees

Separate toilets have been provided at all locations where women employees are posted /engaged both in technical as well as non technical areas. Washrooms, Canteens etc. for all employees in the Company's plants and units are available. Constant efforts are made for improving the hygiene conditions at workplace for all employees especially the women employees. The statutory compliance of the Company are also reflected in its Policies for women employees, such as, Maternity Leave, Child Care Leave benefits etc.

Prevention of Sexual Harassment

Internal Complaint Committees to prevent sexual harassment of women at workplace have been constituted at our Plants/Units in terms of The Sexual Harassment of Women at Work Place (Prevention, Prohibition & Redressal) Act, 2013 and composition of the committee has been uploaded on the existing Intranet/Web portal of the respective Plants/Units.

Welfare of Women

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

15.3 Rashtriya Ispat Nigam Ltd. (RINL)

In RINL, women employees constitute around 3% of its total workforce with around 6 % being executives and around 1.4 % in non- executives. Women employees are working in diverse and challenging areas like Operations & Projects apart from traditional functions in HR, Finance, and health centres etc.

RINL facilitates the women workforce to be closely knit through the local cell of forum of Women in Public Sector (WIPS). The Cell has been associating in a number of activities for the development of women employees which include programmes on Managerial Development, Networking & social skills, technical skills including Gender Sensitivity. It has also been associated with some social support activities including CSR activities in the rehabilitation colonies.

The Company has put in place an Anti-Sexual Harassment Policy in line with the requirements of the Sexual Harassment of Women at Work Place (Prevention, Prohibition and Redressal) Act, 2013 and an Internal Complaints Committee has been set up to redress complaints received regarding Sexual harassment.

Some of the notable milestones during Apr-Dec '16 are:

- 700 women employees were nominated for various training programs including technical, managerial, health, seminars, and conferences in the country. Two women employees were nominated for attending training / seminar abroad. Training & development programmes conducted for women employees till Dec'16 includes programmes on Women Development, Personal Safety, Gender sensitivity, Communication Skills, Leadership skills, Women Empowerment. Training for women contract labour was also organized on the topic "Women Development".
- An exclusive counter containing books by eminent women authors in Central Library was inaugurated in November 2016 to promote & motivate reading habits among women employees.
- A crèche, Happy Hours, has been provided with all infrastructures for the benefit of working women.
- An exclusive "Portal" on the company website exists wherein important achievements of women worldwide are shared for the information and inspiration of women employees. The cell also publishes e-annual newsletter "DISHA".



- On the occasion of International Women's Day and on WIPS Formation Day sessions were conducted by eminent women achievers with a view to motivate the women employees. Programmes on Awareness of Yoga for health for all and "Organ Donation" were also organised for women employees during the period.

15.4 NMDC Ltd.

NMDC Limited employs 280 women employees which constitute about 4.96% of its total manpower of 5635 (as on 30.11.2016). The company provides equal opportunities for the sexes at all levels, be it selection, recruitment, placement or promotion. The number of women in senior positions is growing. Facilities like separate wash rooms, rest rooms etc have been provided in the Head Office and Projects. NMDC has also been sponsoring women employees for training on awareness in healthcare, family planning etc. Recently NMDC has sent two women Officers on foreign training in Business Management. All statutory obligations of the Company are reflected in its policies for women employees.

As per the recommendations of the Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice in its 62nd report, WIPS cells have been constituted in all the Projects.

Under CSR activities, NMDC has taken up various activities for empowerment of local women. Some of them are:

- Balika Shiksha Yojana is a novel CSR initiative having a triple purpose of assisting girls from socio-economically disadvantage sections of society to pursue their education, contribute to empowerment of women and also help in reducing the acute shortage of Medical & Paramedical staff in Bastar region. Till date, 225 students have been sponsored by NMDC for pursuing nursing courses.

The first batch of 19 students of GNM Course who availed the benefits of the scheme have passed in their exam and have been gainfully employed. NMDC is taking steps to achieve convergence between the acquisition of knowledge and skill by the new nursing professionals and availing of employment opportunities in their local area. This will help in achieving the overall objective of women's empowerment.

- NMDC Shiksha Sahayog Yojana where scholarships are granted to the poor tribal and SC students of Bastar Region to continue their academic pursuit beyond 8th class upto Graduation.

15.5 MOIL Ltd.

MOIL employs 791 women employees which constitute 12.68% of its total workforce of 6239 as on 31.12.2016.

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 Complaint Committee comprising of three officials including a lady Doctor was constituted in the year 1999 & reconstituted in June 2014. 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 etc. are being organized regularly, mostly for the benefit of women residing in the remote mine areas.

Every year 8th March is celebrated as International Women Day and various programmes are organized to mark the day. Company also grants Maternity Leave and Special Casual Leave for Family Planning.

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 powder, washing soaps, bamboo baskets, tailoring and various other vocational activities in order to make them self-reliant.

15.6 MSTC Ltd.

MSTC is a Corporate Life Member of Forum of Women in Public Sector (WIPS) and women employees were nominated in the programmes organized by WIPS. Internal Complaints Committees constituted in all the offices of MSTC have been functioning successfully. Periodical meetings and Complaint redressal, awareness programs, etc. are also duly conducted by the Committees.



15.7 Ferro Scrap Nigam Ltd. (FSNL)

Women employees of FSNL are given due importance in all activities, and recognition is accorded for their skills, abilities and success in various competitions. It is also ensured that there is representation of female employees in various committees, such as committee for prevention of Sexual harassment etc.

15.8 Hindustan Steelworks Construction Ltd. (HSCL)

There is only one women employee in HSCL as on 31.12.2016. Management of the Company ensures that the interest and privilege of the women employees are protected. It is also ensured that they are not subjected to any sort of sexual harassment at the workplace.

15.9 MECON Ltd.

There is a Complaint Redressal Committee headed by a senior Lady Executive as its Chairperson to look into the grievance or complaints of women employees in MECON. MECON also follows instruction/ guidelines issued by the Ministry/Govt. of India from time to time with regard to empowerment of women. Besides, different programmes for training to women employees are conducted by our HRD Section from time to time.

15.10 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.

There are 29 women employees on rolls of KIOCL as on 31.12.2016.

In compliance to the provisions/requirements under to Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, internal Complaints Committee were constituted at Bengaluru, Mangaluru and Kudremukh Units to deal with complaints made by victims of sexual harassment. The Complaints Committee comprises of a Senior level women executive as Presiding Officer, one male employee and one female employee as members and one women representative from Non-Governmental Organization (NGO) as third party member.

A Women's Forum - Women in Public Sector is operating in KIOCL and all the women employees are Life Members of the said Forum. KIOCL is a Corporate Life Member for Forum of WIPS. Co-ordinators are being nominated on rotation basis from KIOCL to Liaison with the WIPS. Women employees (Members) are being sent to attend Annual meets / Regional meets / Quarterly REB meets of WIPS by the Company. International Women's Day was celebrated on 8th March, 2016 in a befitting manner.

During the year 2016-17, apart from participating in Swachh Bharat Abhiyan, WIPS Cell has actively undertaken various activities such as organising Medical Camp, monetary assistance to girl student from financially backward family for pursuing higher studies, awareness class on health & hygiene, workshop on cashless transactions, gender sensitisation workshop and other CSR activities.

15.11 EIL, OMDC and BSLC

These companies continue to accord due importance to gender equality. A Woman Grievance Cell is functioning in the Company to redress grievance of women employees. These companies are equal opportunity employer and does not differentiate in terms of gender.

In these companies women employees constitute about 15.18% of its total workforce of 1195 employees as on 31.12.2016. To ensure empowerment of women, "Gender Budgeting Cells" with women representatives have been constituted.

In compliance with the directives of the Supreme Court, a Grievance Cell for Women is functioning to redress grievance of women employees.



CHAPTER-XVI

PROMOTION OF STEEL USAGE

16.1 Promotion of Domestic Steel Consumption

It is observed that growth of steel consumption in India has taken place mostly at the urban segment where lots of developmental activities are taking place. On the other hand despite rapid increase in agricultural production in India, coupled with developments in the quality of rural life, the level of rural steel consumption has not been significant. Institute for Steel Development and Growth (INSDAG) has taken up a good number of activities/initiatives to enhance steel consumption and to create the awareness for more usage of steel in rural areas.

16.2 Study for Assessment of Steel Demand in Rural India

In pursuance of the recommendations of the Parliamentary Standing Committee (PSC) on demands for grants of the Ministry, the Ministry of Steel carried out a survey/ study through the Joint Plant Committee (JPC) to assess the demand for steel in rural India. The JPC submitted the final Report of this survey in July, 2011. The survey has come out with findings regarding average per capita consumption of finished steel in rural areas, trends of consumption of steel and future projections of steel in rural India. The survey collected the data for the purpose of analysis for the three years i.e. 2006-07, 2007-08 and 2008-09 and assessment of rural steel demand for the periods 2011-12, 2016-17 and 2019-20. The average per capita consumption of finished steel in rural India was assessed at 9.78 kg during the period 2007 to 2009, which is estimated to increase to around 12 kg in 2020 based on increased penetration of steel products. This growth would be powered mainly by construction activities, largely at the household level but also by purchase of items such as items for professional use, furniture and vehicles. It is also expected that the demand for household items would decrease over the years. The major reason for the same is increasing replacement of steel by plastic for some of the major contributing items of that category. The survey has also made recommendations for enhancing the consumption of steel in rural India such as shift in type of housing structure, re-looking steel design for various applications, investment in community structures, small and medium steel products manufacturing, highlighting advantages of steel, increasing aesthetics of steel, improving logistics & supply chain for steel and addressing steel quality issues. During the current year, a fresh pan-India study on the domestic rural steel demand has been taken up by JPC under the aegis of the Ministry of Steel. The objective of the study is to understand the drivers for steel demand and arrive at an assessment of the demand for steel in the modern-day rural India.

16.3 Steps taken by SAIL to promote Usage of Steel

SAIL has the widest distribution network of branches and warehouses across the country comprising of 37 Branch Sales Offices, 10 active Customer Contact Offices, 25 Departmental Warehouses and 21 Consignment Agencies as on 01.01.2017. The huge network spread across the country helps in meeting requirements of a wide range of customers at their door step.

With the objective of increasing the reach of its products to common man, apart from a network of 1500 dealers at district level as on 01.01.2017, SAIL has also penetrated the hinterland at block, Tehsil, and Taluka level by appointing 642 rural dealers.

Incentive schemes are being operated by the Company to encourage dealers to improve their performance as well as to promote SAIL steel. Award functions are held by Regions to felicitate high performing dealers.

SAIL and its dealers actively engage in publicity of its products through dealers/masons and architects' meets, wall paintings, hoardings, audio, video and print advertisements, distribution of promotional items, participation in local fairs etc. Some of the promotional activities undertaken in 2016-17 are given below:

- During Apr- Dec'16, 136 Dealer meets, Architects meet and Mason meets (125 Dealer meet, 7 mason meet & 4 architect/engineer meet) were organized.



Hon'ble Steel Minister addressing 25th Meeting of Steel Consumers' Council held at Mumbai

- 221500 sq ft of wall painting was done during Apr-Dec'16
- Auto hood Branding in Ahmadabad (Gujarat)
- Bus branding during the famous Simhashta Mela in Indore and Buses plying under Punjab Roadways
- AC Bus Branding in Mumbai/Navi Mumbai/ Belapur route 105
- Branding on Mini vans in Kota (Rajasthan)
- Advertisement in Metro Stations in Kolkata
- SAIL Advertisements in Radio and TV
- Cinema slides campaign for promotion of SAIL Brand

In addition to promotion, Product development has been a continuous endeavor at SAIL for meeting specific application requirement of customers. Product development for new areas of application helps in promoting steel usage. During Apr- Dec 2016, 18 new products have been developed for a wide variety of applications. Some of the products developed are given as under:

- HARDOX 400 Q&T 20 mm Plates for Earthmovers & Heavy Machineries.
- SAIL Forming 250Grade HR Coils in Dummy axle of Commercial vehicles.
- SAIL HT 600 HR Coil for bodies of commercial vehicles.
- DMR 249 Grade A thicker plates (24 mm) for Aircraft carrier ships.
- AB3 Grade steel plates for Deep water submarines.
- IS2062 E350 B0 (non micro alloyed) grade Parallel flange Beams IPE 450 (NPB 450X190X77.57) for construction.

16.4 Rashtriya Ispat Nigam Ltd. (RINL)

RINL makes efforts on continuous basis for promotion of steel usage through development and supplying of new products and improving Distribution Network for wider coverage. RINL has established itself as a major player among the country's value added steel producers. Special Steels including High Carbon Steel grade, Medium Carbon Steel grades, Medium, High Manganese Steel, Spring Steel, Low Alloy steel grades etc. are produced in Non-flat or long steel products like Rounds and Squares. Efforts are



made for developing new products to meet specific applications, which in turn help in promoting steel usage. The requirements of customers of new products / grades / sizes of steel products are captured through various interactions with the customers.

RINL has a distribution network consisting of 5 Regional Offices, 24 Branch Offices, 23 Stockyards and 6 Consignment Sales Agents. To expand the outreach to customers through strong network of marketing channels, RINL is planning for additional 5 numbers of CAs and additional 19 CSAs.

In 2016-17 special thrust was given on enhancing customer base. With an objective to estimate market potential and decide upon the production plan in facilitating supplies of products, RINL entered into MOUs on the basis of product category up to 83% of the annual production plan. There is increase in the customer base for RINL products in Manufacturers: 1655 from 1472 Nos.), Projects (4129 from 3693 Nos.) and Retailers (445 from 365 Nos.) at the beginning of the financial year.

To bring focus on penetration in the rural market, a new Rural Dealer Scheme (RDS) is introduced during 2016-17 wherein rural dealers are encouraged by way of (a) discount for cash and carry (b) delivery at their doorstep (c) annual quantity based incentives (4) promotion of RINL products. Preference is given for the minorities and women entrepreneurs in the rural areas for the rural dealerships. RINL has increased the Rural Dealers/ DLDS across the country to 431 (till Dec'16) from 399 Nos. at the beginning of the year.

16.5 Hindustan Steelworks Construction Limited (HSCL)

HSCL has been given the mandate by Ministry of Steel for exploring the areas of infrastructure development for increasing steel usage in the country. HSCL has taken up the initiative in right earnest and has started to explore the opportunities for using steel intensive technologies for urban housing, low cost mass housing, road bridges, industrial infrastructure, Food godowns, infrastructure development in hilly terrains and seismic zones and stadiums and sports infrastructures. In doing so, different options have been explored in introducing pre cast and pre-fabricated structures in place of conventional RCC Structures.

HSCL organized a daylong workshop in Kolkata for finding out different technological options and solutions for Low Cost Mass Housing under "Housing for All by 2022" Mission of Hon'ble Prime Minister, keeping in view the purpose of increasing Steel usage in the country. During the workshop, the possibility of using Steel intensive Industrial Structures and Steel bridges in place of conventional RCC structures was also discussed. HSCL has submitted an Executive Summary on the proceedings of the workshop with the different technological options, presented by the manufacturers and executors during the workshop, to the user Ministries like UD, HUPA, RD, MHA, DONER and HRD for selecting suitable options of prefabricated/precast structures for Housing and other Industrial Infrastructures under their jurisdiction. A comprehensive catalogue has also been made by HSCL on various technological options and live projects for taking forward the initiative of increasing Steel usage in the country. Use of precast/ prefabricated structures for housing calls for marginally higher capital investment but is ultimately economical considering lesser time for construction, faster occupation, higher space availability, lower maintenance cost, and lower Life Cycle Cost. HSCL has already submitted a case study for G+ 5 Residential Building using pre-fabricated steel structures compared with conventional RCC structures. Taking all the impact factors as per IS 13174 and CPWD norms DPAR 2012 updated with cost index, Life Cycle Cost with pre-fabricated structure worked out to be much less, calculated as per Present Worth Method as well as Annual Cost Method. Similar study for G+3 building under PMAY, one School Building and Steel Bridges compared to RCC structures have been undertaken.

16.6 MSTC Ltd.

MSTC by organized and transparent process of e-Auction of scrap promotes recycling of steel and other materials. This saves energy and reduces carbon emissions and promotes sustainable development in the country.

For sale and purchase of iron, steel and Non Ferrous products especially for small and medium sector manufacturers, MSTC launched an e- shopping mall. MSTC METAL MANDI is a virtual market place for B2B & B2C segment.



CHAPTER-XVII

CORPORATE SOCIAL RESPONSIBILITY

17.1. Introduction

Corporate Social Responsibility (CSR) is a concept whereby organizations serve the interests of society by taking responsibility for the impact of their activities on customers, employees, shareholders, communities and the environment in all aspects of their operations. Harnessing of natural resources has a direct impact on the economy, environment and society at large. CSR is thus linked with the practice of Sustainable Development.

Government of India has enacted the Companies Act 2013 in August 2013. Section 135 of the Companies Act 2013 deals with the subject of Corporate Social Responsibility (CSR). It lays down the qualifying criteria based on net worth, turnover, and net profit for companies which are required to undertake CSR activities and, inter alia, specifies the broad modalities of selection, implementation and monitoring of the CSR activities by the Boards of Directors of Companies. The activities which may be included by companies in their CSR policies are listed in Schedule VII of the Act. The provisions of Section 135 of the Act and Schedule VII of the Act apply to all companies, including CPSEs.

The Ministry of Corporate Affairs has formulated CSR Rules under the provisions of the Act and issued the same on 27.2.2014. The CSR Rules are applicable to all Companies, including CPSEs w.e.f. 1.4.2014. Further, Department of Public Enterprises has issued Guidelines on Corporate Social Responsibility and Sustainability in October, 2014. All the CPSEs have been directed to scrupulously follow the abovementioned Act/Rules/Guidelines while allocating and spending funds under CSR.

Details of allocation and expenditure of funds under CSR are at Annexure XV.

17.2 Steel Authority of India Ltd. (SAIL)

SAIL's Social Objective is synonymous with Corporate Social Responsibility (CSR). Apart from the business of manufacturing steel, the objective of the company is to conduct business in ways that produce social, environmental and economic benefits to the communities in which it operates. For any organization, CSR begins by being aware of the impact of its business on society. With the underlying



SAIL supporting Divyang people at Durgapur Handicapped Happy Home- A Creche -cum-home- for the Disabled



philosophy and a credo to make a meaningful difference in people's lives, SAIL has been structuring and implementing CSR initiatives right from the inception. These efforts have seen the obscure villages, where SAIL plants are located, turn into large industrial hubs today.

SAIL CSR initiatives have always been undertaken in conformity to the prevalent guiding principles issued by Govt. like The Companies Act-2013/CSR Rules, 2014 and DPE Guidelines on CSR & Sustainability, 2014. SAIL's CSR projects are carried out in and around periphery of steel townships, mines and far flung locations across the country in the thrust areas falling in line with the activities mentioned in the Schedule-VII of the Companies Act-2013, namely, Education, Medical and Health Care facilities, village development, Access to water facilities, Infrastructural development in peripheral rural areas, Environment conservation, Women Empowerment, Assistance to people with disabilities, Sustainable Income Generation through Self Help Groups, Promotion of Sports, Art, Culture & heritage conservation.

'Swachha Bharat Abhiyaan-Swachha Vidhyalaya Abhiyaan

SAIL has been actively participating in the "Swachh Bharat Abhiyan" initiated by the Hon'ble Prime Minister of India. Apart from toilet construction, cleanliness campaign has been undertaken all across the Organisation. Cleanliness drive is regularly undertaken at various locations including the works premises, awareness campaigns such as Pratiyogita, Quiz, Competitions and Shapath, are organized during 'Swachhta Pakhwada' and proper house- keeping is being practiced on company wide basis.

Adoption of Model Steel Villages

In order to bridge the gap between rural and urban areas and to provide comprehensive development of both physical and social infrastructure, 79 villages were adopted as "Model Steel Villages" across the country (in eight states). The developmental activities undertaken in these villages include medical & health services, education, roads & connectivity, sanitation, community centers, livelihood generation, sports facilities, etc. The facilities developed at these MSVs are being run and maintained regularly.

CSR activities:

Education: To develop the society through education, SAIL is supporting over 145 schools in the steel townships to provide modern education to more than 55,000 children and is assisting over 500 Govt. schools in Bhilai and Rourkela with about 63,000 students by providing Mid-day meals in association with Akshya Patra Foundation. 21 Special Schools (Kalyan & Mukul Vidyalayas) are benefitting over 3000 BPL category students at integrated steel plant locations with facilities of free education, mid-day meals, uniform including shoes, text books, stationary items, school bag, water bottles and transportation.

306 Tribal children are getting free Education, Accommodation, Meals & Uniforms, textbooks, etc. at Saranda Suan Chhatravas, Kiriburu; RTC Residential Public School, Manoharpur; Gyanodaya Chhatravas, BSP School Rajhara, Bhilai; Kalinga Institute of Social Sciences, Bhubaneswar; Gyanjyoti Yojna, Bokaro.

Over 1825 school students have been awarded annual scholarships in plant peripheries.

Gyan Jyoti Yojana: Bokaro Steel Plant has introduced this scheme for providing education and holistic development for the children of Birhor tribe, which is at the verge of extinction. 15 Birhor children were adopted and provided free Education along with boarding, lodging, nourishing and wholesome food, clothing, free medical treatment, sports and cultural opportunities in a conducive atmosphere. They are the first Matriculates and 12th pass among their community. Inspired from their achievements, another batch of 15 new Birhor children have been adopted, who are all set to begin their life in new surroundings. For Skill Development and better employability, 9 Matriculate Birhor Boys adopted under Gyan Jyoti Yojana have been sponsored for ITI training in "Welder trade" alongwith stipend of Rs.2500/- each, accommodation and meals at Bokaro Pvt ITI.

Healthcare: SAIL's extensive & specialized Healthcare Infrastructure provided specialized and basic healthcare to 96 lakh people living in the vicinity of its plants and units during the period 2011-16. Surgeries like Cataract and lens implant, cleft lip and palate disorder, polio-leg correction, etc. are conducted. Treatment of hearing impaired, anemia and identification & counseling of Sickle cell & Thalassemia patients, women with gynecological disorders, Leprosy & Tuberculosis patients is provided free of cost.



In order to deliver quality healthcare at the doorsteps of the needy, regular health camps in various villages on fixed days are being organized for the people living in the periphery of plants/units, mines & far-flung areas. During 2016-17 (Upto Q2) 1960 Health Camps have been organized benefitting over 52,000 villagers. 6 Mobile Medical Units (MMUs) running in the plant peripheries benefit One Lakh villagers every year at their doorsteps.

24 exclusive Health centers at plants are providing free medical care and medicines to around 100,000 poor and needy beneficiaries every year. During 2016-17 (Upto Q2), 81,000 villagers have availed free healthcare at these Health Centers.

Sustainable Income Generation: Vocational and specialised skill development training targeted towards sustainable income generation has been provided to 1764 youths & 1020 women of peripheral villages in areas such as Nursing, Physiotherapy, LMV Driving, Computers, Mobile repairing, Welder, Fitter & Electrician Training Improved agriculture, Mushroom cultivation, Goatery, Poultry, Fishery, Piggery, Achar/Pappad/Agarbati/Candle making, Screen printing, Handicrafts, Sericulture, Yarn Weaving, Tailoring, Sewing & embroidery, Gloves, Spices, Towels, Gunny-bags, Low-cost-Sanitary Napkins, Sweet Box, Soap, Smokeless chullah making etc.

546 youths have been sponsored for ITI training at ITCs Bolani, Bargaon, Baliapur, Bokaro Pvt ITI and Rourkela etc. On account of public hearing commitments made by RMD, the ITIs at Bolani & Bursua have been adopted for upgradation and operation by SAIL. Apart from the above, Bokaro Pvt. ITI is already operational at Bokaro where the youth from the periphery are being trained in streams of Electrician, Welder & Fitter. In addition, SAIL is also in the process of upgradation and operation of the ITIs at Manoharpur and Gua.

Infrastructure Development in Rural Areas: Over 77.84 Lakh people across 435 villages have been connected to mainstream by SAIL since its inception by constructing and repairing of roads. Over 7907 water sources have been installed during last four years thereby enabling easy access to drinking water to over 45.96 lakh people living in far-flung areas.

Environment Conservation : To promote renewable sources of energy, Solar street lights have been installed in rural areas, Solar Lanterns and smokeless chullahs have been distributed among the rural people of Saranda and other locations. Maintenance of parks, water bodies & botanical gardens in its townships and plantation & maintenance of over 3.85 Lakh trees at various locations has also been undertaken.

SAIL has supported setting up and operation of 100 KW Capacity Solar Power Plant at Jari, Gumla in Jharkhand.

17.3 Rashtriya Ispat Nigam Ltd. (RINL)

Various initiatives by RINL under CSR have made an effort in addressing the dire needs of the disadvantaged communities and bringing about a tangible change in their lives. An annual budget has been allocated for CSR activities for the year 2016-17. Focus areas in this regard include: Education, Health care, Skill Enhancement, Environmental care, Sanitation, Swachh Bharat ,Sports etc. details of which are as under:

Education

- Organized Adult Literacy Programs in peripheral villages of Visakhapatnam covering 500 adults.
- Extending free education to 1800 children of BPL families of surrounding villages of Plant and Mines.
- Contributed in mid-day meal programme in the Government schools through Akshaypatra Foundation by providing food distribution vehicle & vessels to enable effective delivery of clean and hygienic food for 60,500 children in 438 Govt. schools in Visakhapatnam.
- Free education is being provided to differently abled children through Arunodaya Special School.

Health Care:

- Steel was provided to Govt. Hospital, KGH to construct multistoried hospital complex at Visakhapatnam.



"Kaushal" – A CSR initiative of RINL for Skill development for the members of the SC community

- To reach the interior places of surrounding villages/ tribal areas and to create awareness / to ensure timely retrieval of cornea and transplantation to unfortunate victims of corneal blindness- an ambulance and audio system has been provided to Visakhapatnam Eye Bank and Research Training Trust.
- To address the menstrual health issues faced by girls in government school, RINL has undertaken a capacity building as well as awareness programme -"Parivarthan". About 400 girl students of various Schools got benefitted.
- Organized 156 Eye Camps using 'Netrajothi' Mobile Eye care Van - benefitting 12,562 patients and about 750 surgeries were done.
- Supplied 1,30,000 litres per day drinking water to Rehabilitation colonies/ surrounding villages during summer months.
- Conducted medical camps at a surrounding village of Mines and distributed free medicines.

Skill Enhancement

- 'Project Saksham' - facilitated Vocational Training programmes on Dress making, Fabric Painting, Two Wheeler mechanism, Plumbing, car driving, computer basics, cloth bags etc at Mines area covering 275 villagers
- 'Project Kaushal' - provided training for 200 SC women in Garment construction techniques and Industrial sewing machine operation. 139 beneficiaries have been provided with suitable jobs in local garment manufacturing units

Sanitation

- "Swachh Visakha": Arranged 30 Dumper bins for local Municipal Corporation to address the infrastructure needs of waste Management.
- "Swachh Gram": Solar powered drinking water supply system has been installed and 24 x 7 water is being supplied to the villagers. Construction of household toilets has been taken up in a tribal village of Visakhapatnam district



Swachh Bharat and Swachh Vidhyalaya

- 1241 Swachh Bharat activities were carried out in various departments of the RINL involving 20603 employees.
- Fortnight long Swachhta drives "Swachh Bharat Pakhwada" were organized which includes activities like Swachhta walkathon, Poster & Slogan competition, Swachhta Rath for awareness building amongst the communities, Zero plastic campaign etc.
- 10 Awareness programs on good hygiene practices through audio visual medium were conducted for School children of surrounding areas under Bal Swachh Jagruthi.

Sports

In order to encourage the talented sportspersons, financial assistance was extended to a National level Shooter for procurement of updated equipment thereby enhancing the chances of bringing laurels.

17.4 NMDC Ltd.

The status of CSR programmes undertaken/initiated by the Company are as follows:

Education:

- NMDC partnered with Chhattisgarh Govt. under the scheme called "Ujjar" provides financial assistance to 100 tribal students from Dantewada District, Chhattisgarh for pursuing higher education. NMDC has been successfully supporting the programme since last year.
- NMDC has supported Rashtriya Vidya Kendra (RKV), Hyderabad an institution engaged in promotion of education among students belonging to socio-economically backward sections of society by providing solar energy systems for its School and Hostels.
- The Residential School started at Nagarnar in 2010 is also running successfully with 513 no. of students till class IX
- NMDC has constructed Astha Gurukul School and 1000 seater Auditorium attached in Dantewada and has been successfully operating the school with around 770 orphaned and violence affected children studying from Class I to Class VII.
- The Scholarship Scheme "NMDC Shiksha Sahayog Yojana" to motivate ST/SC students is in operation and during the year 2015-16, 18000 scholarships have been awarded.
- Mid day Meal programme covering 8000 rural school children in & around Donimalai Project is running successfully and NMDC is continuing its support to the initiative.
- NMDC has extended support for operation of Saksham I & Saksham II Schools set up for differently abled boys & girls wherein 206 students are currently studying. The said institutions are functioning at Education Hub, Javanga, Geedam, Dantewada District.

Skill Development:

- The ITI with Welder & Mason trades at Nagarnar with the intake of 28 students each year is functioning successfully
- The ITI at Bhansi with 5 trades is running successfully with the intake of 76 no. of students each year.
- The Polytechnic College at Dantewada established in 2010 with two streams i.e. Electrical & Mechanical with an intake of 126 students is running successfully. Chhattisgarh Govt. has allotted about 8 acres for the Polytechnic. Construction of Hostel Blocks & residential quarters is in progress. It is the only Polytechnic College in Chhattisgarh which is totally operated by a PSU without any contribution from the Govt. of Chhattisgarh.
- NMDC completed a livelihood skill training program in installation, repairs & maintenance of hand pumps for 1260 unemployed youth of Bastar.



- A Skill development programme has been launched in the year by NMDC in collaboration with NSDC to train 1200 non NMDC stakeholders' viz. Contract labour in mining sector related skills. Of a total target of providing training to 400 trainees, the programme has covered 310 trainees so far. The Programme is operational at Bacheli, Kirandul (Chhattisgarh) and Donimalai (Karnataka).

Healthcare:

- Free out-patient & in-patient treatment facility was extended to 57851 & 18801 local tribals respectively during the year 2016-17 (Upto Nov)
- During 2016-17, 17068 tribal villagers have been treated at the doorsteps in 37 villages (Upto Nov) through operation of Hospital on Wheels service

Rural Development:

- The work of integrated development of villages in 19 villages in Bailadila region is in progress with significant success.
- NMDC has been continuing with the Farmers Development Scheme to provide fencing to farmers lands, digging bore wells & installation of hand pumps in Bastar District @ Rs.1500.00 lakh in progress

Women Empowerment:

- Balika Shiksha Yojana is a novel CSR initiative having a triple purpose of assisting girls from socio-economically disadvantage sections of society to pursue their education, contribute to empowerment of women and also help in reducing the acute shortage of Paramedical Staff in Bastar region. As on date, 225 students have been sponsored by NMDC for since 2011-12, for pursuing nursing courses.
- NMDC Shiksha Sahayog Yojana under which scholarships are granted to the poor tribal and SC students Bastar region to continue academic pursuit beyond 8th class upto Graduation is being successfully implemented in the current year also.

Drinking Water and Sanitation:

- NMDC has provided financial contribution to Sulabh International for construction of two toilet blocks at GR Medical College & Hospital and Madhav Rao Scindhia District Hospital, Gwalior Madhya Pradesh at a total cost of Rs.77.70 lakh.
- NMDC has provided financial contribution of Rs.50 lakh for renovation of Dharam Sagar lake to the District Authorities in Panna, MP with a view to address the issue of drinking water shortage in Panna town and the said work is being successfully implemented, with the initiative likely to lead to restoration of the water body and solve the problem of water scarcity in Panna Town.

17.5 MOIL Ltd.

MOIL has framed a CSR policy duly approved by Board of Directors. Several schemes have been taken up and being implemented under CSR in the current Financial year which broadly includes:

Education & Skill Development:

- Supporting five schools, two in District Balaghat of Madhya Pradesh and three in Bhandara District of Maharashtra. Both the districts are notified backward districts of India. Schools are imparting quality education to children of the villages of the surrounding areas and mostly come from poor families.
- In association with DAV Group of Schools, MOIL has constructed a large school at Village Sitasangi, in Bhandara district in academic session April 2014 onwards. The school caters to the educational needs of a number of villages in this remote backward area. The school has modern educational facilities with 35 class rooms, scientific laboratories, library, etc. The school is managed by DAV Management and funded by MOIL.



Drinking Water and Sanitation:

- For providing drinking water to villages in remote areas, MOIL has proposed to dig 35 Nos. bore wells.

Healthcare:

- Company has Light to Lives program for providing free cataract surgeries, Pediatric eye Surgeries etc. to needy rural poor.

Rural Development:

- Company has promoted MOIL Foundation, a Society registered under Society Registration Act, 1860 and entered into a MoU with Maharashtra Institute of Technology Transfer for Rural Areas (MITRA), an Associate Organization of BAIF Development Research Foundation for Community Development Programme. The main areas of Community Development Programme are agriculture development, livestock Development (poultry development, goat development), women empowerment, quality of life programme etc., which will help in overall development of the area.

The project will endeavor to develop resources at the village level for better quality of life. 21 villages have been identified in the vicinity of MOIL mines in the districts of Nagpur, Bhandara of Maharashtra and Balaghat of Madhya Pradesh for the Community Development Program.

Environment Protection:

- Company has taken up various infrastructural development works like construction of Village Roads, community Halls, Renovation of schools, and support for plantations etc.

17.6 MSTC Ltd.

MSTC Limited has made expenditure for the following purposes under its CSR initiative:

- Purchase of furniture, computers etc. for school for primary schools for poor children.
- Construction of Toilet Blocks in West Bengal.
- Primary school building repair and renovation.
- Installation of Tubewell for drinking water
- Purchase of Mobile Medical Van and other medical devices for rendering free medical service to poor villagers and poor children of primary school.

17.7 Ferro Scrap Nigam Ltd. (FSNL)

Company spends in each financial year, at least 2.0% of the average net profits of the company made during the three immediately preceding financial years. The above is not applicable if the Company does not meet the criteria as covered under sub-section (1) of Section 135 of the Companies Act, 2013 for three consecutive financial years. Any unspent/unutilized CSR fund of a particular year, is carried forward to the following year, i.e. the CSR budget is non-lapsable in nature. At least 75% of the CSR budget is earmarked for activities to be implemented in project mode, and maximum upto 20% is allocated for other activities. The CSR Committee (Board Level Committee) recommends to the Board, the amount of expenditure, which shall be spent on the CSR & Sustainability activities. The budgetary allocation is approved by the Board of Directors.

17.8 MECON Ltd.

MECON is engaged in rural/community development activities in the nearby surroundings since 60's. In the year 1976, a dedicated group was formed and named "Community Development Committee (CDC)" and were assigned to look after the activities of "Corporate Social Responsibility". Subsequently



in the year 2010, "CSR Cell" was formed to coordinate the CSR activities of the organisation in association with other employees drawn from various sections as per requirement.

The major developmental activities carried out by MECON in the financial year 2016-17 are as follows:

Sanitation:

- Constructed toilets for Boys at Orphanage Hostel in Anmol Basera (Naxal-affected Village-Sungi) in Khunti District of Jharkhand.
- Construction of toilets under progress in Parsa Toli (Naxal-affected Village-Pancha) in Ranchi, Jharkhand.

Rural Development Projects

- Augmentation of Anganwadi Centre in adopted village - Pancha, Block - Bundu, District - Ranchi
- Construction of New Akhra and construction of Roof slab & finishing work of Community Building in adopted village - Pandu Toli, Block - Nagri, District - Ranchi

Preventive Healthcare services

- Organizing free Health check-up camps in Naxal-hit villages & backward areas of Jharkhand and distribution of medicines. Around 4530 patients were covered in 64 medical camps.
- Project Smile: Cleft Lip and Palate Surgery for 10 nos. poor/ downtrodden/ needy patients was carried out at Apollo Hospital, Visakhapatnam.

Education

- Free education is being provided to the under-privileged poor children at 13 (thirteen) nos. Literacy Centres, which are running in the slum areas/backward areas in and around Ranchi (Jharkhand). No. of students in these centers is around 350.
- Providing Play items to Government School - Middle School, Village - Nagri, District - Ranchi under "Vidyalaya Chalen Chalaäen Abhiyan"

Skill development for women & youth

- Free Stitching/Embroidery Training is being provided in 10 (ten) centres, which are running in slum/backward areas of Jharkhand. 140 students have been enrolled at these centres. Each centre is equipped with stitching machines and practice cloth/other accessories required for training have also been provided.
- Running of Vocational Training Institute, Ranchi for providing Free Vocational training to the under-privileged youths, who are not able to continue their higher studies. The institute is affiliated to National Institute of Open Schooling (NIOS), New Delhi. Presently, the institute offers five types of course viz. Radio & TV technician, Electrical technician, Welding technology, Computer Applications and Yoga.

Projects for Divyang (Visually/Physically challenged Persons)

- Training to the Visually challenged Girls of Braj Kishore Netraheen Balika Vidyalaya, Ranchi for Call Centre Operation

Projects for Old Age Home, Orphanage etc.

- Construction of Toilet Block at Old Age Home in Village-Nagri, District-Ranchi



17.9 KIOCL Ltd.

KIOCL Limited has earmarked Rs.43.50 Lakhs towards various CSR Projects identified in pursuance to schedule VII of the Companies Act 2013. Some of the major activities undertaken under CSR are as follows:

Education:

- To promote education of children belonging to BPL families, KIOCL is providing scholarship to 20 meritorious students belonging to BPL families identified in Govt. High-Schools at Bangalore and Mangalore.
- To promote education of around 400 students who are from poor and economically weaker section of the society, KIOCL has provided teaching aid such as school bags, uniforms, shoes, books etc
- Infrastructure facilities and upgradation of college building at Govt. PU College, Kavour, Mangalore. Around 170 poor students are benefitted with this project.
- Infrastructure facilities, upgradation and facelift for the existing building at Keshava Shishu Mandira, Vidya Nagara, Kulai-Mangalore

Drinking Water and Sanitation:

- Installation of Reverse Osmosis Plants [2 Nos] in Kumbarwada and Ulavi villages in Karwar District, Karnataka for supply of clean drinking water to villagers.
- Providing stainless steel drinking water storage cum dispensing units with purification system for Kulur Hr. Primary School & High School, Mangalore
- To ensure clean and safe drinking water to pilgrimages in Puri Jagannath Temple, KIOCL is providing Pure Drinking Water facility with Reverse Osmosis.
- To promote Swachh Vidyalaya Campaign, KIOCL is constructing toilet block at Sri Chandrakantha Aided Higher Primary School, Nooralbettu Village, Karkala Taluk.
- Taken up upgradation/repair work of toilet block for girl students and providing new access path way for boys toilets from inside of school building at Govt. Hr. Primary School, Panjimogaru, Mangalore.
- Construction of community toilets in Kaliapani, Odisha.
- To ensure sustainability of toilets constructed in schools under Swachh Vidyalaya Abhiyan during previous years at Bangalore, Mangalore and Chickmagalur, KIOCL has taken up the responsibility of maintenance of toilets for a period of 3 years.

Health Care:

- Providing medical aid to poor & economically weaker section of the society in Kaliapani, Odisha.
- Medical assistance to poor & economically weaker section of the society at Kudremukh and Mangalore by conducting medical camps and distribution of medicines at free of cost.

17.10 EIL, OMDC and BSLC

OMDC focuses on CSR activities like health, education, and supply of drinking water and community development. The CSR activities are carried out as per the DPE guidelines.

Construction of community toilets at notified area council of Kamakhyanagar & notified area council of Bhuban at Dist- Dhenkanal, Odisha has been completed and handed over to the Govt. of Odisha.

OMDC extends aid in the form of construction of buildings, arranging study materials, providing furniture, school buses, Sewing machine to women for self-employment etc.



CHAPTER-XVIII

TECHNICAL INSTITUTES UNDER THE MINISTRY OF STEEL

18.1 Introduction

Efforts are being made to constantly upgrade the technical skills of the workforce in the Steel Sector. The following institutes set up for the purpose deserve a mention for their worthwhile role and contribution:

18.2 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 Institute is registered under the Societies Registration Act and started functioning from January 1, 2002. 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 BPNSI at Puri as a full-fledged institute with capital funding from JPC. As an initiative towards capacity building for the envisaged production of 300 mtpa by 2025-26, a proposal is under consideration to upgrade BPNSI so that it will provide Academic Backbone to Iron and Steel Industry. The upgraded Institute would be a joint effort of the Union Government, Odisha State Government and the Industry. Odisha Government has already committed its contribution of Rs. 300 for Upgradation of BPNSI and provide the required land free of cost. A Task Force is constituted to formulate the modalities for Upgrading BPNSI to a National Centre of Excellence.

The Task Force has proposed to prepare a footprint for a campus of approximately 1500 students with all the modern facilities. In, November 2016, Minister of Steel, Govt. of Odisha had a meeting with the Union Steel Minister and discussed to accelerate the Upgradation process of BPNSI. Subsequently, MECON has been engaged to do a study on the recommendations of the Expert Committee for Upgradation of BPNSI and prepare a Feasibility Report to take the Upgradation Project ahead.

18.3 National Institute of Secondary Steel Technology (NISST)

Need for Human Resource Development and Technology Upgradation in the Secondary Steel Sector comprising steel melting units with Electric Arc Furnace (EAF) or Induction Furnaces (IF) and Rolling units has been felt since long. In 1984, an Advisory Committee on Steel Rolling Industries set up by the Ministry of Steel, Government of India also expressed the same need. Accordingly, 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, with the following aims and objectives:

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 & Design work in frontier areas for providing updated technology to this sector.



- To organize for documentation and information retrieval services to the industry.
- To provide a platform for interaction between industry and educational as well as research 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 & Cold)
- Direct Reduced Iron units

During the year 2016, the Institute achieved milestones and took initiatives as outlined below:

- NISST has conducted courses in two Trades namely "Forging-Black Smithy for beginners" and "Grinding-Machinery for beginners" at Patna & Rohtas, sponsored by CII under skill development programme with IIIM Kolkata. Total 124 candidates attended the course and certificates are being awarded to the successful candidates.
- Memorandum of Agreement was signed between NMDC& NISST for conducting Training & Skill Development of Land Losers of NMDC Iron & Steel(NISP), Nagarnar, Chhattisgarh.
- Metallurgical and mechanical testing has been conducted for various Govt. agencies/ constructors/ service providers on regular basis.
- NISST is continuously providing technical support to the secondary steel sector to improve quality, yield, value addition and cost reduction to meet the challenges.
- Human Resource Development activities are being continuously undertaken to improve knowledge and skill of the employees of the secondary steel sector through modular courses/ in-house training programme.
- Organized Seminars, in-house trainings, Safety Awareness programmes and Workshops for the steel industry covering different parts of the country.
- NISST has been empaneled by Bureau of Energy Efficiency for conducting energy audits through its qualified and registered energy auditors. Energy audits of industries and buildings are being carried out with suggestive measure for energy conservation in the service to the nation.
- NISST has obtained accreditation of National Accreditation Board for Testing and Calibration Laboratories (NABL). National Institute of Secondary Steel Technology(NISST) Mandi Gobindgarh has been awarded recognition by Bureau of Indian Standards (BIS) to undertake 15 tests in its laboratories for specific products as per the Indian Standards related to Iron & Steel for three years.
- The institute also undertakes R&D projects on product, process and technology development. It has completed two such projects in the past and one on project on "Computer Simulation and e-Demonstration of Reheating Furnaces" is presently being carried out.
- R&D Project titled "Development of Cost Effective Refractory Lining Materials for Induction Melting Furnace Suitable for Production of Quality Steel" is in progress.
- Following two R&D Projects proposals submitted to Ministry of Steel are in active consideration:
 - ❖ "Development of a Cost Effective Green Technology for Pre Reduction of Chromite Ore in Tunnel Kiln and Production of High Carbon Ferro Chrome in SAF"
 - ❖ "Safe Handling and Pre-Heating of Scrap using Waste Gases for Sale & Reduced Carbon Emission Induction Melting of Steel in SMEs"
- NISST also represents in various BIS standardization committees for formulation/modification of different standards related to steel products. NISST is also member of various Technical Committees of Ministry of Coal and Ministry of Steel.



- NISST is a leading Technical Member of North East Industrial and Investment Promotion Policy (NEIIPP) 2007 to consider Central Capital Investment Subsidy (CCIS) claims under DIPP.

NISST is working jointly with MSME for undertaking cluster development programme in Foundries, Steel Making and Rolling Technologies.

18.4 Institute for Steel Development & Growth (INSDAG)

- INSDAG was promoted by Ministry of Steel and Major Steel Producers of India in line with Steel Construction Institute, UK to promote steel intensive structures in construction and to disseminate steel related information through seminars, workshops, organizing training programmes and bringing out publications.
- The total membership base comprising of Architects, Structural Engineers, Designers, Fabricators, academic Institutions and students (Architects & Civil Engineering) apart from steel producers is 800 as on 31.12.2016 including 300 student members.
- During the year INSDAG published three technical books (a) Guidebook on Welding & Fabrication, (b) Guidebook on Use of Stainless steel in Construction, (c) INSDAG Yearbook and (d) several reports & papers on steel promotion.
- Organized steel campaign in rural areas by training the local engineers, architects and masons on the benefits of steel usage and promote best practices using reinforcement bars and other commonly used steel products. Till date, 56 number of such Training Programme covering 2994 nos. of local engineers, architects and masons were conducted by INSDAG in association with SAIL, Tata Steel, RINL and JSW. Details of such training programmes are as follows,

Financial Year	No of Programs	Organized by	No attended
2015 - 2016	6	SAIL	615
2016 - 2017	7	SAIL, RINL	578

- Developed designs of model Rural Houses, Culverts, Anganwari Panchayat Hall, Community Toilet, etc. with steel. INSDAG has brought out brief publications on the designs of such structures in rural areas and translated in vernacular languages in Hindi, Telegu and Bengali and distributed to panchayats of all states.
- INSDAG developed prototypes of low cost houses with tubular steel frames and ferro-cement panels as walls and roofs in West Bengal, Maharashtra and Tripura. Cost of such houses would be Rs.750/- per sq ft.
- To give further impetus on capacity building in rural areas in terms of fabrication, INSDAG is coordinating with Deptt. of Micro & Small Scale Enterprises & Textiles, Govt of West Bengal to develop Common Facility Centre (CFC) in 6 Districts of West Benal (Coochbehar, Darjeeling, Siliguri, Maldah, Paschim Medinipur & Purba Medinipur). 30 more CFCs are identified for further development. INSDAG Carried out Diagnostic Study Report (DSR) and Detailed Project Report (DPR) at initial phase. Hand holding support for setting up Industrial clusters is now being imparted to selected centres.
- Annual all India Student Competition for Students of Engineering Colleges, one for Civil & Structural students and another for Architecture students on different themes of making steel based structures. INSDAG also conducts all India Competition for Professionals every year for any iconic steel structures designed and constructed last one year.
- Conducting courses / lectures of different topics on stele related subjects covering technicians and decision makers. Training module for structural design as per IS 800 : 2007 (Limit State Method) - for professionals and faculties
- The new code is more rational and practical



- New Concept for structural designers
- Aligned with all International Standards
- To provide introductory and advanced training
- Theory explanation and worked out examples

During 2016-17 about 103 professionals and faculties have been trained.

- Interacting with Academic Institutes both Government and Private Engineering Colleges by delivering class room lectures, sponsoring steel based project work and jointly organizing conferences and seminars.
- INSDAG has drawn up corrosion map and validation of passive fire proofing of steel structures first time in the country and the output is being used by Professionals.
- INSDAG as a member of BIS is continuously assessing the requirement of new Codes and also updating the old ones to make steel based construction competitive.
- Draft IS 808 (Dimension of Hot Rolled Steel Beam, Column, Channel and Angle Sections) is submitted to BIS.
- Revision IS 11384 - Code of Practice for Composite Construction for General Construction has been taken up. Part of the draft has been submitted to CED 38 for comments.
- IS 801 (Cold Formed Steel) draft submitted to BIS. BIS has informed that Dr S Arul Jayachandran-IIT Madras along with an expert panel is preparing the final draft of the code.
- INSDAG is working on revision of three important codes such as IS 2830 (Carbon Steel cast billet ingots, billets, blooms and slabs for re-rolling into steel for general structural purposes), IS 15911 (structural steel - ordinary quality) & IS 2062 from MTD-4 committee.

Recent Initiatives Taken by INSDAG to Raise Steel Demand

- Organized steel campaign in rural areas by training the local engineers, architects and masons on the benefits of steel usage and promote best practices using reinforcement bars and other commonly used steel products. In current year till January 2017 seven such programmes in association with SAIL, RINL were organized for 578 candidates.
- Developed designs of model Rural Houses, Culverts, Anganwari Panchayat Hall, Community Toilet, etc. with steel.
- INSDAG developed prototypes of low cost houses with tubular steel frames and ferro-cement panels as walls and roofs in West Bengal, Maharashtra and Tripura.
- To give further impetus on capacity building in rural areas in terms of steel fabrication, INSDAG is coordinating with Deptt. of Micro & Small Scale Enterprises & Textiles, Govt of West Bengal to develop Common Facility Centre (CFC) in 6 Districts of West Bengal. 30 more CFCs are identified for further development.
- INSDAG organized annual All India Student Competition for Students of Engineering Colleges, one for Civil & Structural students and another for Architecture students on different themes of making steel based structures.
- Conducting courses / lectures of different topics on steel related subjects covering technicians and decision makers and also by developing training module for structural design as per IS 800/2007 (Limit State Method). During 2016-17 about 103 professionals and faculties have been trained.
- INSDAG is organizing workshops on steel usage for final year Civil / Metallurgical Engineering students at different private Engineering Colleges. In 2016-17, 8 such workshops (3-days' each) have been organized covering 665 students.



CHAPTER-XIX

IMPLEMENTATION OF THE RIGHT TO INFORMATION ACT, 2005

19.1 Introduction

With a view to promote 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 the information from the public authorities. Correspondingly, dissemination of such information has become an obligation for all public authorities.

19.2 Implementation of the RTI Act in the Ministry of Steel

One Under Secretary level officer has been nominated as nodal officer for implementation of the RTI Act and its monitoring in the Ministry. The officers of the level of Under Secretary/Assistant Director (OL)/Assistant Industrial Advisor or equivalent level Officer of the Ministry of Steel are designated as Central Public Information Officer (CPIO) and Officers of the level of Director / Deputy Secretary/ Joint Director (OL)/ Deputy Industrial Advisor or equivalent Officer of Ministry of Steel are designated as Appellate Authority respectively. 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, detail of Appellate Authority/ Central Public Information Officers, Assistant Public Information Officers have been hosted on the Ministry's Web-site 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. Web portal for online filling of RTI application has been launched by Department of Personnel & Training (DoPT) and the Ministry of Steel has been a part of RTI online web portal w.e.f 25.06.2013. During the year 2016 (up to 31st Dec 2016), the Ministry of Steel has received 147 offline RTI applications and 256 online RTI applications including appeals, which were duly disposed of within the prescribed time limit.

19.3 Steel Authority of India Ltd. (SAIL)

SAIL has appointed Public Information Officers / Asstt. Public Information Officers and Appellate Authorities and Transparency Officer under Section 5 & Section 19(1) Of RTI Act in each Plant and Unit for speedy redressal of the queries received under the Act. The provisions under the Act are being complied with by all Plants and Units of SAIL.

An Exclusive RTI Portal for SAIL has been developed and link is available on SAIL Website. All the SAIL Plants/Units have listed 17 manuals, details of Authorities under the Act on the SAIL website www.sail.co.in. Quarterly Returns, Annual Returns on implementation of RTI Act 2005 are being submitted online through the CIC portal. Implementation of online request is introduced in SAIL from 1st May 2015. A compilation of Record Retention Policy of various functions of Corporate Office has also been uploaded on the SAIL website. In addition, compilations of important decision of CIC, DOPT circulars and High Court (HC) cases have also been uploaded on SAIL Website.

During the period 1.4.2016 to 31.12.2016, a total of 2607 applications and 471 appeals were received under RTI Act, 2005 in the company, all of which were disposed of within the prescribed time limit. CIC has also taken up 81 cases and all these cases were disposed of in favour of SAIL by CIC.



19.4 Rashtriya Ispat Nigam Ltd. (RINL)

Information available in the 17 manuals of the RTI has been updated on company website 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.

A total of 463 requests have been received under Right to Information Act, by RINL during the period 1st April, 2016 to 31st December, 2016. All the requests and appeals have been disposed of within stipulated time.

19.5 NMDC Ltd.

NMDC has published on its website, www.nmdc.co.in information under Section 4(1)(b) of the RTI Act 2005. 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 applications received and disposed during April, 2016 to December, 2016 are as under:

Applications pending on 01.04.2016	Applications received during 01.04.2016 to 31.12.2016	Applications disposed off during 01.04.2016 to 31.12.2016	Applications pending as on 31.12.2016
03	67	70	0

19.6 MOIL Ltd.

MOIL has appointed PIOs at the Corporate Office and PIOs/APIOs have also been appointed in all its Mining Units. Executive Director (Tech.) has been appointed/designated as Appellate Authority under the Act. The names of all the PIOs/APIOs and the Appellate Authority have also been hosted in the Company's website www.moil.nic.in. The information in respect of company, its employees etc. has been prepared under 17 heads as prescribed in Section 4(1) (b) of the RTI Act, and the same been hosted on Company's portal. MOIL has been submitting necessary information and returns to the prescribed authorities and updating the same regularly.

The number of RTI applications received and disposed during April, 2016 to December, 2016 are as under:

Applications pending as on 01.04.2016	Applications received during 01.04.2016 to 31.12.2016	Applications disposed off during 01.04.2016 to 31.12.2016	Applications pending as on 31.12.2016
03	52	52	03

19.7 MSTC Ltd.

MSTC has nominated an Appellate Authority, a CPIO and a Nodal officer in Head office. Every region/branch has PIO and an APIO as well for effectively processing the RTI applications received at various locations of the Company. Provisions of Right to Information Act 2005 have been duly complied for processing the applications/requests received under RTI Act 2005. All the quarterly reports have been submitted on-line.

During 1st April 2016 to 31st December 2016, total 35 applications and 06 first appeals were received. Out of that, 31 applications and all appeals were disposed of. Remaining 04 applications are under process. Online RTI application registration facility was developed. Online RTI applications/appeals are received through RTI web portal namely <https://rtionline.gov.in>.

19.8 Ferro Scrap Nigam Ltd. (FSNL)

FSNL has appointed a Public Information Officer (PIO) and one Assistant Public Information Officer at Corporate Office and one APIO each at its 8 Units. MD, FSNL is the first appellate authority under the R.T.I Act, 2005. The company has complied the information under 17 different templates/manuals/manuals for voluntary/suo-moto disclosure as required under Section 4(1) (b) of the Act and hosted the



same on the company's website "fsnl.nic.in" and the information so published are being regularly updated. Quarterly reports are submitted to the CIC regularly.

The total number of RTI applications received during the period April 1, 2016 to December 31, 2016 was 30. Out of these, 29 applications have been disposed of.

19.9 Hindustan Steelworks Construction Ltd. (HSCL)

HSCL implemented the Right to Information Act, 2005, nominating one chief information officer at the head office and 16 assistant public information officers across different units. The appellate authority is the Chairman-cum-Managing Director under the provision of the above Act. In compliance to the Act, the Company has put up 17 manuals under Section 4 (1) (b) on its website, www.hscl.co.in. During the fiscal, 79 applications, seeking information under the provision of the Act, were received and disposed of.

19.10 MECON Ltd.

All the relevant manuals pertaining to RTI Act, 2005 have been hosted on "MECON's Website www.meconlimited.co.in w.e.f. 19th September, 2005. A Public Information Officer (PIO) and the 1st Appellate Authority have 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 by the Public Information Officer within the stipulated time period. Jt. General Manager (Personnel) has been nominated as the Transparency Officer of MECON Limited. The status of applications received and processed during the year 2016-2017 (upto December, 2016) under Right to Information Act, 2005 are given below:

Applications pending as on 01.04.2016	Applications received during 01.04.2016 to 31.12.2016	Applications disposed off during 01.04.2016 to 31.12.2016	Applications pending as on 31.12.2016
04	44	45	03

19.11 KIOCL Ltd.

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 level have been appointed/ designated as Appellate Authority under the Act. The names of all the PIOs/APIOs and the Appellate Authority have 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 and the same is being reviewed and updated at regular intervals.

Applications pending as on 01.04.2016	Applications received during 01.04.2016 to 31.12.2016	Applications disposed off during 01.04.2016 to 31.12.2016	Applications pending as on 31.12.2016
Nil	17	17	Nil

19.12 EIL, OMDC and BSLC

These companies are complying with the Right to Information Act -2005. For receipt and replying to the RTI queries, a PIO and APIO have been nominated.



CHAPTER-XX

DEVELOPMENT OF NORTH-EASTERN REGION

20.1 Introduction

The Ministry of Steel has been exempted from the requirement of earmarking 10% of its budgetary allocation for this purpose.

20.2 Steel Authority of India Ltd. (SAIL)

The proposal for setting up a Steel processing Unit (SPU) at Guwahati, Assam was approved in principle by SAIL Board in April, 2008. The proposed facilities and product mix envisaged is TMT Bar Mill of 80,000 TPA. For the project, 31 Acres of land at Tilingaon in north Guwahati, Near IIT Guwahati has been allotted to SAIL at a cost of Rs. 7.97 Crores.

Survey of land has been completed. Barbed wire fencing of boundary, gate and security room completed. The concessions and benefits sought from State Govt. are still awaited.

A fresh study undertaken by SAIL in October 2015 has indicated that conversion arrangement for TMT through SPU route at Guwahati may be a commercially viable proposition. Accordingly, SAIL has taken up the matter with Govt. of Assam in March, 2016 for grant of concessions and benefits as envisaged during in-principle approval for long term viability of the project.

20.3 Rashtriya Ispat Nigam Ltd. (RINL)

RINL provides services to North Eastern Region directly through its Branch Sales Office (BSO) at Kolkata and the Consignment Sales Agents (CSAs) appointed at Guwahati and at Agartala to cater the demand of various customers in the Region.

In order to promote sales in the North Eastern Region, BSO Kolkata is extending incentive to Project Customers of the Region. RINL is also supplying steel products directly to Hydro-Electric, Road and Other Projects in the North Eastern Region through RINL's Stockyard at Kolkata and through the Retailers & rural dealers

20.4 MSTC Ltd.

North-Eastern Region (NER) is rich of forest wealth which constitutes of 22.21 percent of total forest area. Agro Climatic condition favours growth of varieties of fruits, vegetables and spices.

MSTC has taken initiatives to facilitate direct access to the market for the growers from NE states for their produce through its e-commerce services. MSTC is way ahead to form an ecosystem wherein North East Region Agricultural Marketing Corporation Ltd. (NERAMC) (a PSU under the Ministry of DONER) will act as an aggregator and Central Railside Warehouse Company Limited (CRWC), a logistic provider will ensure storage, transportation and door delivery of the commodity to the buyers. In addition, Inland Waterways Authority who has both low & high barges alongside the CRWC may augment the ease of transportation through river/sea routes.

The transportation and logistic infrastructure of the above companies will also help door delivery of both ferrous and non-ferrous products from its manufacturer to buyers in NE states for the transactions made through MSTC Metal Mandi, M3 portal in a transparent and hassle free manner.

In addition to this MSTC has involvement in terms of selling scrap of State / Central Public Sector, Defence units, paramilitary forces situated in the North East for better realization in a transparent way which also benefitted local businessmen, indirectly benefits the region.

20.5 Hindustan Steelworks Construction Ltd. (HSCL)

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 work has been taken up by HSCL as a Project Implementation Unit in phases under Public Works Department of Govt. of Tripura for establishing new connectivity and up gradation of existing roads in rural areas with population densities ranging from 250 to 1000+. The work involves activities from soil testing, survey and construction / up gradation including maintenance of the constructed roads for five years after handing over. HSCL is at present working in two Districts - Dhalai and North District. The summary of the projects under PMGSY is as below:

Total value of work	:	Rs.885.72 Cr.
Value of work completed	:	Rs.732.02 Cr.
No. of road links approved by NRRDA	:	232
No. of road links completed	:	184
Total length	:	1080.24 Km.
Work completed	:	741.86 Km.
Total No. of Bridges	:	62
No. of Bridges completed	:	52

The PMGSY work in two Districts, North and Dhalai of Tripura under five phases Phase IV, V, VI, VII, VIII and IX is going on under strict supervision and adequate security for the working personnel. 184 links have already been opened to public.

Several infrastructure development projects have been taken up for implementation for ITBP, SSB, NDRF under Ministry of Home Affairs, Sports facilities under Ministry of Sports and Youth Affairs, Godowns of FCI, Educational Institutions of TISS and NIELIT, Hospitals and Health Care Centres, Performing Art and Cultural Centres under Ministry of Art and Culture etc. in the North Eastern states.

Apart from Rural Roads under PMGSY, HSCL has successfully completed and handed over 3 Nos. of 150 bedded District Hospitals at Udaipur, Kailashahar and Kulai and one 100 bedded Hospital with allied facilities at Teliamura. The Polytechnic at Fulkumari, under PWD, has been completed and the Drainage work under Directorate of Urban Development is also in the completion stage.



CHAPTER-XXI

INTERNATIONAL COOPERATION

International cooperation and collaboration are crucial for bringing the state-of-the-art technologies in the steel sector and for international trade development. To achieve these objectives, the Ministry of Steel participated in hosted various international meetings/conferences/seminars organised for development of iron and steel sector as per details given below:

- Meeting of H.E. Engr. Carlos Alberto Fortes Mesquita, Transport Minister, Mozambique with Hon'ble Steel Minister.
- Visit of Hon'ble Steel Minister to Luxembourg and London during 27th - 30th August, 2016.
- Meeting of Mr. Etienne Schneider, Deputy Prime Minister and Minister for the Economy with the Hon'ble Minister of Steel & Mines during the visit to New Delhi on 2nd March 2016.
- A delegation led by Mr. Mongi Marzouk, Hon'ble Minister of Energy and Mines, Govt. of Tunisia with the Hon'ble Minister of Steel & Mines during 21-22 January, 2016.
- Meeting of Ms. Harinder Sindhu, Australian High Commissioner with Hon'ble Minister of Steel & Mines.
- Meeting of Dr. Idris Jehrudin Mohammad, headed the delegation of Ethiopian with Joint Secretary (Steel) from 23-27 May, 2016.
- A delegation led by Mr. Alaxander Galushka, Minister for the development of East Region of Russian Federation with Hon'ble Minister of Steel & Mines during 20-23 July, 2016.
- A meeting of Mr. James Gordan Carr, Minister of Natural, Resources, Canada with Hon'ble Minister of Steel.
- Visit of high level delegation to ICVL, Mozambique.
- Officials from the Ministry of Steel participated in the following :
 - (i) 3rd Session of India-Ukraine Working Group on Trade and Economic Cooperation (IU_WGTEC).
 - (ii) 4th Session of India-Azerbaijan Inter-Governmental Commission (IA-IGC) on Trade & Economic Cooperation.
 - (iii) Seventh Session of India-Belarus Inter-Governmental Commission for Economic, Trade, Industrial, scientific Technological & Cultural Cooperation regarding.
 - (iv) Inter -Ministerial meeting chaired by Secretary (West), on 21st June 2016 at Jawahar Bhawan
 - (v) 4th Session of India-Brazil Trade Monitoring Mechanism Meeting on 29-30 September 2016.



Visit of Mozambique Transport Minister H.E. Engr. Carlos Alberto Fortes Mesquita



CHAPTER XXII

WAY FORWARD FOR INDIAN STEEL INDUSTRY

- In 2016, India retained its position as the fastest growing major steel economy in the world and our share in global steel production was 5.5 % in 2015, which has increased to 5.9 % in 2016. India would continue to lead the growth trend in world steel industry and is on its way to become world's second largest steel producer. The gap between India and Japan was 16 million tonnes in 2015, which has come down to 9 million tonnes in 2016.
- There are five important thrust areas that need to be focussed on. An acronym 'PRIDE' aptly sums up the way forward for the steel industry.
 - ❖ P stands for Production & Productivity
 - ❖ R for Research & Development
 - ❖ I for Indian-made steel
 - ❖ D for Demand of Steel
 - ❖ E for Excellence in quality
- Ministry of Steel (MoS) is taking steps to demonstrate benefits of steel to potential users. Through Life Cycle Analysis, MoS will showcase that steel structures are highly cost-effective and have shorter lead time for erection. Steel has greater durability with high design comfort. MoS has directed all concerned to utilize every possible opportunity to showcase prototypes and exhibits of steel for this purpose.
- MoS will use all marketing, branding avenues to push this message. That is the only way to meet the challenge of product substitution by aluminium, concrete, plastic, glass etc.
- In draft National Steel Policy, MoS aims to more than double the capacity to 300 million tonnes. That means an investment to the tune of Rs. 10 lakh crore. Target is to increase per capita steel consumption to 160 kilogram.
- MoS is working towards meeting the entire domestic demand of high-grade automotive steel, electrical steel and special steels from domestic production. These products constitute a major portion of the steel imports in India.
- MoS is examining the feasibility of setting up scrap-based steel plants in India. These will be on the lines of 'Melt & Manufacture' steel technology in USA. Scrap-based steel plants are environment-friendly, energy-efficient and cost-effective. These will have the capability to produce special high-quality steels, a pre-requisite for Make in Steel. North and West India regions are important from the perspective of scrap-availability and steel import hubs.
- MSTC-Mahindra Intertrade state-of-the-art Auto Shredding Plant is likely to be functional in 2018. Indian market has huge potential for auto-shredding.
- For Research & Development in Indian Steel industry, MoS is aiming high and working on out-of-the-box solutions and technologies for steel making using indigenous resources.
- Indian Steel industry is still dependent on imported raw material and high-end steel products. There is potential to enhance usage of domestic coking coal by setting up more coal washeries and MoS is working in that direction.
- MoS is trying to bring together all R&D efforts under one umbrella of SRTMI (Steel Research & Technology Mission of India) with public-private partnership.



- Ministry of Steel is in constant touch with different user ministries to ensure that steel-intensive structures are promoted through regulatory, advisory and other measures. MoS is in the process of talking to hill states to increase use of crash barriers to minimize fatalities due to road accidents on hills. Rural Development Ministry has already recommended use of steel-intensive structures in rural housing.
- MoS is trying that "Indian Made Steel" can be defined in the light of existing Public Procurement Bill. This will provide for mandatory procurement from domestic bidders on the grounds of promoting domestic industry. Basically the aim is to emphasize lower life cycle costing while evaluating projects, rather than just looking at the upfront cost alone.
- MoS is constantly working to think of and work on ways for increasing steel demand in India. MoS had the meeting of newly constituted Steel Consumer Council in Jan 2017. The Ministry invited suggestions on increasing steel consumption in India on MyGov platform and is working on implementable suggestions. MoS constituted four task forces and committees of experts and users of steel to formulate strategies to increase steel consumption in India.
- Focus on areas such as ports, roads, affordable housing, physical infrastructure should provide the steel sector necessary impetus to meet its growth targets.
- The 2017-18 budget has given infrastructure status to housing and enhanced budget for housing, which is expected to revive domestic steel demand as it will push up demand for construction grade steel particularly those for roofing purposes. At present, around 40 % steel consumption is from construction and infrastructure sectors, and MoS wants to take it to 60 percent in long-term.
- Indian steel industry needs to move to a 100 % quality regime, for health and safety of end users. That is why MoS is going ahead with making BIS certification essential for most of the products.
- All the above measures are being taken as a part of comprehensive strategy to generate steel demand in the country.



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, kyanite, 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) Kudremukh Iron Ore Company Limited (KIOCL);
 - (iv) Manganese Ore (India) Limited (MOIL);
 - (v) National Mineral Development Corporation Limited (NMDC);
 - (vi) Metallurgical and Engineering Consultants (India) Limited (MECON);
 - (vii) J&K Mineral Development Corporation Limited;
 - (viii) Hindustan Steelworks Construction Limited (HSCL);
 - (ix) SAIL Refractory Unit;
 - (x) Metal Scrap Trade Corporation (MSTC);
 - (xi) Ferro Scrap Nigam Limited; and
 - (xii) Bird Group of Companies.



ANNEXURE-II

MINISTER IN CHARGE AND OFFICER IN THE MINISTRY OF STEEL

(down to Deputy Secretary level)

Minister of Steel	Shri Birender Singh
Minister of State for Steel	Shri Vishnu Deo Sai
Secretary	Smt. Aruna Sharma
Additional Secretary & Financial Adviser	Shri Saraswati Prasad
Joint Secretaries	Shri Sunil Barthwal Shri S. Abbasi Smt. Urvilla Khatri Shri T. Srinivas
Economic Adviser	Shri Suraj Bhan
Chief Controller of Accounts	Shri Bhupal Nanda
Directors	Shri Anupam Prakash Shri Mahabir Prasad Shri K.S. Samarendra Nath Shri Manvendra Goyal
Deputy Secretary/Joint Director	Shri Naresh Kumar Wadhwa Shri Subhash Bhattacharya Shri A.K. Kailoo Shri Shailesh Kumar Singh, JD(OL)



ANNEXURE - III

PRODUCTION OF ISP & OTHER PRODUCERS						
SUMMARY						
('000 tonnes)						
S. No.	ITEM / PRODUCER	2012-13	2013-14	2014-15	2015-16	Apr-Dec 2016-17*
PRODUCTION						
I.	CRUDE STEEL :					
	SAIL, TSL, RINL, ESL, JSWL, JSPL					
	Oxygen Route	32999	35067	36610	36174	30932
	E.A.F.Units	10037	9174	9473	8914	9444
	Other Producers					
	Oxygen Route	350	455	961	2221	1708
	E.A.F.Units (incl.Corex & MBF/EOF)	9345	9419	13652	15685	10111
	Induction Furnaces	25685	27579	28283	26796	20154
	TOTAL (Crude Steel)	78416	81694	88979	89790	72349
	% share of Other Producers	44.7%	45.3%	47.1%	47.3%	41.8%
II.	P I G I R O N (For Sale) :					
	SAIL, TSL, RINL, ESL, JSWL, JSPL	674	552	920	1186	676
	Other Producers	6196	7398	8774	8041	6396
	TOTAL (Pig Iron)	6870	7950	9694	9227	7072
	% share of Other Producers	90.2%	93.1%	90.5%	87.1%	90.4%
III.	S P O N G E I R O N :					
	Gas Based	3940	2683	2354	2440	3695
	Coal Based	19067	20189	21889	19987	14577
	TOTAL (Sponge Iron)	23007	22872	24243	22427	18272
	% share by Process (Coal Based)	82.9%	88.3%	90.3%	89.1%	79.8%
IV.	FINISHED STEEL FOR SALE (Alloy/Non-Alloy) :					
	SAIL, TSL, RINL, ESL, JSWL, JSPL	42466	45160	46820	48527	41565
	Other Producers	47156	50417	53862	54376	39907
	Less IPT/Own Consumption	7940	7902	8525	11923	7509
	TOTAL (Finished steel)	81682	87675	92157	90980	73963
	% share of Other Producers	57.7%	57.5%	58.4%	59.8%	54.0%

Source: JPC, * Apr-Dec (prov)



ANNEXURE - IV

PRODUCTION OF CRUDE/LIQUID STEEL (By Producers)

PRODUCER	2012-13			2013-14			2014-15			2015-16			2016-17*			('000 tonnes)	
	Working Capacity	Production	% Utilisation	Working Capacity	Production	% Utilisation	Working Capacity	Production	% Utilisation	Working Capacity	Production	% Utilisation	Working Capacity	Production	% Utilisation		
PUBLIC SECTOR																	
B S P	3925	5008	128%	3925	5136	131%	3925	4807	122%	3925	5058	129	3925	3552	121		
D S P	1802	2034	113%	1802	2019	112%	1802	2063	114%	1802	1975	110	1802	1571	116		
R S P	1900	2209	116%	1900	2291	121%	4400	2792	63%	4400	2730	62	4400	2079	63		
B S L	4360	3757	86%	4360	3776	87%	4360	3831	88%	4360	3392	78	4360	2318	71		
I S P	500	135	27%	500	127	25%	2500	141	6%	2500	871	35	2500	1000	53		
A S P	234	131	56%	234	122	52%	234	104	44%	234	91	39	234	68	39		
S S P	180	73	41%	180	91	51%	180	125	69%	180	120	67	180	83	61		
V I S L	118	64	54%	118	13	11%	118	46	39%	118	42	36	118	35	40		
TOTAL (SAIL) :	13019	13411	103%	13019	13575	104%	17519	13909	79%	17519	14279	82	17519	10706	81		
R I N L	2910	3071	106%	2910	3202	110%	2910	3296	113%	6300	3640	58	6300	2921	62		
TOTAL : (Public Sector)	15929	16482	103%	15929	16777	105%	20429	17205	84%	23819	17919	75	23819	13627	76		
(Public Sector)																	
PRIVATE SECTOR																	
Tata Steel Ltd	9600	8130	85%	9600	9155	95%	9600	9331	97%	9600	9960	104	12400	8478	91		
Essar Steel Ltd.	8540	4163	49%	8540	3245	38%	8540	2854	33%	10000	3685	37	10000	3927	52		
JSW Steel Ltd.	14600	11230	77%	14600	12227	84%	14600	13136	90%	16600	12679	76	16600	11803	95		
JSPL	2400	3031	126%	2400	2836	118%	4000	3557	89%	4850	3177	66	4850	2541	70		
Other E A F Units/	12010	9695	81%	14697	9874	67%	15888	14613	92%	18802	15574	83	18801	11819	84		
Corex-BOF/MBF-Eof																	
IF Units	33945	25685	76%	36494	27579	76%	36794	28283	77%	38300	26796	70	38302	20154	70		
TOTAL : (Private Sector)	81095	61934	76%	86331	64916	75%	89422	71774	80%	98152	71871	73	100953	58722	78		

Source: JPC, * Apr-Dec (prov)



ANNEXURE - V

PRODUCTION OF CRUDE/LIQUID STEEL (By Route)					
('000 tonnes)					
CATEGORY	2012-13	2013-14	2014-15	2015-16	2016-17*
OXYGEN ROUTE					
B S P	5008	5136	4807	5058	3552
D S P	2034	2019	2063	1975	1571
R S P	2209	2291	2792	2730	2079
B S L	3757	3776	3831	3392	2318
I S P	135	127	141	871	1000
S S P	73	91	125	120	83
V I S L	64	13	46	42	35
R I N L	3071	3202	3296	3641	2921
T S L	8130	9155	9331	9960	8478
JSW Steel Ltd.	8518	9257	10178	8385	8895
Other Oxygen Route	350	455	961	2221	1708
TOTAL OXYGEN ROUTE :	33349	35522	37571	38395	32640
ELECTRIC ROUTE					
ELECTRIC ARC FURNACE					
A S P	131	122	104	91	68
Essar Steel Ltd.	4163	3245	2854	3685	3927
JSW Ispat Ltd./JSW Steel Ltd.	2711	2971	2958	1961	2908
Jindal Steel & Power Ltd.	3032	2836	3557	3177	2541
Jindal Stainless Ltd.	1107	1111	1907	1258	952
Bhushan Steel Ltd.	-	1084	2180	3078	2315
Bhushan Power & Steel Ltd.	-	1714	1213	1832	1410
Other Electric Arc Furnace	8238	5510	8352	9517	5434
TOTAL ELECTRIC ARC FURNACE :	19382	18593	23125	24599	19555
ELECTRIC INDUCTION FURNACE	25685	27579	28283	26796	20154
TOTAL ELECTRIC ROUTE :	45067	46172	51408	51395	39709
GRAND TOTAL :	78416	81694	88979	89790	72349

Source: JPC, * Apr-Dec (prov)



ANNEXURE - VI

PRODUCTION OF HOT METAL						
('000 tonnes)						
	PLANTS	2012-13	2013-14	2014-15	2015-16	2016-17*
A.	PUBLIC SECTOR					
	BHILAI STEEL PLANT	5202	5377	5072	5317	3771
	DURGAPUR STEEL PLANT	2241	2191	2297	2170	1810
	ROURKELA STEEL PLANT	2366	2538	3157	3042	2200
	BOKARO STEEL LTD	4124	4100	4253	3700	2511
	IISCO STEEL PLANT	231	220	566	1431	1329
	VISVESVARAYA I & S PLANT	94	21	68	60	47
	RASHTRIYA ISPAT NIGAM LTD.	3814	3769	3780	3975	3230
	SUB TOTAL (A) :	18072	18216	19193	19695	14898
B.	PRIVATE SECTOR					
	TATA STEEL LTD.	8858	9898	10164	10655	9542
	MINI BLAST FURNACE	21764	24342	27055	28353	23533
	SUB TOTAL (B) :	30622	34240	37219	39008	33075
	TOTAL (A+B) :	48694	52456	56412	58703	47973
	% SHARE OF PRIVATE SECTOR	62.9%	65.3%	66.0%	66.4%	68.9%

Source: JPC, * Apr-Dec (prov)



ANNEXURE - VII

PRODUCTION OF PIG IRON (For Sale)						
('000 tonnes)						
	PLANTS	2012-13	2013-14	2014-15	2015-16	2016-17*
A.	PUBLIC SECTOR					
	BHILAI STEEL PLANT	14	0	3	0	0
	DURGAPUR STEEL PLANT	3	38	54	53	85
	ROURKELA STEEL PLANT	0	87	143	131	40
	BOKARO STEEL PLANT	84	40	105	36	20
	IISCO STEEL PLANT	65	55	364	388	199
	VISVESVARAYA I & S PLANT	15	5	12	8	2
	RASHTRIYA ISPAT NIGAM LTD.	493	327	239	116	105
	SUB TOTAL (A) :	674	552	920	732	451
B.	PRIVATE SECTOR					
	OTHER BLAST FURNACE/ COREX UNIT	6196	7398	8774	8495	7 0 5 4
	SUB TOTAL (B) :	6196	7398	8774	8495	7054
	TOTAL (A+B) :	6870	7950	9694	9227	7505
	%AGE SHARE OF PRIVATE SECTOR	90.2%	93.1%	90.5%	92.1%	94.0%

Source: JPC, * Apr-Dec (prov)



ANNEXURE - VIII

PRODUCTION FOR SALE OF FINISHED STEEL (Non-Alloy & Alloy Steel)						
		2012-13	2013-14	2014-15	2015-16	(^{'000 tonnes}) 2016-17*
A.	PUBLIC SECTOR					
	BHILAI STEEL PLANT	3614	3470	3321	3271	2306
	DURGAPUR STEEL PLANT	612	620	573	503	397
	ROURKELA STEEL PLANT	2111	2057	2110	2168	1784
	BOKARO STEEL PLANT	3274	3330	3207	2472	2295
	IISCO STEEL PLANT	134	186	120	436	606
	ALLOY STEEL PLANT	40	9	11	16	11
	SALEM STEEL PLANT	270	375	359	390	322
	VISVESVARAYA I & S PLANT	47	25	26	46	24
	SAIL- CONVERSION AGENT	-	556	553	909	738
	RASHTRIYA ISPAT NIGAM LTD.	2717	2811	2552	2766	2257
	SUB TOTAL (A) :	12819	13439	12832	12977	10740
B.	PRIVATE SECTOR					
	TATA STEEL LTD	6427	8756	8967	9527	8020
	ISP-MAJORS	23220	22965	25021	26023	22811
	OTHERS	47156	50417	53862	54376	39907
	Less Own Consump.(Majors & Others)	7940	7902	8525	11923	7509
	SUB TOTAL (B) :	68863	74236	79325	78003	63229
	TOTAL PRODUCTION FOR SALE(A+B)	81682	87675	92157	90980	73969
	%age SHARE OF PRIVATE SECTOR	84.3%	84.7%	86.1%	85.7%	85.5%

Source: JPC, * Apr-Dec (prov)

CATEGORY-WISE PRODUCTION FOR SALE OF FINISHED STEEL

		2012 - 13				2013 - 14				2014 - 15				2015 - 16				(000 tonnes)
CATEGORY	Main Prods	Other Prods	IPT/OWN Consumption	TOTAL	Main Prods	Other Prods	IPT/OWN Consumption	TOTAL	Main Prods	Other Prods	IPT/OWN Consumption	TOTAL	Main Prods	Other Prods	IPT/OWN Consumption	TOTAL		
1. Non-Flat Products																		
Bars & Rods	5803	23128	137	28794	7399	22686	535	29550	7023	25398	170	32251	11064	22583	135	33512		
Structurals/Spl.Sec.	661	5271	0	5932	864	6032	0	6896	819	6688	11	7495	1614	5898	52	7460		
Rails&Rly/Materials	881	57		938	822	65		887	760	75	0	835	882	54	0	937		
TOTAL (Non-flat prdct)	7345	28456	137	35664	9085	28783	535	37333	8602	32160	181	40581	13560	28535	187	41909		
2. Flat Products																		
Plates	2426	1831	95	4162	2497	1481	82	3896	2603	2112	14	4700	4078	198	137	4140		
H R Coils/Skelp/Strips	6678	16418	3706	19390	7686	17333	4213	20806	7567	17784	5146	20205	20192	6409	7150	19451		
H R Sheets	195	391	31	555	197	724	2	919	192	945	0	1138	1504	12	0	1516		
C R Coils/Sheets/Strips	1584	9564	3494	7654	1721	8945	2944	7722	1933	8624	3048	7509	4773	4871	3774	5869		
GP/GC Sheets	710	5650	73	6287	739	6235	75	6899	738	6265	111	6892	3348	4418	582	7183		
Elec.Sheet	72	83		155	69	57		126	69	71	0	140	92	56	0	148		
Tin Plates	8	293		301	7	337		344	0	354	0	354	0	331	0	331		
T M B P	0	5		5	0	3		3	0	0	0	0	0	2	0	2		
Tin Free Steel	0	16		16	0	12		12	0	0	0	0	0	8	0	8		
Pipes (large dia)	75	1931		2006	63	1915		1978	56	2038	0	2094	265	1968	70	2163		
TOTAL (Flat Products)	11748	36182	7399	40531	12979	37042	7316	42705	13158	38191	8318	43031	34251	18272	11712	40811		
TOTAL (Fin. Non-Alloy)	19093	64638	7536	76195	22064	65825	7851	80038	21760	70352	8500	83613	47811	46807	11899	82719		
TOTAL FIN. STEEL (Alloy / Stainless)	151	5738	404	5485	132	7557	52	7637	39	8530	25	8544	690	7595	24	8261		
TOTAL FIN. STEEL (Non-Alloy + Alloy)	19244	70376	7940	81862	22196	73382	7903	87675	21799	78882	8525	92157	48501	54402	11923	90980		



ANNEXURE - IX (Contd.)

CATEGORY-WISE PRODUCTION FOR SALE OF FINISHED STEEL				
('000 tonnes)				
2016-17*				
CATEGORY	Main Prods	Other Prods	IPT/OWN Consumption	TOTAL
1. Non-Flat Products				
Bars & Rods	6179	19619	108	25690
Structurals/Spl.Sec.	809	5013	0	5822
Rails&Rly.Materials	609	127	0	736
TOTAL (Non-flat prdct)	7597	24759	108	32248
2. Flat Products				
Plates	2156	1164	74	3246
H R Coils/Skelp/Strips	6544	15842	5033	17353
H R Sheets	126	722	0	848
C R Coils/Sheets/Strips	1590	6682	2271	6001
GP/GC Sheets	547	4903	0	5450
Elec.Sheet	33	121	0	154
Tin Plates	0	260	0	260
T M B P	0	0	0	0
Tin Free Steel	0	0	0	0
Pipes (large dia)	43	1488	0	1531
TOTAL (Flat Products)	11039	31182	7378	34843
TOTAL (Fin. Non-Alloy)	18635	55941	7486	67090
TOTAL FIN. STEEL (Alloy / Stainless)	119	6777	23	6873
TOTAL FIN. STEEL (Non-Alloy + Alloy)	18754	62718	7509	73963

Source: JPC, * Apr-Dec (prov)



ANNEXURE - X

CATEGORY-WISE IMPORT OF IRON & STEEL						
('000 tonnes)						
Sl.No.	Category	2012-13	2013-14	2014-15	2015-16	2016-17*
I	Semi-finished Steel (Non-Alloy)					
	Semis	517.5	43.2	331.3	512.1	270.3
	Re-rollable Scrap	243.9	208.1	329.2	426.3	250.1
	Total Semis	761.4	251.3	660.6	938.4	520.4
II	Finished Steel(Non-Alloy)					
	Bars & Rods	514.5	294.3	854.3	621.4	316.1
	Structurals	90.9	43.0	52.9	24.6	45.1
	Rly.Materials	18.8	4.4	15.5	11.7	29.9
	Plates	861.6	409.9	731.7	1059.7	531.7
	HR Sheets	122.5	102.1	78.6	105.1	32.2
	HR Coils/skelp/Strips	1871.6	1104.3	2006.3	3400.6	1455.2
	CR Coils/Sheets	1568.6	1278.9	1713.5	2235.1	695.1
	GP/GC Sheets	432.7	368.1	444.1	586.2	406.7
	Elec.Sheets	386.7	346.5	417.9	318.2	226.5
	TMBP	0.9	0.8	1.4	3.8	1.0
	Tin Plates	183.8	188.4	217.7	170.5	196.3
	Tin Free Steel	66.3	56.5	87.3	80.6	21.9
	Pipes	134.4	101.4	132.4	100.8	77.0
	TOTAL Fin. Steel (Non-Alloy)	6253.1	4298.6	6753.5	8718.2	4034.7
	TOTAL STEEL (Non-Alloy)	7014.5	4549.9	7414.1	9656.6	4555.1
	Alloy/Stainless Steel					
	Non-Flat Alloy	352.5	236.6	821.8	1119.5	394.3
	Flat Alloy	1319.1	914.6	1744.9	1874.5	1065.6
	Semi-finished Alloy	31.1	7.1	35.8	42.4	5.8
	TOTAL FIN. STEEL (Alloy)	1671.6	1151.2	2566.8	2993.9	1459.9
	TOTAL STEEL (Alloy)	1702.8	1158.3	2602.5	3036.3	1465.7
	TOTAL FIN. STEEL (Alloy+Non-Alloy)	7924.7	5449.8	9320.3	11712.2	5494.6
	TOTAL Steel (Non-Alloy + Alloy)	8717.2	5708.2	10016.6	12692.9	6020.8
III	Other Steel Items					
	Fittings	340.0	298.0	419.4	482.5	386.5
	Misc.Steel Items	2293.7	3402.9	2327.3	1902.4	1024.6
	Steel Scrap	7772.7	4926.7	5784.3	6627.1	4117.7
IV	Iron					
	Pig Iron	20.6	34.2	23.4	21.9	29.9
	Sponge Iron	0.2	7.3	20.1	0.2	1.3
	H.B.Iron	0.1	0.0	0.0	0.8	0.0
V	Ferro-Alloys	179.6	140.5	242.2	237.4	491.7
	GRAND TOTAL :	19324.2	14517.8	18833.3	21965.3	12072.4

Source: JPC, * Apr-Dec (prov)



ANNEXURE - XI

CATEGORY-WISE EXPORTS					
('000 tonnes)					
CATEGORY	2012-13	2013-14	2014-15	2015-16	2016-17*
SEMIS (Non-Alloy)	142.7	484.2	637.69	635.72	820.87
FINISHED STEEL (Non-alloy)					
Non-Flat					
Bars & Rods	413.1	585.1	392.37	365.02	443.85
Structurals	60.6	64.7	83.08	81.59	91.83
Railway Materials	2.7	1.2	2.76	1.86	38.68
Total Non-Flat	476.4	651.0	478.21	448.46	574.36
Flat					
Plates	246.3	154.9	559.34	266.16	192.88
H R Coils/Sheets	1878.3	2130.2	1374.65	446.55	1364.21
C R Sheets/Coils	411.9	560.6	584.69	655.24	955.60
GP/GC Sheets	1543.8	1821.7	1629.31	1420.24	1301.30
Elec. Sheets	7.0	9.9	9.87	19.33	26.10
Tinplates	54.6	70.1	46.93	56.35	32.53
Tin Free Steel	1.2	0.5	0.27	0.90	1.71
Pipes	136.7	109.3	223.07	162.10	106.42
Total Flat	4279.7	4857.4	4428.13	3026.88	3980.75
Total Fin. Steel (Non-Alloy)	4756.1	5508.35	4906.34	3475.34	4555.11
Total Steel (Non-Alloy)	4898.8	5992.6	5544.03	4111.06	5375.98
Non-Flat Alloy	215.8	227.9	336.14	165.27	113.24
Flat Alloy	396.2	249.1	353.26	438.71	306.96
Total Finished Steel (Alloy)	612.0	477.0	689.40	603.98	420.20
Semi-Finished Alloy	1.5	2.0	1.92	3.07	5.74
Total Steel (Alloy)	613.5	479.0	691.32	607.05	425.94
Total Fin. Steel (Non-Alloy+Alloy)	5368.1	5985.3	5595.74	4079.32	4975.31
Total Steel (Non-Alloy + Alloy)	5512.3	6471.6	6235.35	4718.11	5801.92
PIG IRON	414.1	943.1	539.96	297.24	145.99
SPONGE IRON	58.1	74.0	97.97	127.15	111.30

Source: JPC, *prov



ANNEXURE - XII

POSITION OF IMPLEMENTATION OF THE JUDGEEMENTS / ORDERS OF THE CENTRAL ADMINISTRATIVE TRIBUNAL

Steel Authority of India Limited

Bokaro Steel Plant: O.A. No. 051/85/2016 Dukhan Paswan Vrs. SAIL/BSL (for claiming back wages and consequential benefits for the period from 22/07/2011 till the date of his joining). The matter was disposed on 18/11/2016 and necessary action is being taken for implementation of the Order.

Mecon Ltd.

As per Central Administrative Tribunal (CAT), Kolkata Bench Order No. O.A.350/00191/2014 dated 15.02.2016, implementation of payment of arrear perks and allowances to the eligible employees of MECON LIMITED for the period 26.11.2008 to 20.10.2009 is pending.



ANNEXURE - XIII

COMPARATIVE PBT (PROFIT BEFORE TAX) OF STEEL PSUs

(Rs. in crores)

Sl. No.	PSU/Company	2012-13	2013-14	2014-15	2015-16	2016-17* (Apr-Dec)
1	SAIL	3240.66	3225.00	2358.91	(-)7198.44	(-)3432.03
2	RINL	526.47	549.15	103.35	(1417.23)	(1265.38)
3	NMDC	9465.12	9759.20	9767.84	4505.27	3310.00
4	MOIL	636.78	769.33	650.57	270.26	208.79
5	MSTC	193.40	(-)107.37	131.47	91.34	58.18
6	FSNL	2.53	12.43	25.36	32.53	23.33
7	OMDC\$	26.25	16.74	25.84	18.91	14.23
8	EIL ##	1.96	0.24	(-)12.62	1.71	0.98
9	MECON	150.73	68.69	33.01	(174.70)	(99.92)
10	KIOCL	32.34	61.40	31.26	(77.66)	0.78
11	HSCL	(-) 19.81	(-)18.67	(-)8.10	35.40	63.86
12	BSLC\$	(-) 18.14	(-)18.77	(-)27.27	(16.17)	(10.27)

*Provisional

Eastern Investment Ltd. (EIL), \$ Orissa Mineral Development Company Limited (OMDC), Bisra Stone Lime Company Limited (BSLC) are constituents of the Bird Group of Companies.



ANNEXURE-XIII (A)

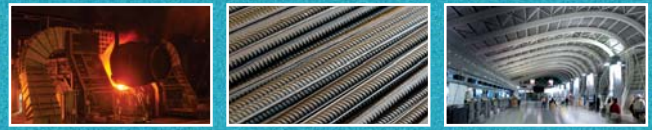
**COMPARATIVE PAT (PROFIT AFTER TAX)
OF STEEL PSUs**

(Rs. in crores)

Sl. No.	PSU/Company	2012-13	2013-14	2014-15	2015-16	2016-17* (Apr-Dec)
1	SAIL	2170.35	2616.48	2092.68	(4137.26)	(2061.94)
2	RINL	352.83	366.45	62.38	(1420.64)	(975.68)
3	NMDC	6342.37	6420.08	6421.86	3028.33	2202.00
4	MOIL	431.72	509.56	428.01	172.98	183.61
5	MSTC	130.73	(-)70.03	90.99	59.88	38.04
6	FSNL	1.96	8.42	17.10	21.11	15.40
7	OMDC \$	12.86	6.26	17.70	10.63	4.95
8	EIL ##	1.47	0.09	(-)12.72	1.44	0.67
9	MECON	101.03	49.48	20.27	(162.41)	(99.70)
10	KIOCL	31.05	39.93	30.82	(77.66)	0.51
11	HSCL	(-) 19.81	(-)18.67	(-)8.10	30.19	41.76
12	BSLC\$	(-) 18.14	(-)18.77	(-)27.27	(16.17)	(10.27)

*Provisional

Eastern Investment Ltd. (EIL), \$ Orissa Mineral Development Company Limited (OMDC), Bisra Stone Lime Company Limited (BSLC) are constituents of the Bird Group of Companies.



ANNEXURE - XIV

CONTRIBUTION MADE TO THE CENTRAL GOVERNMENT AND GOVERNMENT INSURANCE COMPANIES BY THE STEEL PSUs

(Rs. in crores)

Sl. No.	PSU/Company	2012-13	2013-14	2014-15	2015-16	2016-17* (Apr-Dec)
1	SAIL	8599.06	8187.82	7667.00	5373.00	4030.00
2	RINL	1775.24	1643.11	1428.96	1397.53	909.04
3	NMDC	6588.00	8952.00	6681.00	6655.78	8867.00
4	MOIL	236.74	291.75	230.29	201.23	109.00
5	MSTC	83.22	81.41	84.70	70.37	68.00
6	FSNL	36.69	40.83	41.11	42.87	32.25
7	MECON	151.08	92.96	87.47	86.62	39.30
8	KIOCL	209.95	261.05	110.79	30.41	18.88
9	HSCL	0.32	44.87	44.75	52.15	39.11
10	BGC	2.58	10.28	5.85	1.86	1.49

*Provisional



ANNEXURE-XIV (A)

CONTRIBUTION MADE TO THE STATE GOVERNMENTS BY THE STEEL PSUs

(Rs. in crores)

Sl. No.	PSU/Company	2012-13	2013-14	2014-15	2015-16	2016-17* (Apr-Dec)
1	SAIL	3524.25	3372.54	3443.00	3124.00	2279.00
2	RINL	598.85	606.62	514.91	556.37	386.02
3	NMDC	901.00	932.00	1262.00	1070.67	591.00
4	MOIL	77.27	83.24	69.41	62.17	70.37
5	MSTC	28.28	45.86	68.63	67.10	31.00
6	FSNL	0.35	0.73	1.40	0.32	0.48
7	MECON	3.04	0.94	1.62	1.77	0.22
8	KIOCL	29.66	30.44	6.13	2.33	0.48
9	HSCL	2.21	26.67	38.87	40.76	30.56
10	BGC	4.38	4.38	7.22	5.07	3.85

*Provisional



ANNEXURE-XV

BUDGET AND EXPENDITURE ON CSR BY STEEL PSUS

(Rs. in lakhs)

PSU	2012-13		2013-14		2014-15		2015-16		2016-17	
	Budgeted	Exp.	Budgeted	Exp.	Budgeted	Exp.	Budgeted	Exp	Budgeted	Exp * (Apr-Dec)
SAIL	4200.00	5329.00	4000.00	6206.00	7800.00	3504.00	10016.00	7616.00	2933.65	1694.00
RINL	750.00	1600.00	750.00	2031.00	1423.00	1404.00	1137.00	873.00	1375.00	702.00
NMDC	14530.00	10110.00	17105.00	13142.00	25018.69	18865.00	298.20	210.09	248.32	54.00
MOIL	680.00	1056.00	863.00	1036.34	1419.00	1357.57	1430.00	1447.39	1127.00	759.00
KIOCL	283.00	79.00	93.00	227.00	110.00	101.00	96.50	64.00	43.50	12.53
MSTC	355.00	193.28	260.00	483.00	120.00	120.00	145.00	150.26	80.00	7.60
FSNL	9.00	9.00	4.00	4.50	25.27	22.10	26.80	26.83	46.80	N.A
MECON	497.49	235.33	460.46	272.33	468.23	144.45	491.51	221.08	270.43	40.85
HSCL	0.00	24.02#	0.00	0.00	0.00	10.21	0.00	6.67	0.00	0.00
BGC	17.00	48.00	64.00	92.27	99.60	33.50	73.00	72.99	46.00	12.03

* Provisional

spent from the carried over fund of last year.



ANNEXURE-XVI

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 (AR & PG) 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 Central Public Sector Enterprises under the Ministry have also got their Citizen Charter uploaded on their respective websites.



ANNEXURE-XVII

RECENT IMPORTANT AUDIT OBSERVATIONS

Para No.	Title of Paragraph	Summary
5.1	Execution of Jobs	Hindustan Steelworks Construction Limited is engaged mainly with the execution of construction projects for iron and steel works and ancillary plants. Audit of execution of jobs showed that the process of award of work based on Approved Rate Structure (ARS) was not competitive and lacked transparency because in majority of cases work was given on nomination basis without inviting quotations from empanelled contractors. 14 contracts awarded to the company valuing Rs. 133.59 crore were split into 160 contracts and offloaded to 32 contractors mostly on the basis of Limited Tender Enquiry of ARS. Procedures governing invitation of bids were not conducive in attracting wider response from the prospective contractors. Audit observed delays ranging from 10 days to 288 days over permissible time in submission of Performance Bank Guarantee by the contractor in 35 contracts valuing Rs. 241.46 crore. The company could not realize Rs. 21.85 crore as centage charges/PMC fee from the client due to deficiencies in the agreement.
5.2	Marketing Activities	<p>Review of the marketing activities of Central Marketing Organisation (CMO) of SAIL revealed the following:</p> <ul style="list-style-type: none"> • Delay in capacity addition, resulted in reduction of market share from 18.5 per cent in 2009-10 to 14.2 percent in 2014-15 despite increase in steel consumption in India by 30 per cent during 2009-15. • The company did not have an effective strategy for seeking business through participation in tenders and it was not successful in 69 tenders out of 224 tenders in which it participated primarily due to quoting higher prices. • Absence of active dealership base adversely impacted the growth in retail sales and overall market share of the company. SAIL disbursed dispensation of Rs. 26,058 crore in last 6 years and average dispensation per ton increased from Rs. 2241/- in 2009-10 to Rs. 5764/- in 2014-15. • Net Sales Realization increased by 13.43 per cent over 5 years whereas the cost of sales increased by 31.16 per cent. SAIL's cost of raw material to total expenditure was 7-9 and 9-17 percentage points higher than that of Jindal Steel & Power Limited and TATA Steel Company Limited respectively. • There were instances of misuse of the company's supplies and SAIL brand name by Conversion Agents and Wet Leasing Agents.
5.3	Idle investment at SPU Bettiah project	Setting up a SPU at Bettiah for conversion of semis into finished steel was not a prudent decision financially and commercially. Resultantly, an investment of Rs. 140.16 crore in the SPU became non-performing and 137 officials specifically recruited for the SPU were idle.
5.4	Avoidable expenditure	Outsourcing of coal coordination and liaisoning services from a private firm despite having an in-house organisation for the same purpose led to an avoidable expenditure of Rs. 14.35 crore.