



# Upcoming Steel Projects In India

- By Sanjay Sengupta

## Introduction

The Indian steel industry is now poised for a massive growth in the next 15 years. Application of latest global technologies with a stupendous hike in production capacities ensuring production of high value steel products in a cost effective and eco-friendly manner, is the goal of the Indian steel industry.

## National Steel Policy

The Government has announced the National Steel Policy (NSP) in early November, 2005. The policy envisages a compounded annual growth rate (CAGR) of 7.3 percent per annum in the steel sector up to 2019-20. To achieve this, the NSP aims to increase indigenous production from 38 Mt level of 2004-05 to about 110 Mt by 2019-20, through multi-pronged strategy.

The focus of the NSP would be "to achieve global competitiveness, not only in terms of cost, quality and product-mix but also in terms of global benchmarks of efficiency and productivity.

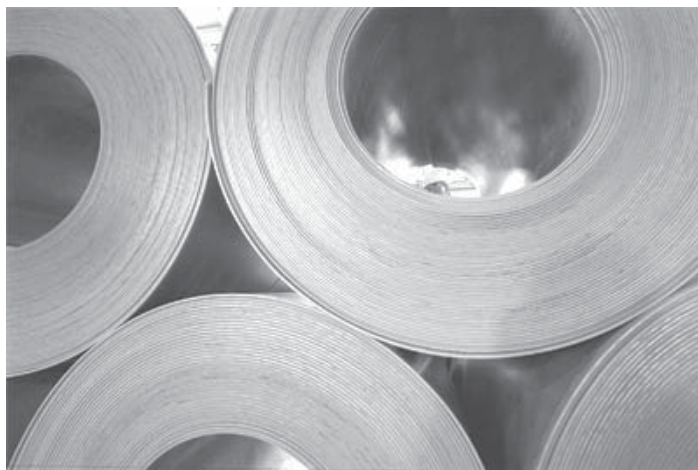
The government proposes to create incremental demand for domestic consumption of steel through

promotional efforts, awareness drives and strengthen then delivery chain, particularly in the rural areas.

The justification is that the growth rate of steel for the past 15 years has been 7 percent per annum. The proposed increase will compare well with the projected income growth rate of 7 to 8 percent, given an income elasticity of steel consumption around one.

According to available estimates, the NSP mentions, that domestic consumption of steel in India stood at 31 Mt in 2003 - 04. Bringing production up to 110 Mt would, therefore, mean a domestic consumption of 90 Mt. The

urban percapita consumption is expected to go up from the present level of 77 Kg to 165 Kg in 2019-20 at a CAGR of 5 percent while in the rural areas, the consumption is slated to double from 2 Kg to 4 Kg at a CAGR of 4.4 percent.



## Upcoming Projects

To boost production to a level of 110 Mt by 2019-

20, the domestic producers of steel have announced massive expansion of capacities. In addition, many greenfield projects have been planned. Two big global players from abroad, Mittal Steel, the world's highest producer and

POSCO of South Korea, globally the fifth highest producer of steel have also joined the band wagon.

A resume of the greenfield projects is presented below -

#### **Tata Steel at Jamshedpur, Jharkhand**

Tata Steel is setting up a 12 Mtpy capacity steel plant near the existing steel plant in Jamshedpur at cost of Rs. 42,000 crore.

The 12 - Mtpy capacity "Mega Unit" will be built in two phases. In the first phase, a 6 - Mtpy capacity will be executed in 36 - 54 months after getting the clearances and leases are received. In 36-54 months after completion of the first phase, another 6 - Mtpy capacity will be added.

#### **Tata Steel In Orissa**

Tata Steel is setting up a six million tpy capacity steel plant at Kalinganagar in the Jaipur district of Orissa. The proposed project will involve an estimated investment of Rs. 15,400 crore and will be completed in two phases of three million tpy each.

The first module will comprise of a blast furnace, coke ovens, sinter plant, caster and rolling mills. The first phase of the project is likely to be completed by 2009. This will be followed by a second module to be completed in the next 24 months.

#### **Tata steel In Chattisgarh**

Tata Steel is planning to install a 5 – Mtpy capacity integrated steel plant in the Baster region of Chattisgarh at a cost of Rs. 15,000 crore. In the first phase, Tata Steel will set up a plant with two million tpy capacity within 48 to 60 months of obtaining the statutory clearances. Subsequently, the capacity will be alimented to five million tpy.

#### **Essar Steel In Orissa**

Essar Steel Ltd. is setting up a 4 – Mtpy capacity steel complex at Paradip in Orissa at an estimated cost of Rs. 10,000 crore. The scheme includes installation of a Pellet Plant and an iron ore beneficiation plant. Essar has already signed a MoU with the Orissa Government.

#### **Essar In Chattisgarh**

According to a report in Metal Bulletin (6/7/05), Essar Steel Chattisgarh, a subsidiary of Essar Steel, has signed a MoU with the Chattisgarh Government to build a 3.2 Mtpy capacity integrated steel plant in the Baster district of the state at a cost of Rs. 60 billion. In the first phase, Essar will construct a 1.6 Mtpy capacity steel plant with a captive power plant at a cost of Rs. 40 billion.

#### **Ispat In Orissa**

The Ispat Group is planning to set up a 5 Mtpy capacity steel plant of Paradip in Orissa. Ispat has requested the Orissa Government for a 240 Mt of iron ore reserve for 30 years for building the project. According to industry sources, the investment for the project could be in the range of Rs. 12,000 crore.

#### **Tata - Blue Scope JV In Jharkhand**

The new joint Venture Company in India between Tata Steel and BlueScope of Australia will set up a 250,000 tpy of metallic coating facility and a point line capacity of 150,000 tpy. The plant will be set up at Bara in Jamshedpur and is expected to be operational by 2008. The capital cost would be about Rs. 1400 crore. The two companies will have a 50:50 share in the joint venture project.

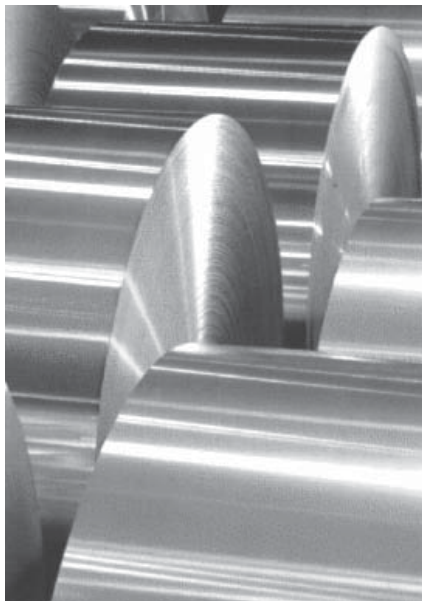
#### **Bhushan Steel & Strips in Orissa**

BSSL has planned to set up a 1.2 Mtpy capacity hot strips plant along with a 300 MW captive power plant at Lapanga in the Jharasguda

district of Orissa. The first phase of the project will involve an investment of Rs. 16502 crore. A further investment of Rs. 1850 crore in the second phase will take the capacity of the plant to 2.8 Mtpy by 2007.

#### **Jindal Stainless Ltd. In Orissa (JSL)**

JSL has signed a MoU with the Orissa Government for setting up a 1.6 Mtpy capacity integrated steel plant along



with a 500 MW capacity captive power plant at Kalinganagar in the Jaipur district of Orissa. The project will be set up in Phases and the total cost involved will be USD 9.5 billion. JSL has acquired 1240 acres of land at Kalinganagar in the Jaipur district of Orissa for the stainless steel project and another 3000 acres for the ash pond of the proposed power project.

The state-of-the-art facilities will have submerged arc furnace for manganese along with blast furnace. Steelmelting shop, slab casting facilities, gas-based cogeneration plant and the 500 MW according to JSL sources this will be the largest stainless steel plant in South Asia.

#### **JSPL in Orissa**

Jindal Steel and Power Ltd. (JSPI) has signed a MoU with the Orissa Government for setting up a 2 Mtpy capacity steel plant, a 8,000 tpy ferro alloys plant a 200 MW capacity captive power plant in the Angul area of Orissa. The integrated project will involve an investment of Rs. 4000 crore.

The company will avoid using coking coal in the proposed plant and instead use locally available coal to produce gas for making steel. The company is contemplating to increase the capacity of the plant to a level of 6-tpy when the investment will be raised to Rs. 10,000 crore.

#### **JSPL in Jharkhand**

Jindal Steel & Power Ltd (JSPL) has signed a memorandum of understanding (MoU) with the Jharkhad Government to set up a 5 – Mtpy capacity integrated steel plant and a 1000 MW capacity captive power plant at an investment of about Rs. 11,500 croer.

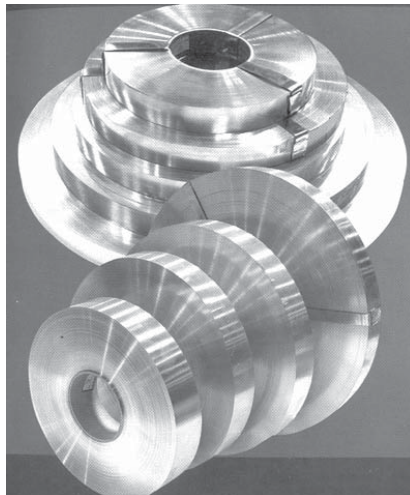
Under the MoU, the state government will provide all necessary help in getting clearances and approvals from the state and central agencies for implementation of the projects and the necessary raw material linkages for the prjocets. The plant will be located in the Saraikela district of the state.

#### **Murrugappa Plant In Orissa**

Tube investments of the Murrugappa Group based in Chennai has signed a MoU with the Orissa Government for the installation of a 2.5 Mtpy capacity steel plant at an investment of Rs. 6000 corore. The plant will mainly cater to requirement of T1 Cycles, a unit of Tube investment, which manufactures cycles in the brand name of Hercules, BSA etc.

#### **NINL in Orissa**

Neelachal Ispat Nigam Ltd. (NINL) is planning to set up a 1 Mtpy capacity steelmaking facility at Kalinganar in Orissa. The steel project is scheduled to be completed by 2007-08 and involves an have a bar and rod mill to produce quality wire rods, reinforcement bars and billets.



#### **MSP Metalliks in Orissa**

MSP Metalliks is setting up an integrated steel plant near Jharasguda in Orissa. The scheme involves installation of a 320,000 tpy capacity sponge iron plant, at 720000 tpy capacity pig iron plant, a 14,200 tpy capacity ferro alloys plant as well as a 25 MW waste heat recovery based captive power plant. A cumulative investment of Rs. 260 crore is envisaged for the project. The first phase of the project covering the sponge iron and pig iron plants is scheduled to be commissioned in 12 months from the

zero date. The company has already signed a MoU with the Orissa Government.

#### **VISA steel in Orissa**

VISA steel will invest Rs. 1600 crore for setting up a special steel plant at Kalinganagar in Orissa. The project will be completed in two phases with the first phase a capacity of 0.5 Mtpy is scheduled to be operational in 2006. The final capacity of 1.5 Mtpy is likely to be achieved by Decemeber, 2007. The plant will be located at Kalinganar.

#### **Vedanta Resources in Orissa**

Vedanta Resources is planning to set up a 5 – Mtpy

capacity steel plant in Orissa at an investment of Rs. 12,000 crore. The plant is proposed to be set up in two stages. It will produce both long and flat products. Vedanta will manage all upstream projects like iron ore mining while finished steel production will be controlled by Volcan Investments. Volcan is Vedanta's major shareholder with a stake of 53.8 percent. The plant is likely to be developed over a period of five to six years from the zero date.

#### **Sunflag Iron & Steel in Orissa**

Sunflag Iron & Steel Ltd. is setting up a 1 Mtpy capacity steel plant in the Sambalpur district of Orissa at an investment of about Rs. 1000 crore. The first phase of the project is likely to be completed by 2006-07.

#### **SPS Sponge Iron In Orissa**

SPS Sponge Iron is investing Rs. 400 crore for installing a sponge iron / steelmaking plant in the Jharasguda region of Orissa. When completed by 2007, the plant will produce 288,000 tpy of billets, 200,000 tpy of sponge iron, 200,000 tpy of pig iron and 100,000 tpy of finished steel products. Besides, the plant will have a 20 MW capacity gas – based power plant.

#### **Ispat Godawari in Chattisgarh**

Ispat Godawari has signed a MoU with the Chattisgarh Government for implementing an integrated iron and steel plant at an investment of Rs. 493 crore. Out of this amount, Rs. 299 crore will be involved for installing a 650,000 tpy capacity sponge iron plant, a 50 MW capacity captive power plant and a 550,000 capacity ingot / billet plant. Rs. 24 crore will be invested for a 33,000 tpy. capacity ferro alloys plant. Rs. 20 crore will be spent for installing a HB/GI barbed wire and other wire plant of 33,000 tpy capacity. Rs. 50 crore will be invested on development of iron ore mine of 3 Mtpy capacity while another Rs. 100 crore will be spent for the development of a 3 Mtpy capacity coal mine.

#### **Aryan Ispat & Power Plant in Chattisgarh**

Aryan Ispat and Power has signed a MoU with the Chattisgarh state IDC to set up an integrated steel complex in Chattisgarh at an investment of Rs. 860 crore. The complex will have :

a) Sponge Iron Plant of 460000 tpy capacity casting Rs.

215 crore.

b) Steel billet unit of 348,000 tpy capacity at an estimated cost of Rs. 30 crores

c) A 116 MW capacity captive power plant at a cost of Rs. 570 crore

d) A 2 Mtpy capacity coal washery costing Rs. 45 crore.

#### **SRMB Srijan Plant in West Bengal**

SRMB Srijan is setting up a 100,000 tpy steel plant at Durgapur in West Bengal at an investment of Rs. 100 crore. The plant will manufacture TMT bars, billets and structurals. The plant will be built in two phases and the entire project is scheduled to be commissioned by 2006.

#### **Ullas Steel in West Bengal**

Ullas Steel will set up a 100,000 tpy MS ingot and alloy unit at Kadasole in the Bankura district of West Bengal at an investment of Rs. 150 crore. Megatherm of Hyderabad is supplying the critical instruments for the plant. The plant is likely to be commissioned by 2006.

#### **Shyam Steel in West Bengal**

Shyam Steel Ltd. is setting up a plant at Durgapur in West Bengal at an investment of Rs. 110 crore for a 10 MW waste heat based captive power plant, a 100,000 tpy capacity sponge iron unit and a steel rolling mill. The entire project was to be commissioned by 2005-06.

#### **Foreign Steel Players in India**

A MoU has been signed between the Orissa Government and POSCO of South Korea, the Korean major and the fifth highest steel producer of the world. The 12 – tpy steel plant will be built at an investment of Rs. 52,000 crore and will be located at the port town of Paradip in Orissa.

Industry sources said that the Orissa Government has agreed to POSCO's proposal of 1:1 swapratio under which the South Korean Company will export iron ore with high alumina content and import an equal quality of high grade iron ore from Brazil. The Orissa Government will give mining leases for 30 years that will ensure a supply of 600 Mt of iron ore which will make the operation competitive.

The first phase of the POSCO project is expected to be completed by 2010 of three million tonnes capacity, after which the capacity would be expanded by three million

tonnes every two years up to 2016.

The Plant will start producing steel slabs in 2010. POSCO plans to import some of the steel slabs to be produced in India for rolling in its mills in South Korea and other countries.

POSCO chairman told after the signing of the agreement, "POSCO's Indian investment will shed positive light on the projects to the nation. The success of our project in Orissa will demonstrate to the world that there is a multi – dollar opportunity to build Indian infrastructure."

### **Mittals In Jharkhand**

Mittal Steel, the world's largest steelmaker, has signed a memorandum of understanding (MoU) with the Jharkhand Government to set up a 12 Mtpy capacity steel plant at an investment of Rs. 400 billion to mine iron ore and build the steel plant. The plant will be built in two phases of six million tonnes each. The first phase of the project is likely to be commissioned by 2010.

Mittal Steel is now finalizing location of the plant, iron ore and coal mines as well as water resources. The company may set up a 2500 MW captive power plant to supply electricity to the proposed plant.

Mittal Steel has reported to have agreed not to export iron ore from Jharkhand.

### **Orissa, Jharkhand and Chattisgarh Steals the show**

According to media reports, Orissa, Jharkhand and Chattisgarh states have signed Memorandum of understandings (MoUS) numbering 122 for setting up steel projects between them in recent times.

The cumulative investments for the projects spread over the stakes have been estimated at Rs. 284,961 crore which will render new capacities to the level of 95.7 Mt of crude steel.

Orissa took the leading role and bagged projects worth Rs. 118,000 crore and is likely to add about 47.7 tpy to the total steel capacity of India.

Jharkhand holds the second position in attracting investments. The state has signed 37 projects worth Rs. 113,000 crore. These projects, when completed is likely to add 32 Mtpy of steel to India's steel capacity.

The chattisgarh state has signed 48 MoUs involving Rs. 21,212 crore for creating an additional capacity of 16

Mtpy.

The balance will be spent on infrastructural development required for efficient working of the plants.

### **Projected Steel Capacity in India by 2011-12 World Steel Dynamics (ESD) on Indian Steel**

Producer	Crude Steel capacity (Mt)
SAIL (including IISCO)	21.4
Tata Steel, Jamshedpur, Jharkhand (including 1 <sup>st</sup> phase of Mega Project)	13.5
Tata Steel, Orissa	6.0
Tata Steel, Chattisgarh	5.0
RINL, VSP, Andhra Pradesh	6.8
Essar Steel, Hazira, Gujrat	4.6
Essar Steel, Orissa	4.0
Essar Steel, Chattisgarh	3.2
JSW Steels (various units)	10.0
Ispat, Maharashtra	3.6
Ispat, Orissa	5.0
Bhushan	3.0
JSPL, Orissa	2.0
JSPL, Jharkhand	5.0
Mittal Steel (1 <sup>st</sup> Phase), Jharkhand	6.0
POSCO (1 <sup>st</sup> Phase & 2 <sup>nd</sup> Phase) Orissa	6.0
EAF & IF	15.0
Others	5.0
<b>Total</b>	<b>125.1</b>

(Source : SAIL NEWS : Oct. – Dec. 2005  
and further update from media and company reports)

World Steel Dynamics in its issue dated 21<sup>st</sup> June,2005, has made the following observations on the Indian steel Industry :

- The dramatic improvements in the prospects for the Indian steel it is now "on the rise".
- The Indian steel industry will be a tour de force to be reckoned within the future. Planned capacity expansion to treble steel capacity by 2015.
- Steel demand is projected to grow at a 4.9 per cent

rate to 2015 various 3.9 percent rate in the last decade.

- After years of indifference, the government is motivated to take a proactive position.
- Indian steelmakers are well positioned in regard to raw materials except for coking coal.
- India is likely to sustain a major cost advantage versus almost all of its Pacific Basin competitors.

### What's the consequence ?

The Indian steel industry will become the key incremental supplier to steel users outside of India in the Pacific basin within the next decade.

Tata Steel, in part due to its ownership of low-cost raw material is well positioned among the lowest cost international steelmakers on the world cost curve and is now the highest ranked producer on W.S.D.'s World Class Steelmakers' list.

The government will not permit the huge supply of easy to access iron ore reserves to be exported at a low price. The Indian government will insist, probably, that the profits from the ore stay in India through value addition in the form of finished steel production.

India will rapidly embrace new technologies. As a nation, India has the brainpower – the managers to pull it off. There are, literally, hoards of qualified metallurgical engineers, civil engineers and computer literate people who love to work in steel plants.

### Conclusion

The national steel policy has projected a production of 110 Mt of steel production in India and a consumption of 90 Mt in the country up to 2019-20. Massive expansion of the existing capacities and installation of new capacities have been announced by the producers which will boost steel production in a big way.

As regards raw materials, the NSP formulations would mean making available 190 Mt of iron ore, 70 Mt of coking coal and 26 Mt of non-coking coal against their present consumption of 54 Mt, 27 Mt and 13 Mt respectively.

To ensure the availability of 190 Mt of iron ore by 2019 – 20, the government would encourage investments in creation of an additional modern mining and beneficiation capacity of 200 Mt at an investment of Rs. 20,000 crore. The NSP has proposed restricting iron ore export to a maximum of five year contract and to encourage sintering and pelletisation to use iron ore fines which make up 90 percent of the country's export of iron ore.

As regards coking coal and non-coking coal, the NSP has made it clear that 85 percent of coking requirement would have to be imported and the dismal 4.7 percent growth of the non-coking coal may also force the sector to import. While stressing the need for new coking coal sources to be tapped, the government would aim for the coal sector to be market driven. But, in the mean times, it would

continue allocating captive coking coal blocks to the steel plants. NSP has also recommended allocation of high grade non-coking coal to the sponge iron industry on priority basis. Massive development of infrastructure and GDP growth rate above 8 percent are the two pillars to support steel production to the projected level. Availability of raw materials in right quantities and at

the right place and time are the basic requirements of the smooth flow of production process. Eco-friendly production and recycling at a high rate as well supply of power at a moderate rate is the key to increased production.

Investment on R&D in the Indian steel industry is negligible. This must be raised substantially.

Development of infrastructure should get a pendous thrust. The share of secondary sector in GDP including manufacturing, construction, mining, oil and gas etc. must go up from the present level of 27 percent. As regards mobilization of resources, the NSP has given some ideas about what would finally happen remain to be seen.

Implementation of projects as per schedule, monitoring of infrastructure projects as well as a pragmatic approach by the government and the steel industry are the essential requisites for the success of the NSP formulations.

