

# REPORT

## INTRODUCTORY

Steel is key to the development of any country and is considered to be the mainstay of the human civilization. The level of per capita consumption of steel is treated as economic indicator of a country. All major industrial economies are characterized by the existence of a strong steel industry and the growth of many of these economies has been largely shaped by the strength of their steel industries in this initial stages of development.

India has been one of the major producers of steel in the world. Prior to the economic reforms of the early 1990s, the Steel Industry of India was regulated and controlled by the Government Policies. After liberalization the Indian Steel Industry evolved significantly to conform to international standards. The India Steel Industry is expected to play a significant role in India's economic development in the years to come. Availability of iron ore in the country and well furnished facilities for steel productions are the major aspects which will play a major role in the growth of the steel industry in India. The domestic steel industry has a tremendous growth potential and likely to register significant growth in the coming years in view of the rising demand of steel in infrastructure and realty sectors. However, one of the major initiatives that need to be taken is to focus on increasing consumption of steel in the rural areas.

In order to realize the growth potential in the steel sector, it is imperative that the steel industry remain competitive. The availability of critical inputs such as iron ore and coke is equally important for sustainable growth of the industry. India has a number of iron ores. Thus, the industry has plenty of resources to draw its raw material from. However, Indian Steel Industry has to grapple with the problem of inadequate reserves of coking coal.

Notwithstanding the above, there are certain challenges before the steel industry of India. The condition of infrastructural facilities of the steel industry is not so conducive for a healthy growth and development of the steel industry in India. The Indian Steel Industry has also not been able to draw the best professionals.

## CHAPTER-I

### Brief Background

#### **STEEL AUTHORITY OF INDIA (SAIL)**

In the pre-liberalization era, besides TISCO (Tata Iron and Steel Company now renamed as TATA steel) and secondary steel producers, SAIL was the only major steel producer in India. However, post liberalization and globalization, a number of private players like Essar, Jindal, Ispat etc. set up steel plants in India. According to the Ministry, this resulted in increased competition. Subsequently, all these domestic producers have enhanced or are in the process of enhancing their capacities. Further, many foreign steel majors like POSCO, Arcelor Mittal announced their plans to set up new steel plants in India. This would have further eroded the market share of SAIL.

1.2 It has been stated that in order to maintain predominance in the steel sector and to face global competitiveness, SAIL had drawn up a Modernisation & Expansion Plan for its five integrated steel plants and special steels plants including raw material resources and other related facilities. Apart from increasing the production capacity, the plan addresses the vital issues of elimination of technological obsolescence, installing energy efficient & environment friendly technologies, value addition/ product-mix improvement/ sustenance of existing assets of the plants and introduction of customer-centric processes such as Enterprise Resource Planning (ERP) and Manufacturing Execution System (MES). The upgradation of existing facilities at steel plants is necessary to meet the stringent quality requirements of the customers and to remain cost competitive.

1.3 In reply to a query, the Ministry informed the Committee that SAIL has planned a capital expenditure of about Rs.70,000 crore for modernization/expansion and sustenance schemes of existing Plants/Units, including Rs.10,000 crore for development of raw material facilities. The source of funding of modernization & expansion of SAIL will be through a combination of debt & equity (including internal resources) while maintaining debt-equity ratio of 1:1.

## **Rashtriya Ispat Nigam Limited (RINL)**

1.4 According to the Ministry, RINL has excellent layout, infrastructure including land and large skilled workforce making it suitable to expand capacity upto 20 million tonnes of liquid steel per annum. The plant has well connected logistic infrastructure facilities like two main ports at close proximity, National Highway and railway lines adjacent to the plant. Based on the fund availability and advantageous position with respect to layout and infrastructure, RINL has utilised this opportunity to encash on the growth opportunity in the country and has undertaken expansion to double it's capacity to 6.3 Mt of liquid steel, which is currently in progress.

1.5 The Committee have been further informed that the production of Hot Metal, Liquid steel and Saleable steel at VSP, crossed rated capacities in the year 2001-02 and have consistently remained above 100% since then. As a result of consistently operating at high levels of capacity utilization and the plant being in continuous operation for nearly 20 years, many critical equipment in the plant have outlived their economic service life and therefore require major revamps / capital repairs to bring them back to earlier reliability and efficiency levels. In this endeavour, RINL-VSP has undertaken several modernisation/ upgradation projects, which are at various stages of conceptualization / market survey / order placement / implementation and commissioning. In addition to the above reasons, strategically, expansion is also necessitated to reduce overhead cost per tonne of steel produced, as RINL does not have captive Iron ore and Coking coal mines and for these reasons, RINL's variable cost is much higher than those Integrated Steel Plants having captive mines for these raw materials.

1.6 RINL has envisaged meeting its plan expenditure towards modernization and expansion schemes entirely out of internal accruals and external borrowings without seeking any budgetary support from Government of India. In respect of its major ongoing Expansion project, it is envisaged that the entire project cost would be funded by way of 50% from internal accruals and 50% from external borrowings that would be raised by the Company depending on the requirement. Being a Zero debt high Net worth company, the company is confident to raise resources from capital market as and when required.

## CHAPTER II

### **Modernisation – Elimination of Technological Obsolescence, Energy Efficiency and Environment Friendly Technology**

#### **Steel Authority of India (SAIL)**

SAIL is in the process of modernizing and expanding its production units, raw material resources and other facilities to maintain its dominant position in the Indian steel market. Besides capacity enhancement, the modernization & expansion plan adequately addresses the need of SAIL Plants towards eliminating technological obsolescence, energy saving, enriching product mix, pollution control, developing mines & collieries to meet higher requirement of key inputs, introduce customer centric processes and have matching infrastructure facilities in the Plant to support higher production volumes.

Plant-wise status:

#### IISCO Steel Plant (ISP)

The Modernisation & Expansion Plan of ISP was approved 'in-principle' by SAIL Board in July'06. The final approval was also accorded for placement of order of major packages by SAIL Board progressively from Sep'07 to Feb'08.

The plan envisages:

- The Major Facilities include a New 7 metre tall Coke Oven Battery; Sinter Machines; a new Blast Furnace of 4060 m<sup>3</sup> volume with Top Pressure Recovery Turbine; 3 Nos. of 150 T Basic Oxygen Furnace Converters; 2 Nos. of 6-strand Billet Casters and one 4-strand Beam Blank/ Bloom Caster; Heavy Section Mill; Wire Rod & Bar Mill with necessary auxiliary and service facilities.
- Continued operation of existing Finishing Mills with feed stock from new Casters. Saleable steel is envisaged at 2.37 Mtpa from both existing and new mills.

The status of implementation is as follows:

- Orders for all the major packages viz. Coke Oven Battery (COB), Sinter Plant, Blast Furnace, Basic Oxygen Furnace (BOF) Shop, Continuous Casters, Heavy Section Mill, Wire Rod & Bar Mill etc. have been placed.
- Design and engineering jobs are in advanced stage of completion. Civil & structural works and equipment supply & erection are in progress. The commissioning of various facilities has been synchronized with the

schedule of BOF shop.

### Salem Steel Plant (SSP)

The Modernisation & Expansion Plan of Salem Steel Plant was approved 'in-principle' by SAIL Board in June'06. The final approval for placement of order of major packages was accorded by SAIL Board on Sep'07/Jan'08.

The plan envisages:

- Installation of new steel making and continuous casting facilities to produce 180,000 tonnes per annum (tpa) of stainless steel slabs and expansion of cold rolling complex to produce 146,000 tpa of cold rolled stainless steel.

The status is as follows:

- Orders for all the packages viz. New Steel Melting Shop, New Cold Rolling Mill Complex, Up-gradation of Existing Cold Rolling Mill, Roll grinder for Hot Rolling Mill etc. have been placed.
- Design & engineering work and major civil & structural works have been completed. Major equipment supply & erection jobs have also been completed. Some units have already been commissioned and are under regular use. Steel making facilities are likely to be completed by Aug'10 subject to availability of uninterrupted Power supply from TNEB.

### Bokaro Steel Plant (BSL)

The Modernization & Expansion Plan of BSL was approved 'in-principle' by SAIL Board in Dec'06. Final approval had also been accorded by SAIL Board for placement of orders for major stand alone packages which includes New CRM Complex, Up-gradation of BF-2, Augmentation of SMS-II, Power distribution & Transmission Packages and Hot Metal Desulphurization packages.

The Major Facilities include the following:

- Installation of a new cold rolling mill complex of 1.2 Mtpa capacity
- Up-gradation of one Blast furnace
- Rebuilding of coke oven batteries compliant with statutory environmental norms
- Modernization & up-gradation of SMS-II
- Augmentation of Infrastructure Facilities

The status is as follows:

- Orders for major schemes have been placed which include New CRM complex, Upgradation of BF-2, upgradation of SMS-II for its capacity expansion and CHSGP for BF 1,2&3 along with associated auxiliary packages. Execution of all these packages is in progress.

## Bhilai Steel Plant (BSP)

The Modernization & Expansion Plan of Bhilai Steel Plant was approved 'in-principle' by SAIL Board in Apr'07. Final approval had also been accorded by SAIL Board for placement of orders for major packages which includes BOF shop, CC Shop, Coal & Ore handling system, New COB etc.

The Plan envisages:

- Phasing out of low yield and energy intensive units viz. twin hearth furnace, ingot casting, soaking pits and blooming and billet mill
- Reduction of semis by enhancing finished steel production;
- Broadening and value addition in product-mix for higher flexibility and profitability;
- Meeting requirement of Indian Railways of class A heavier rails

The Major Facilities include the following:

- Installation of a new 7 metre tall coke oven battery No. 11,
- New blast furnace, having a volume of 4060 m<sup>3</sup>
- Second sinter machine in Sinter Plant-3,
- New Steel Melting Shop (SMS-3) with complete secondary refining facilities,
- New Billet Casters/ Billet-cum-Bloom Caster, Beam Blank Caster,
- Bar & Rod Mill,
- Universal Rail Mill,
- New Oxygen Plant

The status is as follows:

- Orders for some major packages have been placed which includes BOF shop, Continuous Casting (CC) Shop, Coal & Ore handling system, New COB, New Lime Plant etc. and are under implementation. Balance packages to be ordered include Sinter Plant, Blast Furnace, Bar & Rod Mill, Universal Rail Mill etc. which are under various stages of tendering.

## Rourkela Steel Plant (RSP)

The Modernization & Expansion Plan of Rourkela Steel Plant was approved 'in-principle' by SAIL Board in May'07. Final approval had been accorded by SAIL Board for placement of orders for the major packages except BOF & Plate Mill.

The Plan envisages:

- Increase in production of crude steel through state-of-the-art technology meeting the productivity levels of international standards;
- Improvement in quality of products; Production of more value-added products;
- Improvement in energy consumption; Improvement of environment; and Reduction in cost of production and thereby increase in NSR.

The Major Facilities include the following:

- New 7.0 m tall COB No.6
- New Sinter Plant-3

- New Blast Furnace -5 (4060m<sup>3</sup>).
- New 3<sup>rd</sup> BOF convertor, LF, RH-OB and 3<sup>rd</sup> single strand Slab Caster with balancing facilities for operation and increased production in SMS-II.
- New 4.3 m wide Plate Mill
- New Oxygen Plant on built-own-operate (BOO) basis.

The status is as follows:

- Orders for major packages have been placed which includes New Blast Furnace, Continuous Caster, New Sinter Plant, 3<sup>rd</sup> BOF Converter, Coal Handling Plant, Ore Handling Plant & Lime Calcination Plant and are under implementation. Major balance package to be ordered includes New Plate Mill which is under various stages of tendering.

#### Durgapur Steel Plant (DSP)

The Modernization & Expansion Plan of Durgapur Steel Plant was approved 'in-principle' by SAIL Board in Jul'07.

- Orders have been placed for major packages such as Bloom-cum-round caster, Medium Structural Mill & Reheating Furnace for MSM and standalone packages which include additional equipment in Raw Material Handling System (RMHS) etc. Execution of all these packages is in progress.

2.2 The Committee during the course of examination of modernisation and expansion of steel sector undertook, inter-alia, a visit to IISCO Steel Plant(ISP), Burnpur on 29.06.2010 to oversee the progress of the modernisation and expansion programme of the Plant.

2.2.1 When the Committee inquired about increasing the height of the boundary wall of the IISCO Steel Plant, the Ministry of Steel in their written reply have furnished the following information:-

“The height of existing plant boundary wall has been raised to 4.0 meters where the height was less than 3.0 meters. Old boundary wall near Coal Handling Plant was damaged and same has been restored with height of 4.0 meters.

10 km long new boundary wall, having overall height of 4.20 meters (including concertina coil), coving the new plant area has been erected except for five stretches (7 m, 8 m, 4 m, 20 m and 22 m totaling 61 meters). Work in these areas is held up due to protest by local residents of the area. The matter has been taken up with local administration at various levels and is being pursued since long time but no support is forthcoming for completing balance work of boundary wall.

Boundary wall near west yard(stretch of 20 mtrs) has been dismantled to facilitate construction of a road bridge. The boundary wall will be reconstructed after completion of the job of Road Bridge.”

### 2.3 Rashtriya Ispat Nigam Limited (RINL):

As per the information furnished by the Ministry of Steel, the production of Hot Metal, Liquid steel and saleable steel at VSP, crossed rated capacities in the year 2001-02 and have consistently remained above 100% since then. As a result of consistently operating at high levels of capacity utilization and continuous thrust on production of value added steel, critical equipment in the plant require major revamps / capital repairs to bring them back to earlier reliability and efficiency levels, as brought out below:

- **Blast Furnaces:** BF-1 Godavari & BF-2 Krishna were commissioned in Mar '90 & Mar '92 respectively. Since inception, BF-1 & BF-2 have produced 29.8 Mt & 28.6 Mt till 31.03.09 respectively and have been in continuous production for the last 19 & 17 years respectively. Normally, the Russian BFs are recommended for Category – 1 capital repairs after 18-20 Mt throughputs & after 14 to 16 years of operation. So, both the furnaces are overdue now for the major repairs needing about 4 months shutdown each. The action for revamping and up-gradation of Blast Furnaces have already been taken and tender has been re-floated for BF-1.
- **Basic Oxigen Furnace(BOF):** The 3 converters have since inception produced 16.16 Mt, 15.80 Mt & 15.41 Mt respectively of liquid steel till 31.03.09. These BOFs are only furnaces of this design and vintage working in the world today as was confirmed by their designer M/s Azovmash, who two years ago recommended total revamp. Number of heats in BOFs at VSP have exceeded 100 thousand in a span of 17 years against accepted service life of 40 to 50 thousand heats and / or 17 years. The action for revamping of converters has already been taken and tender has been re-floated.
- **Sinter Plant:** Sinter Machines 1 and 2 were commissioned in Nov' 89 and Dec '91 respectively and have produced 41.66 Mt and 41.63 Mt respectively till 31.03.09. Machines are now due for major repairs to bring back efficiency and earlier reliability, more importantly from environmental point of view. The process of conceptualization of revamping and up-gradation has already commenced.
- **Coke Ovens:** The three Coke oven batteries were commissioned progressively between Sep '89 and Jul '92. Cumulative gross coke produced till 31.03.09 is 35.5 Mt. Intermittent repairs are being carried out and major repairs are now planned from 2012. Rebuilding of each battery is likely to take 30 months.
- **Others:**
  - Continuous Casting Shop
    - Replacement of outlived Lift & Turn (L&T) housings for 3 out of 6 machines completed and balance three are planned in 2010-11 and 2011-12 for which the procurement process is in progress.
    - Modification of gas cutting machines completed for three out of six machines and balance three are planned in 2010-11 and 2011-12.
  - Thermal Power Plant



- Up-gradation of Control & Instrumentation systems of power plant is in progress after being in operation for more than 20 years. Obsolete systems are being replaced with Digital Distributed Control (DDC) systems.

Thus, RINL is in the process of modernizing and upgrading its' existing facilities to sustain the current production and productivity level and also to reduce energy consumption, improve technological parameters, to meet latest environmental norms etc. Management has put in place an exclusive Department – Modernization and Capital Repairs, for processing of activities relating to the modernization and capital repairs of various units in the plant in a focused way.

In this endeavour, several projects have already been frozen for implementation and some of them are further being identified as per requirement. Some of the major projects which have been completed are Coke oven Battery-4 (Phase-1), Combined Blowing in all of the 3 LD converters, Modernization of Continuous casting Machine-2, Modification of gas cutting machine in SMS, Replacement of Lift & Turn stand housing in CCM-4, Up-gradation of ladle furnace PLC & MMI, Up-gradation of Control and Instrumentation of 1 Turbo generator, Up-gradation of Control and Instrumentation of 1 Boiler, Conversion of binding machine to automatic strapping machine in bar mill.

The projects relating to Iron Ore Storage Augmentation, Coke Oven Battery 4(phase-2), Pulverized Coal Dust Injection System, Conversion of tying machine to strapping machine in Medium Merchant Structural Mill, Up-gradation of Control and Instrumentation of 2 Turbo generators, Air Separation Unit 4 & 5, Reduction of Ammonical Nitrogen at MBC are under implementation.

Later on the projects relating to Stacker-cum-Reclaimer & Dozers, Enhancing production in Sinter Machines, Category 1 repairs of BF 1 & BF 2, Pig Iron storage augmentation, Modification of Continuous Casting Machine, Converter revamping / up-gradation, Up-gradation of slag yard cranes, Handling and finishing line – 4, Augmentation of SMS water system for up-gradation of CCMs, Additional storage facility (EPI) are proposed to be taken up for implementation.

2.4 On being asked whether the globally best and proven technologies available in steel industry are being introduced in the ongoing modernisation and expansion of SAIL and RINL, the Ministry of Steel has furnished the following information:

### **Steel Authority of India Limited (SAIL)**

SAIL's modernization & expansion plan include the state-of-the-art technologies prevalent in steel sector globally which include:

- BOF Secondary Refining, LF, RHOB, etc.
- Continuous casting technology (from current level of 60% to about 93% in current phase)

- Introduction of pellets charging in Blast Furnaces
- Coke dry quenching facilities in Coke ovens
- Top pressure recovery turbine introduced in Blast Furnaces
- Coal Dust Injection in Blast furnaces.
- 100% desulphurization and addition of VAD, AOD and other degassing units for cleaner steel.
- ERP introduction
- Level-3 automation
- Following units of new technology being introduced :
  - Round cum bloom caster at DSP
  - Beam blank caster at ISP
  - Coupled pickling and Tandem Mill at BSL

### **Rashtriya Ispat Nigam Limited (RINL)**

#### **i) Details of best and proven technologies available in the Steel industry:**

Two main processes which constitute the core of the steel industry are:

- a) Iron making and
- b) Steelmaking

#### **a) Iron Making Technology:**

Iron making technology used by the steel industry across the globe, is through the following routes:

1. **The Blast Furnace route:** The Coke-oven-Sinter-BF route is the most widely used and tested process used by integrated steel plants across the world, that produce steel from iron ore in large volumes. In this process, the iron ore is first subjected to a sintering process and the treated iron from the sintering plant is fed in to the Blast furnace along with coke. The hot metal output from the Blast furnace is either directly fed in to the Basic Oxygen Furnace or used for producing 'pig iron'.
2. **The Direct Reduction Technique:** This technique is an alternative to the Blast furnace technique and produces 97.0 percent pure iron, which is called, solid Sponge Iron or direct reduced iron or hot briquetted iron. It is used as substitute for steel scrap in Electric Arc Furnaces.
3. **Smelting Reduction Technique:** Smelting reduction technique is the third technique used for the production of iron from iron ore. COREX technique is the latest process used for smelting. Here coal is directly used in a melter gasifier as an energy carrier & reducing agent, thereby eliminating the need for a Blast Furnace, Sinter Plant & Coke Ovens. Corex which was introduced two decades ago has not grown significantly. It has limitation for production of steel in large volumes.

The other smelting techniques that have been developed are Hismelt, Ausmelt, Romelt, Plasmasmelt and the Direct Iron Smelting Reduction (DIOS).

4. **Finex Technology:** Finex technology is based on use of iron ore fines and non coking coal. However, Finex based steel plants so far have only been installed in Korea, comparatively of lower capacity and few other steel plants are in the process of adopting this technology. The production of steel through this route is less than 5 million tonnes against the global production of over 1200 million tonnes annually through conventional technology viz., Blast Furnace, Basic Oxygen Furnace, Electrical Arc Furnace route etc.,

Among all the iron making processes up to now, the **Blast furnace iron making route** is the biggest in production scale, the lowest in energy consumption and the highest in efficiency. Several developments have been made over the years to improve the efficiency by improving the scale of operation through increase in the furnace size, to improve productivity through increase in top pressure and blast temperature, intensive size control of the burden, improvement in the quality of sinter, burden distribution control, usage of pellets and injection of auxiliary fuels like coal dust, natural gas, tar injection along with oxygen enrichment.

b) **The Steel Making Process**

The second stage in iron and steel making is the steel making process. Generally two types of techniques are adopted for steel making. They are the Basic Oxygen Furnace (BOF) type and Electric arc furnace (EAF) type.

**Basic Oxygen Furnace Technique (BOF):** The Basic oxygen furnace is used for producing steel from the refined iron. Currently about 67% of the world steel is produced through BF/BOF route. This route is very good for volume production. But the process requires high capital cost and substantial investments on infrastructure.

Technologies like Combined blowing in converters have been developed to improve productivity of the Basic Oxygen Furnaces or Converter. Use of multi hole lances, improved refractory, high levels of automation etc further improves the productivity of the converter vessel. Refining technologies like Ladle furnace, RH degasser further enhances the quality of steel produced from the converters.

**Electric Arc Furnace (EAF):** Steel scrap or Pig iron or Sponge iron is used as the raw material in this process. The share of EAF steel making in the global output of crude steel stands at around 31 % and is increasing as EAF process is an environment friendly and has flexibility to produce variety of value added grades of steel

ii) **New technologies being adopted in Modernisation/expansion at RINL-VSP:**

RINL-VSP has opted for the latest technology and more efficient equipment in it's on-going expansion project. The following are the new features being adopted in the new units coming up in the on-going 6.3Mt expansion phase:

a) **New Sinter plant-3:**

Deep bed sintering, elimination of hot sinter screen by S.S. segregation chute, short ignition furnace, circular cooler, waste heat recovery from cooler, lime addition in sinter mix, VVVF drive for energy saving.

**b) New Blast Furnace-3:**

Soft water closed loop cooling, copper cooling stove in high heat zone, high rate of coal dust injection, high top pressure, flat cast house, carbon hearth, silicon carbide stack lining, heat recovery from stove flue gas, water cooled bottom, INBA slag granulation, Bell-less-top with center coke charging facilities, Level-2 automation, VVVF drive for energy saving.

**c) New Steel Melt Shop-2:**

Secondary emission control, RH de-gassing, round cum billet caster, warm charging of billet in WRM, tundish slide gate for liquid steel flow control, Level-2 automation, VVVF drives for energy saving.

**d) Wire Rod Mill-2:**

Low temperature rolling for quality product, housing less stands, robot in roll shop, warm charging of billet, high speed rolling, VVVF drives for energy saving, Condition Monitoring System (CMS) for better availability, digital control for reheating furnace, single family roll pass design for high campaign life and sizing mill for rolling with high tolerance limit.

**e) Structural Mill:**

Housing less stands, robot in roll shop, multi stand straightener, CMS for better availability, VVVF drive for energy saving.

**f) Special Bar Mill:**

Low temperature rolling for quality project, housing less stands, roll shop robot, CMS for better availability, VVVF drive for energy saving, single family roll pass design for higher campaign life and sizing mill for rolling with high tolerance limit.

**g) Auxiliary systems:**

- Energen/Argonite based system
- Solid state based railway-signaling system
- Gas insulated substation
- Substation automation system
- Use of numerical communicable protective relays
- Use of active front-end control for mills
- Use of 220 kV cables in substation
- Waste water recycling using Membrane Technology.
- Near zero discharge plant
- Near zero flaring plant

- Treated concentrate effluent discharged in to deep sea through marine discharge pipe
- Combined cycle gas turbine proposed for power generation
- Full use of TLC in hot metal transfer.

Finex technology based steel plants are comparatively of lower capacity and so far have only been installed in Korea and has therefore not been envisaged in the current phase of expansion by RINL-VSP.

2.5 In reply to a query as to what extent, the ongoing modernisation and expansion programme would make units/plant of SAIL, RINL and NMDC to achieve international level techno-economic parameters in blast furnace productivity, coke rate and specific energy consumption, the Ministry of steel has submitted as under:

### **Steel Authority of India Limited (SAIL)**

Under the modernization & expansion plan of SAIL state of the art facilities like high capacity Blast Furnaces, tall Coke Oven batteries, Continuous casting plants, modern finishing mills, etc. are being installed. With these facilities and available of good quality inputs like coking coal and iron ore, SAIL shall be in a position to substantially improve the techno-economic parameters viz. BF productivity, Coke rate & energy consumption.

### **Rashtriya Ispat Nigam Limited (RINL)**

Several parameters of RINL are already at national and international levels. Specific water consumption is at international levels, specific energy consumption is one of the best in the Indian steel industry. BF productivity is also amongst the best in the country and is in line with international standards on like to like basis.

Globally in some of the steel plants BF productivity would remain high mainly due to use of better quality raw material which they have, like iron ore, coking coal etc. In absolute terms specific energy consumption of the global steel plants will be better because of the nature of fuels used like natural gas, better quality of coal etc. On like to like basis, VSP's energy consumption will be comparable to international standards. Specific energy consumption at VSP will further improve with the commissioning of energy efficient units coming up in the expansion units,

Coke rate at VSP is also one of the lowest in the country. It will further improve with introduction of latest technology like Pulverised coal dust injection and will be then comparable to international standards for like to like plants, depending on usage of quality raw materials, PCI coal etc.

In order to strengthen it's technological superiority and further enhance efficiency & productivity, upgradation of the existing equipment / technology is being undertaken / planned through expansion and modernisation programme as elaborated earlier. With expanded units opting for latest technology and more efficient equipment, techno-economics would also vastly improve. Modern technological and energy efficient features coming up in the current phase of expansion of RINL-VSP are:

Area	Major Unit	Technology	Benefits expected
<b>Existing units</b>			
Coke making	Coke ovens – Battery # 4	Automatic Heating Control system	Reduction in Sp. Energy consumption
	Planned in CO Battery #1,2 &3	Automatic Heating Control system	Reduction in Sp. Energy consumption
Sinter making	Sinter plant 1 & 2	Waste Heat recovery from sinter cooler	Reduction in energy Consumption
Iron making	Blast Furnace - 1&2	Category –I capital repairs	To improve productivity & efficiency
		Pulverized Coal Injection	Reduced coke consumption & Improved productivity.
Steel making	LD Converters	Combined blowing	Reduced consumption of Ferro Alloys. Improvement in Productivity. Better yield and quality.
		Revamping	Modern Technology & Sustainable Production
		Fugitive emissions	Pollution control measure
	Continuous Casting Machines	Design Modification of Machines	Reduction in Tundish skull generation (waste) & improvement in productivity
	Refractories for Ladles / Converters	Development of protective coatings based on nano materials	To increase refractory life & improvement in productivity.
<b>Expansion units</b>			
Sinter making	New Sinter Plant – 3	Circular cooler	Energy efficiency
		Multi slit burners	Energy efficiency
		Waste Heat recovery from sinter cooler	Reduction in energy Consumption
Iron making	New Blast Furnace – 3	Profilometer	Improved process control
		Copper staves in high heat zones	Better campaign life
		Hearth bottom cooling with water	Better campaign life
		Pulverized Coal Injection	Reduced coke consumption & Improved productivity.
Steel making	New LD Converter	Combined blowing	Reduced consumption of Ferro Alloys. Better yield and quality.
		Secondary fume extraction system	Cleaner environment
		Contour & bath level measurement	Measurement of refractory lining
	New Continuous casting Machine	Auto mould level control	Reduction in breakouts
		100% Billet casting	Energy saving
Steel Melt Shop LH & RH	Electro Magnetic Stirrer	Cleaner steel	
Mills	Wire Rod Mill – 2	High speed WRM (105-110m/s)	Increased productivity
		Integration of Furnace control with Mill control	Better fuel optimisation
	Special Bar Mill	20-45mm size in straight & coil form	Reduced wastage for end user
		Free size rolling	Customized sizes with tolerance of +/- 0.1mm
	Structural Mill	High speed roughing stands to produce 75-175 mm structurals.	Increased productivity

## CHAPTER III

### Capacity Utilisation and Post Expansion Capacity Enhancement

The Committee have been informed that some of the major private steel companies such as TATA Steel, Essar Steel, Jindal Steel and Power Ltd, Bhushan Steel Ltd. etc. have undertaken Greenfield projects which are likely to increase the capacity of steel production substantially by 2012.

3.2 When asked about the reasons as to why SAIL and RINL have not set up Greenfield projects which would have further increased the capacity of steel production, the Ministry of Steel in their written replies have stated as follows:-

#### SAIL

“Steel Authority of India Ltd. (SAIL) has currently decided on expanding its capacities through brown field projects considering the available land and up-gradation of the existing plants through state of art technology.

SAIL had planned for setting up a steel plant as a green field project in the State of Jharkhand of about 12 million tonnes capacity of crude steel, subject to allocation of land, iron ore mining leases and other necessary clearances from State Government. On the basis of the viability report prepared by Consultant for this project, SAIL had taken up with the State Government of Jharkhand in October 2007 for suitable allocation of land and further signing of MoU. The response of the State Government is still awaited.

However, SAIL, at present is not considering green field expansions in its current phase of expansion plan, as land and other infrastructure facilities are already available at brown field site.

#### RINL

RINL has excellent layout and other infrastructure facilities at it's Vizag unit to expand the capacity up to 20 million tonnes per annum. Based on the fund availability and advantageous position with respect to layout and infrastructure, RINL utilised this opportunity to en-cash on the growth opportunity in the country and has undertaken expansion to almost double it's capacity to 6.3 Mt of liquid steel.”

3.3 During course of oral evidence, the Committee enquired about the plant-wise present capacity utilization of SAIL. Subsequently, the Ministry in their written reply has submitted as under:

“SAIL plants capacity utilization during 2008-09 was as follows:

Plant	% Capacity utilization (2008-09)
BSP	132
DSP	105
RSP	110
BSL	82
ISP	83
SAIL (5 ISP's)	105

Capacity utilization at Bokaro Steel Plant (BSL) reduced from 95% in 2007-08 due to lower production of hot metal as one blast furnace was under capital repair for 60 days & another blast furnace was shutdown since December 2008 due to depressed market condition.

IISCO Steel Plant (ISP) capacity utilization was low due to less hot metal production as two blast furnaces were put down due to adverse techno-economic parameters, one in the month of February 2008 & another furnace in October 2008”.

3.4 On being asked about the installed capacity of the products of units/plants of SAIL and RINL and the capacity after completion of the first phase of modernisation, the Committee have been informed as under:

**“Steel Authority of India Limited (SAIL)**

The Modernisation & Expansion Plan envisages increase in capacity of hot metal, crude steel & saleable steel as follows:

Items	(Million Tonnes)	
	Installed capacity	Capacity after implementation of current programme
Hot Metal	13.8	23.46
Crude Steel	12.8	21.40
Saleable Steel	11.1	20.23

The plant-wise capacity enhancement details for current phase are given below:

		(Million Tonnes)								
		BSP	DSP	RSP	BSL	ISP	ASP	SSP	VISL	Total
<b>Hot Metal</b>	Installed Capacity	4.08	2.09	2.00	4.59	0.85	-	-	0.22	<b>13.82</b>
	After current Expansion	7.50	2.45	4.5	5.77	2.91	-	-	0.33	<b>23.46</b>
<b>Crude Steel</b>	Installed Capacity	3.93	1.80	1.90	4.36	0.50	0.23	-	0.12	<b>12.84</b>
	After current Expansion	7.00	2.20	4.20	4.61	2.50	0.48	0.18	0.23	<b>21.40</b>
<b>Saleable Steel</b>	Installed Capacity	3.15	1.59	1.67	3.78	0.42	0.18	0.18	0.10	<b>11.07</b>
	After current Expansion	6.56	2.12	3.99	4.18	2.39	0.43	0.34	0.22	<b>20.23</b>



### **Rashtriya Ispat Nigam Limited (RINL)**

The installed capacity of the Existing Units and capacity after first phase of on-going expansion to 6.3 Mtpa liquid steel stage are given below:

<b>Description</b>	<b>Installed Capacity (Existing)</b>	<b>Capacity after on-going expansion</b>
Hot Metal	3.4 Mtpa	6.5 Mtpa
Liquid Steel	3.0 Mtpa	6.3 Mtpa
Saleable Steel	2.656 Mtpa	5.72 Mtpa

The installed capacity of the existing plant will further go up to 7.3 Mtpa of liquid steel by 2013, on completion of Modernization, revamping and up-gradation of Blast furnaces, revamp of sinter plant and installation of 3<sup>rd</sup> converter & 4<sup>th</sup> Caster.”

3.5 When asked about the state of Indian Steel Sector vis-à-vis the global scenario, the Ministry have replied as under:-

“Steel demand and production in India have both grown faster than in the world as a whole. Steel consumption in India has recorded an average (CAGR) growth of 9.6% during the past 5 years (i.e. between 2003-04 and 2008-09). Similarly the average growth in steel production during the past five years has been to the tune of 7.02%.

As compared to the steel sector in India, the steel production in all other countries, except China, showed a negative growth during the year 2009. According to the statistic published by World Steel Association global production in calendar year 2009 fell by 8%, from 1326.5 million tones in 2008 to 1219.7 million tones in 2009. China is the only country in the world, other than India, to have registered a positive growth in steel production by 13.5% in 2009.

Steel consumption growth has a factor of elasticity of 1.1 with the Gross Domestic Product (GDP) growth. India's GDP is estimated to register an average growth of 89% and therefore, steel demand in the country is also expected to be average 10%, at least for next ten years. Hence the steel industry in India can be expected to outperform most countries in the world in terms of both growth rate and absolute volume increase. On the other hand the steel industry in the developed nations have faced stagnant or reduced demand, high cost of production and lower raw materials security in certain countries such as Japan and those in Europe. As per *worldsteel* forecast global steel demand will return to growth in 2010 but this is expected to be moderate. As before the financial crisis, the emerging economies, especially China, will be the critical factor in driving world steel demand in the near future.”

## CHAPTER IV

### Investment on Modernisation and Expansion

The Committee enquired as to how much amount has been sanctioned in regard to modernisation and expansion of SAIL and RINL and the fund spent so far under each scheme/project. The Ministry of Steel in a written note has submitted as under:

#### **“Steel Authority of India Limited (SAIL)”**

An amount of Rs.70,169 crore has been sanctioned for modernisation and expansion of SAIL including Rs 10264 crore towards modernization & expansion of Mines. Out of this, Rs 17352 crore has been spent till Jun'10. As such there is no shortfall in utilization of funds. Plant-wise cost & actual expenditure of Modernisation & Expansion plan is as follows:

(Rs. crore)

Plant	Approved Cost	Actual expenditure till Jun'10
Bhilai Steel Plant	17,266	1229
Durgapur Steel Plant	2,875	78
Rourkela Steel Plant	11,812	1801
Bokaro Steel Plant	6,325	1158
IISCO Steel Plant	14,443	7995
Salem Steel Plant	1,902	1592
RMD including Rowghat mines	10,264	527
Sustenance Schemes	5,282	2972
Total	70,169	17,352

#### **Rashtriya Ispat Nigam Limited (RINL)**

RINL has undertaken several initiatives for augmentation/modernization/up gradation and Expansion of operating capacities besides total revamp of certain key units like Blast Furnaces, Converter Shop, Sinter Plant and other auxiliaries which have outlived their economic lives. These projects are at various stages of implementation and are planned to be completed progressively by 2013. The following table shows details of major schemes- Project cost and the expenditure incurred till 30.6.2010.

(Rs. Crs.)

S. No	Scheme	Project cost	Expenditure upto June '10
1	Coke Oven Battery – IV , (Phase – I)	380	357
2	Pulverized coal injection	187	45
3	Expansion to 6.3 Mtpa	12499(#)	6641
4	Air Separation unit -IV & V	285	68
5	20.6 MW Waste heat recovery – Sinter straight line cooler of Sinter Machine 1&2	96	0.01
6	Battery-4 (Ph-II) Coal	143	72
7	Battery-4 (Ph-II) BP	169	
8	Supply & Erection of Plant, Machinery for one 330 tph Boiler System	350	126
9	Supply & Erection of Plant, Machinery for one 67.5 MW Turbo Generator.	358	164
10	Iron ore Storage Capacity Augmentation	480	20

11	220 KV Switching station & MRS Augmentation	58	15
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# In addition, Rs. 1990 crs is also envisaged for expenditure on Power Plant-2 and 3rd converter & 4th caster of SMS-2 (These are additional units which were not included originally). Revised project cost for the same has been prepared.

Besides the above, RINL is continuously carrying out several Additions/Modification & Replacement schemes to maintain productivity/ health of the Plant, to the tune of about Rs. 306 crs for the past three years.

RINL has been meeting its' Plan expenditure entirely out of its' own sources without seeking any Budgetary Support from Government and there is no under utilization of funds by RINL w.r.t overall Revised Plan outlay during the last two years."

4.2 When asked about the investment proposed by the private steel players in modernisation and expansion of brown field and green field projects and their capacity addition there from, the Ministry in their reply have furnished the following information:-

"The information on the progress of private sector steel units being maintained by the Ministry of Steel is based upon the inputs furnished by the concerned companies. These are reviewed periodically in the Ministry of Steel regarding the issues affecting these major projects, so that these can be further discussed in the Inter Ministerial Group (IMG) meetings, and the concerned Ministries / Departments of Union government and the State Governments be sensitized on the issues.

The progress of major steel investment projects, in terms of the position furnished by respective companies are given below. The estimated costs are only indicative and since the project proposals have not been scrutinized or approved in the Ministry of Steel, it would not be possible to authenticate the information.

**A. Major Projects which were targeted to be completed by 2011-12**

**(i) Tata Steel Ltd. Orissa Project**

Location : Kalinga Nagar  
Proposed Capacity : 6.0 MTPA (Phase I - 3.0 MTPA, Phase II – 3.0 MTPA)  
Estimated cost : Rs. 21,200 crores  
Land : 3040 acres of land is registered in Tata Steel's name. Proposal submitted to IDCO for 580 acres of land for township and 226 acres for rail corridor. Delayed due to law & order issues on land encroachment. Detailed project reported is completed.  
Equipment : Rs. 6500 crores equipment order finalized, but supply has not commenced.  
Target for production milestone : Financial Year – 2009-10. (As per Memorandum of Understanding (MoU)). Project is delayed 3-4 years.

(Source: Tata Steel)

**(ii) Essar Steel Orissa Ltd. Orissa Project**

Location : Paradeep  
 Proposed Capacity : 12.0 MTPA (Phase I - 6.0 MTPA, Phase II – 6.0 MTPA)  
 Estimated cost : Rs. 22,600 crores (Phase I)  
 Land : Total requirement – 2225 acres (at Paradeep – 1925 acres & at Joda – 300 acres) 271 acres acquired at Paradeep, 80 acres acquired at Dabuna. Balance land at Paradeep is under acquisition through IDCO.  
 Environmental Clearance : Environmental clearance obtained and feasibility report completed.  
 Original Target for completion : Phase I : 2010, Phase II – 2012. No target for phase I can be given unless land acquisition is completed.

(Source: Essar Steel)

**(iii) Jindal Steel & Power Limited. (JSPL)Orissa Project**

Location : Angul  
 Proposed Capacity : 6.0 MTPA  
 Estimated cost : 22,500 crores  
 Land : Total requirement – 5750 acres.  
 Lease /possession obtained – 3100 acres  
 Balance land under acquisition.  
 Environmental Clearance : Obtained for 6 mtpa steel plant.  
 Total Expenditure incurred so far : Rs. 2805.15 crores.  
 Financial closure : Achieved for the steel plant.  
 Target dated of commissioning of the project : Phase I of 2 mtpa by June 2011 and Phase II of 4 mtpa by June 2013.

(Source: JSPL)

**(iv) Jindal Steel & Power Limited. Jharkhand Project**

Location : Patratu  
 Proposed Capacity : 5.0 MTPA  
 Estimated cost : 22,000 crores  
 Land : As per the Government of Jharkhand, the company has acquired Bihar Alloys Steel plant with 559 acres of land and 500 quarters at Balkudra., Patratu for steel plant and further the company has acquire private land of about 500 acres. The company has already spend Rs. 650 crores and made financial commitment of Rs. 2000 crores for equipment & others.  
 Environmental Clearance : As per the company, Environment clearance obtained for 6 mtpa steel plant and target dated of commissioning of 1<sup>st</sup> phase of 2 mtpa by June 2011 and 2<sup>nd</sup> phase of 4 mtpa by June 2013.

**B. Projects which were not targeted by 2011-12, but have made sufficient progress.**

**(i) Electrosteel Castings Limited (ECL), Jharkhand project**

Location : Chandankyari block, Bokaro  
 Proposed Capacity : 2.2 MTPA

capacity	
Land	: 1136 acres of land have been acquired by the company which meets the full requirement of proposed steel plant.
Financial closure	The company has had a financial closure for the project at a cost of Rs. 7262 crores funded by a debt of Rs. 5447 and equity of Rs. 1815 crores in August 2009.
Target dated of commissioning of the project	On site execution of the project is undergoing at present. The project is scheduled to be completed by June 2011.

(Source: ECL)

### **C. Major Projects which were targeted beyond 2011-12**

#### **(i) Posco India Project, Orissa Project**

Location:	: Jagatsinghpur
Proposed capacity	: 12.0 MTPA (Phase I-4 MT, Phase II-4 MT, Phase III- 4 MT)
Estimated Cost	: US\$ 11,736 Million (Rs. 53,000 crore at current exchange rate)
Land	For project – 4004-19 acres out of which 539 acres of non forest Government land was leased to Posco on 20.09.2009 and it is pending for transfer to POSCO. No physical possession of land by company yet.
Forest Clearance	Stage II clearance issued by Ministry of Environment & Forest on 29.12.2009.
Original target date of completion	Phase I (4 mtpa) by April 2010 (as per the MoU). Target can be furnished, only after commencement of land acquisition process.

(Source: POSCO)

#### **(ii) Arcelor Mittal India Limited, Orissa Project**

Location	: Patna, Keonjhar
Proposed capacity	: 12.0 MTPA (Phase I – 6.0 MTPA, Phase II – 6.0 MTPA)
Land:	Requirement – 8000 acres(As per MoU) and 7770 acres (as per IPICOL), Acquired: nil 6(1) notification for private land measuring 219.640 acres is under process.
Investment made so far	Rs. 60.00 crores.
Target as per MoU	The first phase will be completed in forty eight (48) months from the completion of Detailed Project Report (DPR). The second phase will be completed in fifty four (54) months from the completion of phase I).

(Source: Govt. of Orissa)

#### **(iii) Arcelor Mittal India Limited, Jharkhand Project**

Location	: Torpa, Karra, Khunti and Kamdara
Proposed capacity	: 12.0 MTPA (Phase I – 6.0 MTPA, Phase II – 6.0 MTPA)
Land:	25000 acres (as per MoU) revised 11325 acres (8845 acres for steel plant & captive power plant, 2480 acres for township & resettlement colony). No forest land involved. Rs. 12.39 crores paid in March 2009 towards 80% cost of the land (1025 acres) as per the demand note.
Estimated cost	40,000 crores
Target as per	The first phase will be completed in forty eight (48) months from the completion

MoU of Detailed Project Report (DPR). The second phase will be completed in fifty four (54) months from the completion of phase I). (Source: Govt. of Jharkhand)

**(iii) Tata Steel Ltd, Chhattisgarh Project**

Location: Bastar  
Proposed capacity: 5.5 MTPA (Phase I – 2.7 MTPA, Phase II – 2.8 MTPA)  
Land: Requirement - Approx 4000 acres. Land acquisition is in progress and 70% of PAP has taken compensation. Detailed project report completed.  
Estimated cost: 16,500 crores  
Production milestone as per MoU: FY 13 (2.7 MT). Project is delayed by 2-3 years. (Source: Tata Steel)

**(iv) Tata Steel Ltd, Jharkhand Project**

Location : Seraikela  
Proposed capacity : 12.0 MTPA  
Land : Notification was awaited for private land. Government of Jharkhand now asking the company to acquire private land directly.  
Estimated cost : 42,000 crores  
Production milestone as per MoU : FY 12 (6.0 MT of phase I). Project is delayed by 2 years. (Source: Tata Steel)

**(v) JSW Steel Ltd., West Bengal Project**

Location : Salboni  
Proposed capacity : 10.3 MTPA  
Land : Total requirement: 4454 acres, out of which 3800 acres government land is in possession of JSW Bengal. 654 acres of land is private land of which 95% has been acquired. (Source: JSW)

**(vii) Jindal Steel & Power Limited, Jharkhand Project**

Location: Asanboni  
Proposed capacity: 5.0 MTPA  
Land: As per Govt. of Jharkhand, 256.5 acres of land has been purchased through direct negotiation at Asanboni East Singhbhum district. 416 acres of Government land has been transferred.  
Estimated cost: 18,000 crores  
Target date of commissioning: December 2014 (Source: JSPL)"

## **Chapter V** **Raw Material**

Supply of sufficient amount of coking coal is one of the prerequisite of expansion and modernization of steel sector. In this context, the Committee enquired whether India had sufficient coking coal needed by the steel plants. The Ministry have stated in their reply:-

“As on 01.04.2009, India has total coking coal reserves of 33.413 billion tonnes, out of which 17.54 billion tonnes is of Proved category. However, most of the coking coal reserves are extremely difficult to mine leading to low productivity. The present production of coking coal (2008-09) in the country is 16.84 million tonnes per annum which are being supplied to steel & coke oven units. Coal India Limited & other public sector companies produced 9.74 million tonnes per annum and balance 7.1 million was produced by Tata Steel Limited from its captive coking coal mines in Jharkhand. The present level of production is not sufficient to meet the demand of the industry and also not of best quality suitable for blast furnace operation. Therefore, 24.00 million tonnes of high grade hard coking coal is imported by steel industry.”

5.2 When asked whether the Indian Steel Industry faced any problem of supply of good quality coking coal and the action plan prepared to meet the shortfall of coking coal, if any, the Ministry in their reply have stated as under:-

“Except BCCL collieries, coking coal reserves in India are not of good quality. They have high ash content and some of coking coal reserves are not economically mineable. Therefore, the domestic steel industry is highly dependent upon import of coking coal to fulfill its requirement.

In the year 2008-09, indigenous coking coal supply to steel & coke oven units was about 16.84 million tonnes and 24.0 million tonnes was imported by steel units to fulfill their coking coal requirement. Hence, there is need to enhance coking coal production in the country to meet the domestic coking coal requirement of public and private sector steel units.

Ten coking coal blocks having Geological Reserves of 1396.37 million tonnes have been allotted to different steel producers. After commencement of production from the allotted coking coal blocks to steel units, indigenous supply of coking coal may improve.”

5.3 The Committee desired to know whether the raw material bearing States insisted on setting up steel plants within its territorial boundary and whether such a state-centric Policy stood in the way of healthy growth of steel industry in general and development of laggard states in particular, the Ministry of Steel in a written reply have stated as under:-

“While it has been noticed that various State Governments show tendency of promising iron ore mines for setting up steel plants/ value addition industries within these states, it is mentioned that the Group of Ministers set up to discuss National Mineral Policy, had observed that *“India is a single economic space and since mineral wealth belongs to India, its use and location should be guided factors of production which has to be decided by entrepreneurs”*. The National Mineral Policy, 2008 has been approved by the Government in 2008. Ministry of Mines is framing a new Mines and Minerals (Development & Regulation), Act to bring into effect the approved recommendations of the Hoda Committee, which were approved along-with the National Mineral Policy, 2008. Therefore, the present policy for allocation of iron ore mines does not discriminate on the basis of location of the steel plant.”

5.4 During the course of oral evidence, the Committee enquired about the present and post expansion requirement of raw material of SAIL and steps being taken for its raw material security, necessity of Chiria mines to be allotted to SAIL. The Ministry in their post evidence written reply have given the present as well as post-expansion requirement of major raw materials for SAIL as under :

“(Million Tonnes)

	2008-09(Actual)	After expansion
<b>Hot Metal</b>	<b>14.44</b>	<b>26.18</b>
<b>Iron Ore</b>	<b>23.28</b>	<b>43</b>
<b>Coking Coal</b>	<b>13.83</b>	<b>23</b>
<b>Lime Stone</b>	<b>3.15</b>	<b>6</b>
<b>Dolomite</b>	<b>2.93</b>	<b>5</b>
<b>Thermal Coal</b>	<b>7</b>	<b>11</b>

#### **Steps being taken for raw material security**

**Iron ore** : While existing capacity of mines is largely able to meet entire requirement of iron ore for the time being, enhanced raw material requirements would be a critical issue. To address this, efforts are being taken by SAIL to expand capacity of existing mines to exploit full potential; developing new mines; upgradation/installation of beneficiation plants and pelletisation plants.

**Coking Coal** : Majority of coking coal requirements to the tune of 70% is met through imports with balance from Coal India Limited. In order to enhance availability of indigenous coking coal; SAIL is taking action on developing captive coking coal blocks namely Tasra and Sitanala; entering into JV partnerships with companies like BCCL and TATA for revival of old/ abandoned mines; for acquisition and development of coal assets in India; and installation of coal washeries. SAIL has also identified two coking coal blocks namely Jhirki/ Jhirki West OC & Rhone-Routpara West for allocation



under Govt. dispensation, for which Ministry of Steel has taken up the matter with Ministry of Coal.

**Thermal Coal** : Although SAIL has been continuously applying for allocation of thermal coal blocks, no new block has allocated to SAIL. SAIL has identified six thermal coal blocks namely Tentuloi, Ghogharpalli & Extension, Bankhui, Gand Bahera Ujheni, Puta Parogia & Pindrakhi for allocation under Govt. dispensation which has again been taken up by Ministry of Steel with Ministry of Coal.

As regards other minerals such as limestone & dolomite, SAIL is exploring options to increase availability from domestic and through acquisition of new deposits.”

5.5 Further, the Committee desired to know the reasons for such a long delay in allocation of mines, problems faced and remedial measures taken to overcome them. The Ministry of Steel in their reply have stated as follows:-

#### **“Necessity of Chiria Mines to be allotted to SAIL”**

SAIL has undertaken massive expansion plan of its units to meet growing needs of infrastructural development of the country. The expansion plan envisages supply of major volume of iron ore from Chiria iron ore mine for which investment for large mechanised mine with state-of-art technology have been initiated. Chiria is the only large resource which would supply to SAIL plants for more than 30 years. Other mines would deplete much earlier.

IISCO, erstwhile subsidiary of SAIL, nurtured Chiria for over 5 decades and helped in improving the socio-economic environment of the area. SAIL was nursing erstwhile IISCO, the then BIFR Company without any job losses. It is only after the world prices for iron ore shot up, other steel players showed interest. IISCO was merged with SAIL in February 2006 along with its mines and SAIL had to absorb loss of over Rs.900 crs. incurred by IISCO. Considering the long term requirement of SAIL and in the broader national interest, all six leases of Chiria needs to be renewed in favour of SAIL.

#### **Reasons for the delay in the renewal of Chiria leases**

Erstwhile IISCO had been operating Chiria iron ore mine in the State of Jharkhand with 6 leases for over decades. Out six, none is valid, three are under deemed extension and three are under dispute. The applications for renewal of all these leases were submitted to State Govt. in time. However, State Govt. rejected 3 leases during the year 2004 & 2005. On an application by SAIL, Mining Tribunal set aside the rejection orders and directed State Govt. to reconsider the matter. However, State Govt. did not agree, and the matter was under dispute at various levels. To resolve the matter; the issue was discussed in PMO thrice during 2006 & 2007, in which following decisions were taken:

- State Govt. will renew mining leases for reserves of about 1 Billion Tonne.

- The balance reserves of 1 Billion Tonnes will be renewed subject to SAIL creating additional steel capacity.

However, Jharkhand Government did not implement the above. In this regard, Hon,ble Prime Minister vide his DO letter dated 13.8.07 advised Hon'ble Chief Minister of Jharkhand to favourably consider the renewal of mining leases in Chiria & Gua in view of country's growing requirements for steel and the need to support the SAIL's expansion plan.

### **Problem being faced for non renewal of Chiria leases**

In the absence of renewal of mining leases of Chiria, SAIL is facing the difficulty for making a large investment on development of large state-of-art mechanized mines at Chiria. Uncertainty on renewal of leases is delaying the development of large mechanized mines at Chiria. If leases of Chiria are not renewed immediately, SAIL will have serious problem in iron ore supply to Bokaro Steel Plant and it's expansion may get adversely affected. Hence, any further delay in settling this issue may critically affect SAIL's corporate objective and financial health.

### **Remedial Measures adopted**

After the constant and concerted efforts by Ministry of Steel, SAIL & PMO with the State Government of Jharkhand some positive development has been visible. The Jharkhand Government has conveyed in-principle approval on 23.10.2009 for renewal of one of leases i.e., Budhaburu (McLellan). The lease contains about 800 million tons of reserves.

However, there is no further progress on the formal approvals of the State Government on Budhaburu lease of Chiria mines and renewal of balance leases of Chiria is awaited.

### **Status of steps being taken for ensuring security of raw materials is given below:**

#### **A) *Iron Ore***

Increased requirement of iron ore is planned to be met by expansion of production capacity of existing mines at Kiriburu, Meghahatuburu, Gua & Barsua and development new mines at Chiria, Rowghat, Taldih & Thakurani. These developments would ensure availability of better quality iron ore on consistent basis. In order to utilize micro fines, low grade ores & slimes, pelletisation plants are also proposed to be installed at Bolani & Gua.

However, major bottleneck is being faced in respect of renewal of leases. Delay in renewal of leases is affecting expansion of existing mines and development of new mines particularly at Chiria. Out of 26 iron ore mining leases in the states of Jharkhand, Orissa and Chhattisgarh, only 6 leases are valid. Status of leases is shown below :

Details	Jharkhand	Orissa	Chhattisgarh	Total
No. of leases	13	7	6	26
Valid	Nil	1	5	6
Under deemed ext.	9	5	1	15
Under dispute	4	1	Nil	5

### Status of Chiria Project

#### a) Renewal of mining leases of Chiria

Lease	Budhaburu	Dhobil	Ankua	Ajitaburu	Sukri-Latur	Tatiburu
Status	Deemed Extension	Deemed Extension	Deemed Extension	Under Dispute	Under Dispute	Under Dispute

Lease renewal of three leases namely Budhaburu (McLellan), Dhobil & Ankua lease is pending with State Government. The issue of disputed leases of Sukri-Latur & Ajitaburu is pending in Hon'ble Supreme Court.

#### b) Recent development regarding renewal of mining leases of Chiria

1. Government of Jharkhand vide letter dated 23.10.09, conveyed its in-principle approval for renewal of the Budhaburu lease (823.62 ha) of Chiria iron mine.
2. On 18.11.09, SAIL informed Jharkhand Govt. to renew leases corresponding to 1000 million tonnes keeping all four leases of Gua & Ajitaburu of Chiria in the present form and redefining Budhaburu lease.

#### c) Other developments

Pending renewal of leases, SAIL has initiated the process of obtaining approval for forest and environment clearances. Engagement of consultant for preparation of DPR is also in progress.

### Status of Rowghat Project

Rowghat 'Deposit-F' with an area of 2028.797 Ha and iron ore reserve of about 511 Million Tonnes has been allocated to BSP. New mine with a capacity of 14 MTPA will be developed at Rowghat. All statutory clearances like approval of mine plan, Forestry clearance & Environment clearance have been obtained. Lease deed granting iron ore mining lease for the area has been signed by the Govt. of Chhattisgarh on 21.10.09.

### Status of mine development is given below:

- a) The process of deforestation has been initiated by Chhattisgarh Government.
- b) The process of engaging consultant of global repute for preparation of Detailed Project Report (DPR) has been initiated.
- c) The construction work of rail link project is being executed by Rail Vikas Nirman Limited (RVNL) for length of 95 Km from Dalli-Rajhara to Rowghat. Land acquisition work under progress.

## **Status of Thakurani**

In spite of continuous efforts by Ministry of Steel and SAIL, the Prospecting License (PL) has not been granted to SAIL even though the area is reserved for 50 years for SAIL by Gol in Feb'04. Issue is pending in Hon'ble Supreme Court as M/s Bhushan Power & Steel Ltd. has filed SLP in the Apex Court for an area including the reserved area of SAIL (277.649 ha).

SAIL had filed Interlocutory Application (IA) in Hon'ble Supreme Court on 16.3.09 for seeking direction that the State Government shall be free to consider the SAIL's application for grant of PL for the area for which the Notification dated 4.2.04 has been issued by Gol, irrespective of the pendency of SLP filed by Bhushan Power & Steel Limited pending consideration before the Hon'ble Supreme Court.

## **Allocation of iron ore mines to VISL & SSP**

In order to ensure security of iron ore availability for VISL & SSP, steps taken is given below:

- a) Visvesvaraya Iron & Steel Plant (VISL) of SAIL has applied to Karnataka State Govt. for allotment of mining lease in NEB Range, Sandur Taluk, Bellary District (area 140 Ha) in January'2007. Karnataka State Govt. in January'2010 has forwarded the application to Ministry of Mines, Gol recommending grant of lease in favour of VISL.
- b) Salem Steel Plant (SSP) of SAIL does not have its own iron ore mine. SSP has applied to Tamil Nadu State Govt. for 1000 Ha of Kanjamalai mining lease in June'2008. However, the said area is yet to be allocated to SSP.

## **B) Coking Coal**

### **Strategy for enhancing the security of coking coal**

Due to limited availability from indigenous sources, more than 70% requirement of coking coal is being met through imports. To meet the enhanced requirement after expansion, SAIL has planned to increase domestic availability of coking coal to the level of 8-10 MTPA in next 5-6 years. In this regard, SAIL is looking at opportunities for acquiring new coking coal blocks for development as well as entering into partnership with BCCL/CIL and other strategic partners for acquisition/ development of new coal blocks. Steps taken by SAIL in this regard are as follows:

#### **a) Tasra Coking Coal Block:**

All statutory clearances like approval of mine plan, environmental clearances etc. have been obtained. Planned mine capacity 4 MTPA (ROM) to produce about 2 MTPA of clean coal. Selection of Mine Developer cum Operator (MDO) is in progress. Through tendering process, L-1 bidder has been identified and work order will be issued shortly. In the meantime, small scale production has been started from November'2009.

**b) Sitanala Coking Coal Block:**

Mine planned for production of 0.3 mtpa (raw)/0.2mtpa (clean). Project report has been prepared, mining plan approved and compliance of formalities for grant of environment clearance in process.

**c) Kapuria Block**

In pursuance by SAIL, BCCL Board had given clearance in June'08 for formation of a JVC of SAIL & BCCL for development of Kapuria Coking Coal Block. However, CIL is not in favour of such JVC.

**d) Partnership with BCCL**

SAIL has entered into MOU with BCCL in 2006 for up gradation of Moonidih Mine at 16 top seam. Although, BCCL is now not interested to take interest bearing loan from SAIL, entire output of about 0.66 MTPA (ROM)/ 0.46 MTPA (washed coal) from the mine has been assured for SAIL at mutually agreed prices.

**e) SAIL-Tata Steel Joint Venture**

SAIL & Tata Steel Ltd. has formed S & T Mining Company Private Limited, a JVC with 50: 50 equity. The company was incorporated in Sep'08. As a first step company has initiated the process for acquisition and development of coal assets in India. JVC has been short listed for submission of bid for revival of old/ abandoned mines of CIL. JVC is also attempting to develop Bhutgoria mine of BCCL. The company has submitted tender to BCCL for construction of washery at Dugda for Non Linked Washery (NLW) coal. The company is also exploring possibility to install a stand alone NLW coal washery at Malkera

**f) Allotment of new coal blocks**

In order to further augment captive coking coal production, two potential coking coal blocks namely, Jhirki/ Jhirki West OC & Rhone-Routpara West in Jharkhand have been identified by SAIL and Ministry of Steel has requested Ministry of Coal in June'2009 for allocating the blocks to SAIL under Govt. dispensation. However, Coal blocks are yet to be allocated to SAIL.

Recently Hon'ble Steel Minister has again on 5.2.2010 taken up this issue with Hon'ble Minister of Coal, in which it was requested that Jhirki/Jhirki West OC (East Bokaro Coalfield) and Rohne-Routpara West (North Karanpura Coal file) coking coal blocks may be allotted to SAIL through the Government dispensation route.

**g) Acquisition of coal assets abroad**

SAIL along with CIL, NTPC, RINL & NMDC has also formed International Coal Ventures Limited (ICVL), a joint venture company for acquisition of coal assets abroad.

### **C) Thermal Coal**

Presently, major requirement of thermal coal is being met by supplies from Coal India Limited. In order to ensure security of thermal coal availability, SAIL along with its power JV Companies had submitted 18 applications in 2007 for allocation of thermal coal blocks. However, none of the blocks was allocated to SAIL. SAIL has further identified six thermal coal blocks namely Tentuloi, Ghogharpalli & Extension, Bankhui, Gand Bahera Ujheni, Puta Parogia & Pindrakhi and Ministry of Steel has requested Ministry of Coal in September'2009 for allocating the blocks to SAIL under Govt. dispensation. However, Coal blocks are yet to be allocated to SAIL.

Recently Hon'ble Steel Minister has again on 5.2.2010 taken up this issue with Hon'ble Minister of Coal, in which it was inter-alia requested that 2-3 thermal coal blocks may be allotted to SAIL through the Government dispensation route.

### **D) Limestone & Dolomite**

Due to quality constraints, captive mines are able to meet part requirement of fluxes and balance have to be purchased. SAIL would require to source low silica limestone from Jaisalmer in Rajasthan, Arki in Himachal Pradesh and Oman. While capacity of Kuteshwar Limestone mine is planned to be enhanced to 4 MTPA in phases and Baraduar Dolomite mine would be revived & developed for 3-4 MTPA capacity in phases to enhance production from captive sources. In addition, possibility for acquisition of new deposits is also being explored.”

**CHAPTER VI**  
**Completion schedule of the Modernisation & Expansion**

6.1 The Committee enquired about the target date(s) for completion of modernisation and expansion both original and revised and the reasons for not achieving the target envisaged originally also the action to achieve the revised target. The Ministry of Steel in their written reply have stated as under:

**“Steel Authority of India Limited (SAIL)”**

The plant-wise commissioning schedules for Phase-I are given below:

<b>Plant</b>	<b>Original Target</b>	<b>Now scheduled Integrated Commissioning</b>
<b>SSP</b>	Jun'10	Aug'10
<b>ISP</b>	Jun'11	Jun'11
<b>BSP</b>	Dec'12 - Mar'13*	Dec'12 - Mar'13*
<b>RSP</b>	Dec'12 - Mar'13*	Dec'12 - Mar'13*
<b>BSL</b>	Dec'11*	Dec'11*
<b>DSP</b>	Dec'12*	Dec'12*

\* The above are based on completion schedules of orders already placed and anticipated schedules for balance packages. The commissioning of various packages will be synchronised after placement of orders of balance packages.

**i) Original schedule of completion**

The planning for Modernisation & Expansion Plan of SAIL was initiated in 2003 under its Corporate Plan–2012 which envisaged increase in capacity in a phased manner by the year 2012. Corporate Plan was a directional road map and needed to be reviewed periodically in line with developments such as merger of IISCO, global demand etc

In view of buoyancy of the global steel industry & indications of accelerated growth in domestic demand, the growth and investment targets were revised upwards in 2006-07. Further, it was decided to implement different packages in a plant together and compress the timelines to year 2010 as against year 2012 envisaged earlier in Corporate Plan.

**ii) Steps being taken to restrict further slippages.**

The steps taken/ being taken by SAIL in the line of systemic improvements include strengthening project monitoring and project management organisation, convening pre-bid conferences and consultation with technology suppliers & their partners for ensuring wider participation/response in the tenders, streamlining project manuals, Standard Bidding Document and procurement procedure,

splitting of large value & traditionally turnkey packages into core & non-core categories and tendering them out separately in order to get wider participation, enhancing delegation of powers at various levels and constitution of a intermediary Committee to SAIL Board viz., Board Sub Committee for consideration of large value packages.

**iii) Reasons for so much delay**

SAIL has met the timelines of activities, in areas within its control, which inter-alia included appointment of consultants, finalization of Composite Project Feasibility Reports(CPFR), getting the CPFR vetted by financial institution(s), 'in-principle' approval by the SAIL Board and issuance of tenders etc. Orders for most of ISP & SSP packages & New CRM packages of BSL were placed as per timelines. Orders for many packages for RSP, stand-alone packages of BSL viz. upgradation of BF-2 & SMS-2 and BSP viz. Ore handling system, New Coke Oven Battery, were also placed progressively.

Due to buoyant steel market & seller's market condition, order placement for some of the major critical technological packages took longer time as quoted prices were much higher than the estimates. In July 2008, the cost of Modernisation & Expansion plan was reviewed by SAIL to optimize the investment.

Further, due to global meltdown conditions from October 2008 onwards, Plan was again reviewed during February 2009-June 2009 wherein it was decided to implement the plan in a phase-wise manner.

**Constraints faced**

SAIL had faced the following constraints in finalisation of packages especially during the buoyant phase prior to economic meltdown (pre Oct'08) when major global equipment suppliers had adequate orders in hand:

- Inadequate response against various tenders; consequently, time limit for submission of tenders had to be extended in many cases on the request of bidders.
- Deviations in offers vis-à-vis tender terms & conditions including the desired delivery schedules for completing the projects; Bidders seeking extension in time limit for submitting clarifications and submitting incomplete clarifications/ maintaining deviations, leading to several rounds of techno-commercial discussions
- In many cases, price bids submitted by bidders were higher than Consultant's estimates. For some of the packages, SAIL had to go for retender or engage in several rounds of negotiations on account of higher prices.

The above problems resulted in delays in finalisation of orders as well as prices being higher and were more acute for high technology areas where the vendor base is limited resulting into initial delays.



**iv) Justification of approvals in 2-stages and for taking such a long time?**

As per the prevalent guidelines of SAIL in respect of capital projects, two stage approval is being taken for the investment proposals. The stage-I (in-principle) approval is taken based on the feasibility report/ detailed project report with indicative cost as prepared by the Consultants. Stage-II (final) approval is obtained based on the firmed up cost after competitive bidding.

The major reasons for time taken for approval are as follows:

- Inadequate response against various tenders
- Deviations in offers vis-à-vis tender terms & conditions
- Bidders seeking extension in time limit for submitting clarifications and submitting incomplete clarifications/ maintaining deviations, leading to several rounds of techno-commercial discussions.
- In many cases, price bids submitted by bidders were higher than Consultant's estimates. For some of the packages, SAIL had to go for retender or engage in several rounds of negotiations on account of higher prices.
- Further, due to global meltdown conditions from October 2008 onwards, Plan was reviewed during February 2009-June 2009 wherein it was decided to implement the plan in phases.

**v). Reasons of implementation (of decision to expand) taking 6-7 years to materialize.**

The chronological developments for decision to expand the SAIL steel plants are given as under:

- The in-principle approvals for Modernisation & Expansion Plan were accorded by SAIL Board progressively from June 2006 to July 2007.
- Due to buoyant steel market & seller's market condition, order placement for some of the major critical technological packages took longer time as quoted prices were much higher than the estimates. In July 2008, the cost of Modernisation & Expansion plan was reviewed by SAIL to optimize the investment.
- Further due to global meltdown since October 2008, SAIL Board felt that there was a need to review the expansion plan of SAIL including financing pattern. After consultations with the consultants and due deliberation (February –June 2009), it was proposed that the production build-up be achieved in two phases.

**vi) Estimated escalation in cost on account of delay in the projects.**

It may be noted that prior to the melt down when market conditions were buoyant, even where prices received were higher than estimates;

it was generally not possible to get much reduction through negotiations. Only in few cases where tenders were opened prior to melt down and orders were not concluded, it was possible to get substantial reduction after melt down as market price situation had changed. Post melt down the equipment prices started coming down.

### Rashtriya Ispat Nigam Limited (RINL)

#### Target date(s) for completion

Facility	Original/ Contractual schedule	Revised schedule
<b>Stage I (36 Months)</b> <ul style="list-style-type: none"> <li>• New Blast Furnace along with new RMHP and new Sinter Plant</li> <li>• New SMS along with continuous casters</li> <li>• New finishing mill – Wire Rod Mill</li> </ul>	Oct '08/ Feb '10	Test trial of various units has already commenced. Balance jobs are in progress & commissioning & stabilization is planned by Mar '11
<b>Stage II (45/48 Months)</b> <ul style="list-style-type: none"> <li>• New Special Bar Mill &amp; New Structural Mill</li> </ul>	Oct '09/ Jun '11	Jobs at site already in progress & units will be commissioned and stabilized by 2011-12.

Reasons for not achieving the target envisaged originally are given below:

#### Pre Ordering Delay

- The delay in completion schedule against original project schedule is broadly due to delay in appointment of consultant, tender process & placement of order - mainly attributable to the Bidders.
  - a) Delay in appointment of Consultant resulted in delay in issue of specifications.
  - b) More time sought by bidders in submission of offers & PQC clarifications was accepted for reasonable competition.
  - c) Techno Commercial Deviations & Price negotiations.
  - d) Technological Process equipment suppliers asked more completion time.
  - e) Commencement date shifted from LOA date to Contract signing date. Also changes from LOA conditions were asked before signing of Contract.
- Due to the then prevailing market conditions, bidders quoted high prices over the estimated cost. Further price evaluation and subsequent negotiations with eligible bidders, delayed finalization of tender.

#### Post Ordering Delays

- a) Delay in engineering and supply & erection of equipment by BHEL & MECON
- b) Delay in structural work by HSCL
- c) Delay in structural & equipment erection by Bridge & Roof
- d) Delay in supply of equipment from Chinese sources

- e) Delay in submission of feed back data by equipment suppliers resulted in delay in engineering & issue of construction drawings by Consultants and subsequent delay in handing over of fronts for equipment erection.
- f) Delay in detailed engineering, procurement and supply of imported and indigenous equipment.
- g) Slow progress of civil works due to inadequate mobilization of manpower and resources by the contractors.
- h) Slow progress of structural work by contractors due to inadequate deployment of erection cranes and manpower.
- i) Delay in handing over of fronts to equipment erection agencies due to delay in civil and structural works.
- j) Non-sequential supply of equipment by suppliers and inadequate resources deployed by equipment erection agencies.

### **Actions taken to achieve the revised target**

- a) Strengthening Project division, adequate empowerment by Board to executing level, close monitoring at highest level, including High Power Steering Committee of Board of RINL helped in bringing down the intermediate delays which had been taking place during execution
- b) Provided labour colony & other infrastructure facilities to get & retain large workforce for expansion which touched 19000 Nos. With this, attrition could be minimized.
- c) VSP supplied steel which helped in completion of structural jobs on time
- d) Cranes got commissioned in time for equipment erection, which was initially delayed
- e) Steps being taken to improve the performance of Public Sector companies like BHEL, MECON, Bridge & Roof and HSCCL
- f) Structured meetings are being held with major suppliers at higher management level.
- g) Progress of Expansion is reviewed by Board of Directors in its regular meetings.
- h) Offloading of jobs from non-performing contractors.
- i) Strengthening of follow up group for expediting balance supplies of equipment by taking up the matter with higher management, visit to manufacturing shops etc.
- j) Support by VSP like Cranes etc to contractors wherever needed
- k) Change in methodology of execution to improve progress of work suiting site conditions through innovative way of construction.
- l) Curtailing duration of inspection, approval of drawings etc w.r.t what was envisaged earlier”

6.2. When asked about the details of original price in the first tender, price on retender, reasons for retender and financial savings, the Ministry, in their post evidence reply stated as follows:

“In most of the packages where retendering was resorted to due to high price, repackaging/ rationalization of scope of work has been done. There has been savings in most of the cases after re tender post meltdown.

## Salem Steel Plant

S.N	Package	L-1 price after 1 <sup>st</sup> tender	L-1 price after Re-tendering
1	EAf & LF	170.00	
	<b>After retendering</b>		<b>142.85</b>
1a	EAf		89.10
1b	SVC(Static Var Compensater), Erection and Refractories		16.43
1c	LF		36.00
1d	LF erection		1.32
2	AOD	93.44	
	<b>After retendering</b>		<b>76.08</b>
2a	AOD supply		71.88
2b	AOD Erection		4.20
3	Slitting Line	38.70	
	<b>After retendering</b>		<b>30.44</b>
3a	Slitting Line supply	-	29.58
3b	Slitting Line Erection	-	0.86
4	CRM Structural	63.97	59.75

## IISCO Steel Plant

S.N	Package	L-1 price after 1 <sup>st</sup> tender	L-1 price after Re-tendering
1	Raw Material Handling System	1574.00	
	<b>After retendering</b>		<b>1661.40</b>
1a	Ore Handling Plant		534.50
1b	Coal/ Coke Handling, Pipe Conveyor		504.50
1c	Base-Mix Preparation Plant		457.50
1d	Yard Machines - Group I		26.40
1e	Yard Machines - Group II		77.70
1f	Yard Machines - Group III		60.80
2	BOF	2134.30	
	<b>After retendering</b>		<b>1777.17</b>
2a	BOF Converters		1120.83
2b	Secondary Refining Unit		215.19
2c	Hot Metal desulphurisation		37.26
2d	EOT Cranes for BOF & CCP		186.30
2e	Aux. Pkgs.		217.59
3	Coke Dry Cooling Plant	304.10	
	<b>After retendering</b>		<b>330.57</b>
3a	Main Package		307.37
3b	CDCP - Civil & Structural		23.20
4	Civil & Strl Work for BOF & CCP	482.00	
	<b>After retendering</b>		<b>478.54</b>
4a	Civil Work for BOF, CCP & LDCP		199.63
4b	Strl Work for BOF, CCP & LDCP		278.91
5	Lime Calcining Plant	188.30	105.82
6	Civil & Strl work for RM & RHF	446.40	
	<b>After retendering</b>		<b>377.49</b>

6a	Civil Work for RM & RHF		184.61
6b	Strl Work for RM & RHF		192.88
7	EOT Cranes for BOF & CCP (<120T)	142.80	
	<b>After retendering</b>		<b>125.14</b>
7a	Misc. Cranes for BOF & CCP (<120 T)		73.13
7b	Rotating Trolley Cranes		52.01
8	Centralised Compressed Air Station	34.83	41.40
9	Road Network with Drain	26.15	28.42

### Bokaro Steel Plant

S.N	Package	L-1 price after 1 <sup>st</sup> tender	L-1 price after Re-tendering
1	Tension Leveling, Inspection and Re-coiling Line	262.92	93.01
2	EOT Cranes & Telphers	168	91.30
3	Cast House Slag Granulation Plant	324.35	207.78
4	Roll shop	168.6	107.92

### Bhilai Steel Plant

S.N	Package	L-1 price after 1 <sup>st</sup> tender	L-1 price after Re-tendering
1	Structural Work for BOF & CCP	524.5	360.12*
2	Civil Work for BOF & CCP	132.1	99.94
3	LDCP at RMP-III	305.2	251.16
4	OHP Part-B	943.6	519.92

## CHAPTER VII

### Issues relating Steel Sector

#### Infrastructure

7.1 The Committee desired to know about the steps taken or being taken to focus on infrastructure and other issues which affect long-term growth of the steel industry. The Ministry in their written replies have stated that “Inter Ministerial Group (IMG) during its meetings, has discussed in detail on the critical infrastructure projects those are necessary for steel sector, which are either under expansion or for newly proposed Greenfield projects. A summary of critical infrastructure projects required for steel sector and their current status of approval / extension is given below: -

(i) **“Rail**

#### A. New Rail Links

S.No	Line / Route / Section	Beneficiary	Current status
1	Dalliarajahara-Rowghat Jagdalpur	SAIL (Bhilai), Essar, Tata CG Project	MoU signed between SAIL, Govt. of CG and IR in Dec 07. Commencement of work is awaiting forest clearance and land acquisition.
2	Haridaspur-Paradeep	Posco, Arcelor-Mittal, Tata (Orissa Projects)	Under construction by RVNL under joint participation between IR, GoO, Posco. Target: March 2012
3	Paradeep-Dhamra (62 Kms)	Tata, Posco	Construction taken up by Dhamra Ports company Ltd. (JV between Tata & L&T)
4	Surat-Baziraport	Essar, Gujarat	RVNL to construct the line. Land alignment not yet finalised.
5	Banspani-Talcher	Steel units located in Angul in Orissa (JSPL, Monnet, Bhushan)	Banspani-Bimlagarh-Barsuan sanctioned in 2009-10 in Railway Budget
6	Putter-Attiputu (90 Km) to connect Ennore port	JSW (Karnataka) and steel units in Karnataka	Sanctioned in 2008-09. Target : March 2012
7	Ranchi direct line to Ramgarh	JSPL, JSW and all other steel units to connect Jharia coalfields	Rajkharswan – Ranchi line sanctioned in 2009-10.

#### B. Augmentation of important existing Routes

S No	Line / Route / Section	Beneficiary	Augmentation required	Current status
1	Banspani-Jakhpara	Posco, Arcelor-Mittal, Tata, Essar, JSPL, RINL, JSW & others in Orissa	Single line to double line with electrification	Survey work sanction in 2008-09
2	Jakhpara-Haridaspur	All above	Third line	Survey sanction in

				2008-09
3	Kottavalsa-Kirandul (K-K line)	All of steel industry including RINL	Doubling with additional capacity	Feasibility survey in progress
4	Manoharpur-Asaboni with connectivity to Chiria	All steel units in Jharkhand. Bokarow, Durgapur SAIL plants	Third line with Y-connectivity to chiria mines	Partly sanctioned (i)Third line Manoharpur-Asanboni in 2008-09
5	Chandil-Muri-Patratu	JSW(JH), JSPL (JH), Tata	Doubling	(Alternate new rail line between Rajkharwan-Ranchi sanctioned in 2009-10.
6	Barsuan-Kiriburu-Bimlagarh-Bondamunda	SAIL (Rourkela, Bhilai, Bokaro)	Doubling	Damitra-Champajharan sanction in 2008-09
7	Talcher-Angul-Sambalpur	JSPL, Bhushan, Monnet (Orissa)	Doubling	Not yet considered

(ii) **Ports**

S. No	Ports	Beneficiary	Current status
1	Dhamra (Orissa)	Private port being developed by Tata and L&T	D/o Shipping has issued all clearances. Construction work in progress. Target: Phase I 25 million ones by 2011. Planned capacity 83 million tonnes.
2	Paradeep (Orissa)	Essar: 2 captive berth JSPL: 2 captive berths	2 additional berths have been tendered under PPP route for handling coal, iron and container.
3	Haldia(WB)	1 additional berth each for JSW, JSPL, Tata for import of coal and export of finished goods	Berth Nos. 2 & 8 (existing has been earmarked for augmentation by 3 million tonnes each under PPP route, for public use only. These will be dedicated for coal and steel handling.
4	Visakhapatnam (AP)	JSW: Berth No. 7 as captive berth	Berth No. 7 has been earmarked for development under PPP route

(iii) **Infrastructure for steel sector – Roads / Important road projects linked to Greenfield & Brownfield steel projects**

SNo.	Road Link	Project	Current Status
1	NH-42 Cuttack – Sambalpur (Orissa)	2 lane to 4 lane	Feasibility study of Cuttack-Angul has been included in 2008-09.
2	NH-200 Angul-Jajpur Road (Orissa)	2 lane to 4 lane	A section of NH 200 Chandikhol-Duburi-Talcher (137 km) identified under NHDP Phase III.
3	NH 5 Kolkata – Bhubaneswar (WB, Orissa)	4 lane to 6 lane	Balasore to Khurda is already 4 lane. Balance portion of 4 laning under progress
4.	Additional 2 lanes in NH 6 from Kolkata to Bhilai (WB, Jharkhand, Orissa, CG)	2 lane to 4 lane & 4 lane to 6 lane	(i) Feasibility study for 4 laning of Bahragora-Kharagpur (ii) 88 Km from Sambalpur-Bargarh identified for 4 laning under NHDP III.

			(iii) 322 Km length of NH 6 in Chhattisgarh is under 4 laning work
5	NH-215 Joda-Jajpur Road (Orissa)	Urgent repair and 4 laning	Identified for improvement under NHDP Phase III. Bids have been invited and are under examination
6	NH 6 Jagdalpur-Dantweada (CG) NH 43 Jagdalpur-Raipur (CG)	2 lane to 4 land	4 laning of NH 43 Khurd-Damtari (23 Km) identified under NHDP Phase III
7	NH 60 Kharagpur-Bankura (WB)	4 laning	Improvement from Intermediate land to 2 laning for 144 Km length, has been identified. 10 Km – completed 57.5 Km – In progress”

### Demand & Supply

7.3 In response to a query regarding the present Demand & supply scenario of Indian steel industry, the Ministry have stated as under:-

	In thousand tonnes		
	Apr-Jan 2009-10*	Apr.-Jan. 2008-09	% change
Production for Sale	48814	47275	3.3
Import	5937	5011	18.5
Export	2395	3634	-34.1
Consumption	45939	42592	7.9
Source: Joint Plant Committee; * - Provisional			

7.4 When asked about the projection of Demand supply gap of steel industry in India in the next 10 years, the Ministry of Steel have stated as under:-

“A long term projection for the Indian Steel Sector up to the year 2019-20 was made in the National Steel Policy 2005. The projections in the National Steel Policy were based on the assumptions of 7.3% average growth in production and 6.9% average growth in consumption. However, the statistics of production and consumption for the past 5 years show that the steel production and consumptions in the country have risen at rates much faster than the initial projections in the National Steel Policy. At this point of time, it is apparent that, the steel consumption in the country will grow at an average rate of more than 10%, at least for next five years. Based on this projection of consumption growth steel demand in the country would be approximately 68 million tones in the year 2011-2012 and approximately 100 million tones in 2015-16.

Based on the status of various steel projects as in 2007, it was projected that, India's steel production capacity would reach 124 million tones by the



financial year 2012. However, the current position of progress of various green field steel projects indicates a fresh re-look and a projection on year-by-year basis for the next 5 years. Ministry of Steel will shortly constitute a Committee to examine the status of all proposed major steel projects and make a fresh projection of the likely steel production capacity on year-wise basis for the next 5 years.

A fresh examination of production, consumption, export and import projections for the next 10 years have to be conducted, in conjunction with the targeted commissioning of major projects, international production projection and trade outlook on long term basis.”

### **Consumption of Steel**

7.5 The Committee enquired about the current per capita consumption of steel vis-à-vis world average. In reply, the Ministry have stated that “as per the information provided by World Steel Association, India's per capita finished steel consumption stood at 44.3 kg in the year 2008 against a global average of 190.4 kg in the same year. However, based upon the statistics maintained by Joint Plant Committee, per capita consumption of steel in India was 47 Kg' for the year 2008-09.”

7.6 To a further query about the per capita consumption of steel in India by 2012 both in rural area and urban area, the Ministry of Steel have stated as under:-

“Per capita steel consumption in the country for the year 2008-09 is 47 kg. There is no statistics available to demonstrate the sectoral per capita consumption. Steel has three distinct areas consumption viz., (i) Infrastructure (ii) Urban (iii) Rural. However, in the absence of any particular data on rural per capita consumption, it has not become possible to maintain steel consumption on sectoral basis.

A rough estimate was carried out in 2005, which indicates the per capita steel consumption in rural sector to be 2 kg. However, since the year 2005, a number of rural development projects have been initiated by government. Moreover, in the year 2005, per capita steel consumption in India was 35 kg which has now increased to 47 kg.

In order to obtain a full picture of the pattern of rural steel consumption in the country a All India level survey has already been commissioned. The survey is coordinated by Joint Plant Committee, Kolkata and the field work is being carried out by IMRB International, a leading market research organization. The survey will cover 300 districts and 1500 villages in the country, covering all India States and Union Territories. The preliminary findings of the survey are expected by October 2010 and after analysis and final computation the results of rural steel demand can be available by January 2011.

At the current rate of per capita steel consumption growth, the per capita steel consumption in India is expected to be in the range of 60-62 kg. in 2012.”

7.7 When asked about the action taken by the Ministry to increase the per capita consumption of steel in rural areas, the Ministry of Steel have stated that “per capita steel consumption can be increased by increasing the steel consumption base. Largely, no specific action is required for that as steel consumption will grow along the growth in the economy. However, intensity of steel consumption (steel consumption per unit of GDP) can be raised by popularizing steel intensive technologies in construction, transport etc. and popularizing steel intensive consumer goods among the population. It is believed by the industry that there is a good potential for growth in steel consumption in the rural areas. The industry believes that lifestyle change in the rural areas can usher in a more steel intensive consumption base there. Also, by making the rural population aware of the advantages of steel, one can expect them to look for substitution to steel based products. To assess the full potential of it, the Joint Plant Committee is undertaking a detailed study to this effect. The findings of the study will provide commercial and strategic direction to the Indian steel industry to develop market in rural India.”

## **Observations/Recommendations**

1. In the aftermath of liberalization and globalization, steel PSUs witnessed a strong competition from the private steel producers who started building up their capacities by setting up new steel plants. Steel PSUs thus faced the challenge of retaining their predominant position in steel sector. This necessitated them to draw up a modernization and expansion plan of their steel plants not only in terms of capacity building but also technological upgradation, introduction of energy efficient and environment friendly technology. Availability of proper infrastructure, land, critical inputs and skilled workforce would undoubtedly play a major role in the success of modernization and expansion of steel PSUs.

2. The Committee note that the modernisation and expansion programme of plants of Steel Authority of India Ltd. (SAIL) viz. IISCO Steel Plant (ISP), Salem Steel Plant (SSP), Bokaro Steel Plant (BSL), Bhilai Steel Plant (BSP) and Rourkela Steel Plant (RSP) was approved 'in principle' by SAIL Board between June, 2006 to July, 2007. The Committee have been informed that the modernisation and expansion plan of the plants of SAIL envisaged installation of major facilities such as a new Coke Oven Battery, Sinter Machines, installation of new/upgradation of Blast Furnace, Basic Oxygen Furnace Converters, Bloom Casters, continuous casting facilities, New Cold Rolling Mill Complex, phasing out of low yield and energy intensive units, new Steel Melting Shop and New Billet Casters/Billet-cum-Bloom Casters etc. In the case of Rashtriya Ispat Nigam Ltd. (RINL), the Committee have been informed that modernisation and expansion was necessitated in view of consistently operating at high levels of capacity utilization, critical equipments like Blast Furnace, Basic Oxygen Furnace (BOF), Sinter Plant and Coke Oven etc. required major revamp/capital repairs to bring them back to earlier reliability and efficiency levels.

3. According to the Ministry, the original target for completion of modernization and expansion of plants of SAIL was between June, 2010 to March, 2013. Owing to buoyancy in the steel industry, the timeline for implementation of different packages was initially compressed to 2010. However, as per the further revised targets, the plants of SAIL are to be

commissioned between August, 2010 to December, 2012. Similarly in the case of RINL, the original schedule for completion of stage-I of modernisation and expansion was between October, 2008 to February, 2010 which has been subsequently revised to March, 2011.

4. As regards, progress of the modernisation and expansion programme of SAIL and RINL, the Committee regret to note that major packages such as Coke Oven Battery, Blast Furnace, Basic Oxygen Furnace (BOF), Bloom Caster, Continuous Casting facilities, Steel Melting Shop (SMS-II) etc. are yet to be received. Due to delay in receipt of requisite packages, the installation of the aforesaid facilities is likely to miss the laid down targets. Further, the design, engineering, civil and structural works are also likely to take considerable time for their completion which would further hamper timely installation of various facilities which have been ordered. The Committee need hardly emphasise that phasing out of obsolete technology and introduction of energy efficiency and environment friendly technology would assume critical importance in the modernization of steel PSUs. They expect that with the introduction of state of the art technology in units/plants of Steel Authority of India Ltd. (SAIL) and Rashtriya Ispat Nigam Ltd. (RINL), their techno-economic parameters such as Coke Oven Rate and energy consumption would substantially improve. Accordingly, it is essential that immediate remedial steps need to be taken to ensure early delivery of packages, orders for which have been placed. Further, to facilitate the erection/installation of technological facilities, civil and engineering works of the plants should be completed well before the receipt of packages. During the course of their study visit to IISCO Steel Plant(ISP), Burnpur in June, 2010, the Committee found that civil engineering works relating to modernisation and expansion of the ISP have been undertaken by SAIL. The Committee were given to understand that both management and the workers were putting in their best efforts for making the modernisation programme of ISP successful. The Committee are satisfied with the performance of all labourers/employees/officers of ISP for building up such a big project relating to modernisation and expansion of the plant. However, the Committee are surprised to note that boundary wall of certain stretches of the new plant area has not been erected due to protests by the local residents of the area and boundary wall of the old

plant area is too low. The Committee desire that the matter may be sorted out with the help of local administration and the boundary wall of the entire plant may be constructed/height of the boundary wall be raised appropriately within a reasonable time frame. The Committee would like to be informed of the action taken in the matter. The Committee also trust that units of SAIL and RINL would make optimum utilization of the facilities as a result of implementation of modernization programme.

5. The Committee have been given to understand that during the course of implementation of modernization and expansion plan, SAIL had faced certain problems/constraints such as inadequate response to tenders, price bids submitted by the bidders being higher than the consultant's estimates, etc. The Committee are of the considered opinion that had SAIL adhered to the timeline of 2010 for completion of modernization programme, despite the then meltdown, its financial performance would now have been far better given the present stability in the steel market. In this connection, it is pertinent to note that SAIL had also resorted to retendering due to high price quoted by the vendors. The Committee are of the view that what SAIL saved financially on account of retendering would be much less than the profit it could have earned on account of completion of modernization programme in 2010 itself.

6. The Committee regret to point out that SAIL having compressed the target for modernisation and expansion from 2013 to 2010 to encash the buoyancy in the steel industry failed to meet the revised target. However, SAIL is stated to have taken several corrective steps such as strengthening project monitoring and project management organization, convening pre bid conferences and consultations with technology suppliers and their partners for ensuring wider participation/response in the tenders, streamlining project manuals etc. With these measure, the Committee expect the SAIL to complete its modernization and expansion within the revised target (August 2010 to December, 2012). The Committee would like to be informed of the present position in this regard.

7. The Committee find that the pre-ordering delay in completion of schedule of RINL against the original schedule has been mainly attributed to

delay in appointment of consultants, tender process and placement order. The post ordering delays include engineering and supply and erections of equipment by BHEL and MECON, structural work by HSCL, structural and equipment erections by Bridge and Roof, supply of equipments from Chinese sources etc. The Committee feel that the pre and post ordering delays could have been avoided had there been stringent monitoring mechanism in place. The Committee recommend that Ministry of Steel/RINL should chalk out a strategy to make up for the loss due to time over-run and ensure that the modernization and expansion programme of RINL is monitored at highest level so as to ensure there is no further time and cost overrun.

8. The Committee find that current installed capacity of Hot Metal, Crude Steel and Saleable Steel in respect of SAIL is 13.8, 12.8 and 11.1 million tonnes respectively which is stated to go up to 23.46, 21.40 and 20.23 million tonnes respectively after implementation of modernisation and expansion programme. Similarly, in the case of RINL their current installed capacity of Hot Metal, Liquid Steel and Saleable Steel which is presently 3.4, 3.0 and 2.656 Million Tonnes respectively is stated to go up to 6.5, 6.3 and 5.72 Million Tonnes respectively after the on-going expansion programme. The Committee are surprised to find that though SAIL and RINL have currently undertaken Brownfield projects to expand the capacities of their existing plants during 2008-09, Bokaro Steel Plant and IISCO Steel Plant could not fully utilize their installed capacity as their capacity utilization was only 82% and 83% in 2008-09 respectively. The Ministry attributed the reason for underutilization of these capacities to the snags in the blast furnaces. The Committee are not convinced with the reason put forth by the Ministry as the problem should have been envisaged well in advance and fixed without much delay. The Committee urge upon the Ministry of Steel/SAIL to undertake capital repair/replacement of the worn out equipment as a part of their current modernization programme so that the bottlenecks in the full capacity utilization of these plants are removed. It should be endeavour of the SAIL/RINL to fully utilize the existing capacities as only then the increase in the capacities could be justified.

9. According to the Ministry of Steel, post completion of current modernization and expansion programme, the capacity of hot metal, crude steel and saleable steel in respect of SAIL will go up to about 75% of the present installed capacity. Similarly, in the case of RINL, after completion of the ongoing expansion, their capacity will be twice of the existing installed capacity. The Committee find that private steel players have proposed huge investments for setting up Greenfield projects in order to enhance their production capacities. Major private players such as Tata Steel, Essar Steel, Jindal Steel & Power Ltd., Electro Steel Casting Ltd., Posco, Arcelor Mittal India, JSW Steel have embarked upon major Greenfield projects in Orissa, Jharkhand, West Bengal and Chhattisgarh for which process of land acquisition is already in progress. Some of these projects are likely to be completed by 2011-12. The Committee desire that as in the case of private sector, public sector steel companies should also consider the feasibility of setting up of Greenfield projects after completion of first phase of current modernization and expansion programme so as to remain competitive and keep pace with the private sector steel companies.

10. The Committee note that steel PSUs would meet the expenditure on their modernization and expansion from out of their internal accruals and external borrowings without seeking budgetary support from Government of India. A sum of Rs. 70,169 crore and Rs. 15005 crore respectively have been sanctioned on account of various schemes of modernization and expansion of SAIL and RINL. SAIL could utilize only Rs. 17,352 crore upto June, 2010 on various schemes of its plant which works out to about 25% of the approved cost. Expenditure trend of RINL in respect of its modernization is relatively better as they have spent Rs. 7,508 crore upto June, 2010 which is about 50% of the approved cost of the project. The Committee are not satisfied with the progress of utilization of funds earmarked for the purpose of modernisation and expansion. The Committee recommend that SAIL and RINL should take suitable steps so as to fully utilize the allocated fund for timely completion of the projects/schemes related to modernization and expansion of their respective units/plants.

11. Availability of critical inputs such as iron ore and coking coal is one of the pre-requisites of modernisation and expansion of Indian Steel Industry. The Committee observe that although India has total coking coal reserves of 33.413 billion tonnes, it is difficult to mine most of the reserves. The Committee find that except BCCL Collieries, coking coal reserves in India are having high ash content. Thus, the domestic steel industry is highly dependent upon import of coking coal to fulfill its requirement. The Committee observe that post modernisation and expansion, raw material requirement of India Steel Industry would increase substantially. Thus, there is an urgent need for having raw material security. The Committee desire that SAIL should step up efforts to expand the mining capacity of their existing iron ore mines and develop captive coking coal blocks namely Tasra and Sitanala. The Ministry of Steel/SAIL should make all out efforts and take up the matter with the Ministry of Coal at the highest level for acquisition of coal blocks of Jhirki, Jhirki West OC and Rhone- Routpara West.

12. The Committee recommend that the thermal coal mines identified by SAIL should be allotted to it for captive use from the Government dispensation besides according top priority to the renewal of Chiria mines. The Ministry of Steel should also take up the matter with Government of Jharkhand with regard to renewal of leases viz. Budhaburu, Dhobil and Ankua keeping in view the fact that Government of Jharkhand has already given its in-principle approval. With regard to other leases which are pending for want of forest and environment clearances, the concerns of the Ministry of Environment and Forest/State Government may be addressed to enable them to grant necessary statutory clearances expeditiously. The Committee further recommend that Ministry of Steel should provide all possible help to Visvesvarya Iron & Steel Plan (VISL) and Salem Steel Plant (SSP) in grant of iron ore leases keeping in view that they have already applied for grant of leases and SSP and does not have their own iron ore mines. They also recommend that coal blocks identified by SAIL viz. Tentuloi, Ghogarpalli & extension, Bankhui, Gand Bahera, Ujheni, Puta Parogia and Pindrakhi should be allotted to it to ensure raw material security in respect of thermal coal.



13. The Committee find that SAIL and Bharat Coking Coal Ltd. (BCCL) intend to form a Joint Venture Company for development of captive coking coal block for which Coal India Ltd is not giving its nod. The Committee urge upon Ministry of Steel to persuade Ministry of Coal/CIL to give their approval for development of captive coking coal block. The Committee also recommend that more such JVCs may be formed with CIL and its subsidiaries mutually agreed to by them as the same would be beneficial to both of them.

14. The Committee note that critical infrastructure projects such as new rail links, augmentation of important existing routes, ports and road connectivity projects etc. are vital for growth of the country and are dependent to a certain extent on the steel sector. Keeping in view the critical importance of development of infrastructure, the Committee desire that the Ministry of Steel expeditiously complete their modernisation and expansion programme so that such projects do not feel shortage of good quality of steel.

15. The Committee note that in the current economic scenario, there is huge growth potential for Indian steel industry. The Committee have been given to understand that steel consumption in the country will grow at an average rate of more than 10% for the next 5 years. On the basis of this projection of consumption growth, steel demand in the country would be approximately 68 million tonnes for the year 2011-12 and it may rise to approximately 100 million tonnes by 2015-16. The Committee agree with the view of the Ministry of Steel that a fresh examination of production, consumption, export and import projections for the next 10 years is required for which Ministry propose to constitute a committee. The Committee desire that since various Greenfield and Brownfield projects are going to be commissioned in next 2-3 years, the proposed committee may be constituted on priority basis to look into the projections of steel consumption etc. on year-by-year basis for the next 10 years so as to plan and suggest measures to boost the requisite output of steel. As regards consumption of steel in India, the Committee find that per capita consumption of steel was 47 kg in 2008-09 which was much less compared to global average of 190.4 kg. The Committee, therefore, recommend that Government should take initiative to focus on increasing the consumption of steel in the rural areas given the growth potential of

**consumption of steel in the rural areas for purposes like rural housing, rural infrastructure etc.**

**NEW DELHI;  
23 November, 2010  
02 Agrahayana, 1932(Saka)**

**KALYAN BANERJEE  
Chairman  
Standing Committee on Coal and Steel**

## ANNEXURE-I

### MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND STEEL HELD ON 1<sup>st</sup> FEBRUARY, 2010 IN COMMITTEE ROOM 'B', PARLIAMENT HOUSE ANNEXE, NEW DELHI.

The Committee sat from 1400 hours to 1545 hours.

#### PRESENT

**Shri Kalyan Banerjee** - **Chairman**

#### MEMBERS

- 2 Shri Adhi Sankar
- 3 Shri Sanjay Bhoi
- 4 Shri Chandrakant B. Khaire
- 5 Sardar Sukhdev Singh Libra
- 6 Shri Narahari Mahato
- 7 Shri Govind Prasad Mishra
- 8 Kumari Saroj Pandey
- 9 Shri Ramesh Rathod
- 10 Shri Pashupati Nath Singh
- 11 Smt. Rajesh Nandini Singh
- 12 Shri Rajiv Ranjan Singh alias Lalan Singh
- 13 Ms. Mabel Rebello
- 14 Shri Jai Prakash Narayan Singh
- 15 Shri Mohd. Amin
- 16 Shri Ali Anwar Ansari
- 17 Shri R.C. Singh
- 18 Shri Kishore Kumar Mohanty
- 19 Shri Swapan Sadhan Bose

#### SECRETARIAT

1. Shri Shiv Singh - Director
2. Md. Aftab Alam - Under Secretary

#### WITNESSES

##### MINISTRY OF STEEL

1. Shri Atul Chaturvedi, Secretary
2. Shri B.S. Meena, Special Secretary and Financial Adviser
3. Shri G. Elias, Joint Secretary

##### STEEL PUBLIC SECTOR UNDERTAKINGS

4. Shri S.K. Roongta, Chairman - SAIL
5. Shri P.K. Bishnoi, CMD - RINL

2. At the outset, the Chairman, welcomed the representatives of the Ministry of Steel and Steel Public Sector Undertakings to the sitting of Committee. The Chairman mentioned that the sitting of the Committee has been convened to hear the views of the representatives of the Ministry of Steel regarding “Modernisation and Expansion of Steel Sector”.

3. Thereafter, the Secretary, Ministry of Steel, briefed the Committee on “Modernisation and Expansion of Steel Sector”. The points discussed during the sitting broadly related to the issues such as progress of implementation of ongoing modernization and expansion of steel plants; reasons for delay in execution of expansion plans, steps being taken/to be taken by the Ministry of Steel to face challenges of economic melt down; demand & supply of steel and availability of iron ore and coking coal.

4. The Chairman directed that the replies to some of the queries raised by the Committee which could not be replied by the representatives of the Ministry may be furnished well before the next sitting of the Committee.

5. The Committee decided to further hear the views of the representatives of the Ministry at their sitting to be held on 19<sup>th</sup> February, 2010.

A verbatim record of the proceedings has been kept.

***The Committee then adjourned.***

**MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND  
STEEL HELD ON 19 FEBRUARY, 2010 IN COMMITTEE ROOM NO. '139',  
PARLIAMENT HOUSE ANNEXE, NEW DELHI.**

The Committee sat from 1400 hours to 1630hours.

**PRESENT**

**Shri Kalyan Banerjee - Chairman**

**MEMBERS**

2. Shri Hansraj G. Ahir
3. Shri Jayawant G. Awale
4. Shri Sanjay Bhoi
5. Shri Abu Hasem Khan Choudhury
6. Shri Ismail Hussain
7. Shri Chandrakant B. Khaire
8. Shri Yashbant Laguri
9. Shri Narahari Mahato
10. Shri Govind Prasad Mishra
11. Kumari Saroj Pandey
12. Shri Rakesh Sachan
13. Shri Pashupati Nath Singh
14. Shri Rajiv Ranjan Singh *alias* Lalan Singh
15. Ms. Mabel Rebello
16. Shri Dhiraj Prasad Sahu
17. Shri Jai Prakash Narayan Singh
18. Shri Ali Anwar Ansari
19. Shri Kishore Kumar Mohanty

**SECRETARIAT**

1. Shri Ashok Sarin - Joint Secretary
2. Shri Shiv Singh - Director
3. Smt. Sunita - Deputy Secretary
4. Md. Aftab Alam - Under Secretary

**WITNESSES**

**MINISTRY OF STEEL**

1. Shri Atul Chaturvedi, Secretary
2. Shri B.S. Meena, Special Secretary & Financial Adviser
3. Dr. Dalip Singh, Joint Secretary
4. Shri G. Elias, Joint Secretary
5. Shri Udai Pratap Singh, Joint Secretary

## **STEEL PUBLIC SECTOR UNDERTAKINGS**

1. Shri S.K. Roongta, Chairman, SAIL
2. Shri P.K. Bishnoi, CMD, RINL
3. Shri Rana Som, CMD, NMDC
4. Shri K.J. Singh, CMD, MOIL

2. At the outset, the Chairman, welcomed the representatives of the Ministry of Steel and Steel Public Sector Undertakings to the sitting of Committee. The Chairman mentioned that the sitting of the Committee has been convened to discuss the various issues and queries raised by the Committee regarding the subject "Expansion and Modernisation of Steel Sector" at their sitting held on 01.02.2010.

3. Thereafter, the Committee sought clarifications on the various issues related to "Modernisation and Expansion of Steel Sector", some of which were replied to by the representatives of the Ministry. The issues discussed during the sitting broadly related to acquisition of land and payment of compensation to the land owners by NMDC in Chhattisgarh, Modernisation of many old units of RINL; delay in expansion programme of SAIL problem of environment and forest clearance etc.

4. The Chairman directed the representatives of the Ministry of Steel to furnish the replies to the queries raised by the Members which could not be responded to by them.

A verbatim record of the proceedings has been kept.

***The Committee then adjourned.***

**MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND  
STEEL (2010-11) HELD ON 29.10.2010 IN COMMITTEE ROOM NO. G-074,  
PARLIAMENT LIBRARY BUILDING, NEW DELHI**

The Committee sat from 1400 hrs. to 1500 hrs.

**PRESENT**

Shri Kalyan Banerjee- **Chairman**

**MEMBERS**

**LOK SABHA**

1. Shri Hansraj G. Ahir
2. Sanjay Bhoi
3. Ismail Hussain
4. Shri Narahari Mahato
5. Shri Govind Prasad Mishra
6. Shri Adhi Sankar
7. Shri Pashupathi Nath Singh
8. Sardar Sukhdev Singh Libra
9. Dr. G. Vivekanand

**RAJYA SABHA**

10. Ms. Mabel Rebello
11. Shri Dhiraj Prasad Sahu
12. Shri Jai Prakash Narain Singh
13. Shri R.C. Singh

**SECRETARIAT**

1. Shri Raj Shekhar Sharma - Director
2. Smt. Sunita - Deputy Secretary
3. Md. Aftab Alam - Under Secretary

2. At the outset, Chairman, welcomed the Members to the sitting of the Committee.

3. The Committee then considered and adopted the following Draft Reports subject to some minor modifications:-

- (i) \*\* \*\* \*\* \*\* \*\* \*\* \*\*
- (ii) \*\* \*\* \*\* \*\* \*\*
- (iii) \*\* \*\* \*\*^
- (iv) Modernisation and Expansion of Steel Sector.

4.     \*\*                   \*\*                   \*\*                   \*\*                   \*\*                   \*\*

5.     The Committee authorized the Chairman to finalize the Reports after making consequential changes arising out of factual verifications by the concerned Ministries or otherwise and to present these Reports to both the Houses of Parliament.

**The Committee then adjourned.**

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\*\*Do not pertain to this Report.