

Essar Steel in 'Double Digits'



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**- Shashi Ruia, Chairman,
Essar Group**

Completes 10 MT Capacity Expansion at Hazira

The Essar Steel Hazira complex has announced doubling of its capacity to 10 MMTPA (million metric tonnes per annum). This expansion makes the Hazira Steel Complex the largest single location flat steel producer in India and the fourth largest single location flat steel producer globally. In a ceremony held at Hazira, Mr A V Amarnath, CEO, Minerals & Metals SBU, Essar Projects, handed over the completed project by presenting a symbolic key to Mr Rajiv Bhatnagar, COO, Essar Steel & Mr P Alagurajan, Chief - Projects, Essar Steel. With the completion of this expansion project, Essar Projects has become a leading EPC Contractor for steel industry. It has now an established track record in setting up large integrated steel plants from raw material processing to setting up down stream steel processing facilities like Plate Mill & Pipe Mill.

Commenting on the completion of the project, Mr Alwyn Bowden, CEO, Essar Projects said, "This project has

reinforced the competence of Essar Projects as the premier EPC contactor with great project management skills backed with necessary resources and construction capabilities that gives us further confidence to take up mega projects anywhere in the world.' In order to support the steel plant, Essar Projects has also built associated facilities in Hazira that include a 30-MTPA all-weather port, two power plants with an annual capacity of 1,015 MW, Oxygen and lime plants, a fabrication facility, and a self contained township.

On this occasion, the Chairman of



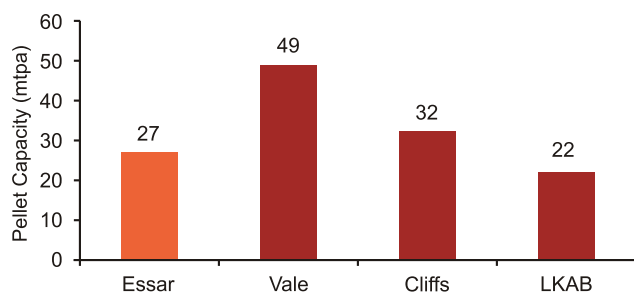
Complete Raw Material Security

Established Steelmaking company self sufficient in Key raw materials

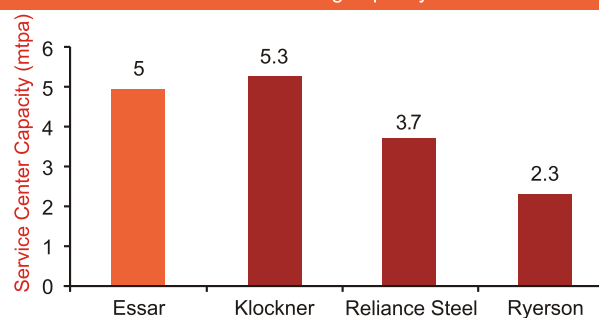
	Essar Steel Capacity
Steelmaking	14 mtpa
Iron Ore	2 bn tonnes
Coal	210 MT

2010 Volumes & Resources				
POSCO ¹	Tata Steel	Severstal	Evraz ²	Arcelor Mittal
35.4 mtpa	23.2 mtpa	18.2 mtpa	15.3	98 mtpa
==	2.0 bn tonnes	1.6 bn tonnes	2.9 bn tonnes	15.5 bn tonnes
==	720 MT	480 MT	269 MT	1,291 MT

Set to become one of the largest iron ore Pellet producers globally



Introducing the service center concept in a growth market with world leading capacity



Well established raw materials, steelmaking and distribution player located in a high growth market



"The completion of expansion project enables us not only to offer entire spectrum of flat products but will also enable us to vary our product mix to suit the market demand. Essar Steel will be able to focus on value added products many of which were hitherto imported into the country."

- Vikram Amin, Exec. Director - Strategy & Business Development, Essar Steel Business Group

Essar Group, Mr Shashi Ruia said, "We would like to dedicate this plant to the nation. When I first ventured into Hazira, it was my desire to put India on the global steel map and today that dream has come true. Our world-class steel complex is a testament to the hard work put in by the Essar family and our small contribution to the steel industry and India's growth story."

This steel plant will play a major role in making Gujarat a global industrial hub catering to the needs of capital and consumable goods, shipbuilding and automobile sector. Being a port-based plant, its strategic location makes it an ideal gateway for meeting the global demand for steel. Domestically the complex will provide world-class steel to meet the diverse needs of various industries, while also making the Hazira Steel Complex a national hub for Essar Steel to provide a range of steel products to the rest of the country. This is in line with the Vision 2020 that envisages taking India's steel capacity to 200 MMTPA.

Raw Material Security and Flexibility

Essar has adopted an integration and securitization strategy that has enabled it to keep its costs low even

with the expanded capacity. A bulk of its iron ore needs have been secured through off take agreements with key players like NMDC and captive mines in Jharkhand and Chhatisgarh. In addition, the iron ore beneficiation plants have been set up by the company to facilitate usage of low grade iron ore fines abundantly available in the country. For its energy requirements, Essar has long-term power purchase agreements and will soon have access to source cheaper coal based power from its captive plants. The offtake agreements combined with the captive mines and easy availability of low grade iron ore dumps provides Essar the necessary raw material security to operate its steel plant in the most cost-effective manner. Essar has three iron making technologies - HBI/DRI, Corex and Blast Furnace.

These technologies give them flexibility in their raw material inputs, be it iron ore or energy, in the following ways:

- The complex uses varying grades of iron ore inputs, including lump ore, fines, slimes, sinter and pellets.
- The complex uses different energy sources, including natural gas, coking coal, coke, corex gas, blast



"It is a moment of great pride for us to complete the expansion. Besides bringing down our costs, this will offer operational flexibility in terms of usage of raw materials and product mix. While expanding, we have ensured that the safety and environmental aspects are given due importance in the design, construction and operations of the plant."

- Dilip Oommen, MD & CEO, Essar Steel India

furnace gas and non-coking coal. Raw material costs are optimized to deliver the best value to the customer.

Low Capital Investments

Essar Steel has invested over Rs 37,500 crore in the business including the recent project expansion. The industry standard for steelmaking is US\$ 1 billion for a million tonnes of production. Essar Steel incurred a cost of just US\$ 750 per tonne of steel, which in addition to steelmaking also includes beneficiation, pelletization and downstream capabilities. On a like to like basis, Essar Steel has managed to create this asset at a significantly low capital cost. In some cases, the costs are lower than other steelmakers by as much as 50%.

Low Cost of Production

Essar Steel will be in the bottom 25% of the global cost curve. They have the ability to use low grade iron ore fines through its own 20 million tonne pellet and beneficiation plants which provide raw material security. Power requirements have been tied up through captive coal- and gas-based power plants. Different iron making technologies provide flexibility in raw material usage.

Operational Efficiencies

- People Efficient : 2nd lowest labor cost for steel production globally
- Process Efficient : Flexible technology assets provide an energy hedge
- Cost Efficient : Global sourcing team, state of the art procurement practices e.g. e-auctions
- Energy Efficient : By-product utilization leading to energy conservation e.g. Corex gas used in production of HBI/DRI

World Steel Producer's Labor Costs*

Company (Site)	US \$ Cost per t
Baosteel (Baoshan)	5.71
Essar Steel (Hazira)	8.20
POSCO (Gwangyang)	9.22
JSW (Vijaynagar)	11.64
Wuhan Steel (Qingshan)	12.29
MMK (Magnitogorsk)	12.75
China Steel (Kaohsiung)	13.98
ArcelorMittal (Tubaro)	18.70
POSCO (Pohang)	18.74
Nippon Steel (Kimitsu)	21.85
TATA Steel (Scunthorpe)	44.64
SAIL (Rourkela)	49.31

Source : CRU, Internal Company Data
*Select companies analyzed

Complete Portfolio of Flat Steel Products

New compact strip production (CSP) mill is capable of producing thin gauge strips of thicknesses as low as 0.8 mm.

CSP along with the hot strip mill (HSM), plate mill, pipe mill and other existing downstream facilities offer the ability to produce the entire range of value-added flat steel products.

Over 70% of the basket of products are value added, thus positively impacting margins. Caters to all customer segments.

World-class sustainability standards

In early 2011, Essar Steel signed the World Steel Association (WSA) Sustainable Development charter which evaluates economic, social and environmental sustainability of an organization. On most parameters they were either on par or better than the WSA peer group. As an organisation they are conscious of the impact of our products and services on the environment. In 2010, they conducted the Life Cycle Impact Assessment of



"With this project completion, we have achieved complete vertical integration. We have end to end connectivity right from the mine head to the marketplace. Our raw material securitization strategy, multiple iron and steel making technologies for flexibility and ability to convert waste gases into energy catapult us to be among the lowest cost producers of steel in the world. The fact that we were able to bring these world class facilities into operation at one of the lowest capital investment costs is a testament to our group's ingenuity and expertise in engineering and project management. Says Amit Agarwal, CFO, Essar Steel India."

- Amit Agarwal, CFO, Essar Steel Ltd.

Hot Rolled Coil (HRC) as per ISO 14040:2006 and ISO 14044:2006.

Key sustainability accomplishments in FY 2010-11 include :

- 8.72% reduction in Greenhouse gas emissions in India
- 99% reuse of by-products in Hazira
- Lifecycle Impact Assessment completed for HRC
- Over 130,000 cu. mtrs of water conserved through rainwater harvesting in Hazira
- 91% of solid waste utilized in Hazira
- 5.2% reduction in specific water consumption of crude steel at Hazira

Regardless of these achievements, Essar continues to strive to be the most sustainable steel company in the world.