

■ Expansion Initiatives

Tata Steel's 2.9 mtpa expansion at Jamshedpur covers the entire gamut of its operations; starting from augmenting the capacity of its mines to the introduction of the latest technologies in steel manufacture.

Brownfield expansion at Jamshedpur

Tata Steel India is implementing an expansion project at the Company's Jamshedpur Works to increase its crude steel capacity from 6.8 million tonnes per annum to 9.7 million tonnes per annum.

The project includes setting up a pellet plant with a capacity of 6 million tonnes per annum, a new Blast Furnace with a capacity of 3 million tonnes per annum, a new LD Shop and a Thin Slab Caster and Rolling Mill of 2.54 million tonnes per annum capacity to produce Hot Rolled Coils. The expansion project also entails augmentation of the Noamundi and Joda Iron Ore Mines and the setting-up of two coke ovens batteries with a capacity of 0.7 million tonnes per annum each.

Trial productions have begun for fines circuit of Noamundi Mines, Pellet Plant, 1 Blast Furnace and 1st stream of LD#3 and TSCR Mill. All balance facilities under this project are scheduled to be completed in Financial Year 2012-13.

Major civil and refractory work is nearing completion for Coke Oven Battery No. 10. Mechanical and electrical work is in progress.

The expansion project has been challenging as it requires carrying out large volumes of construction work while ensuring minimum disruption of ongoing operations. The highest safety standards are being stringently followed.

The project is being executed with world-class technology suppliers such as SMS for LD Shop, Thin Slab Caster and

Rolling Mill, Paul Wurth for the Blast Furnace, Outotech for the Pellet Plant, ACRE for the coke oven batteries, Maerz for the Lime Kilns. L&T is the main contractor for the rest of the plant and site work. During the project work, utmost care is being taken to ensure safety in construction activities. Also, quality is being ensured in equipment supplies and construction work at site. Work is being supervised by leading consultants like M N Dastur & Tata Consulting Engineers.

Blast Furnace Rebuild at Port Talbot

The rebuild of Blast Furnace No. 4 at Port Talbot began in earnest during Financial Year 2011-12. The project, at an estimated cost of approximately £185 million, will enhance the campaign life of the No.4 Blast Furnace by 20 years.

The Company is employing the best available technology from within the Group and from leading international technology suppliers.

The rebuild of the blast furnace is expected to boost productivity at the site by an additional 500k tonnes, increasing the overall productivity to 2.5 mtpa, with an increased inner volume and hearth diameter. The rebuilt blast furnace will ensure heavy end asset optimisation, making operations competitive in Europe.

The project will introduce a new centralised electrical control system that will replace obsolete equipment. A new gas cleaning plant, incorporating a cyclone technique will improve primary dust collection and containment. New hot blast stoves will further boost productivity and also reduce emissions and variable speed drives are expected to reduce the energy usage.



Minimising environmental impact has been one of the key objectives of the expansion at Jamshedpur.



Suitable measures are being taken to ensure that the pollution level arising out of the expansion project is being contained within the limits prescribed by the Ministry of Environment and Forest. Towards achieving this goal, schemes are being implemented to upgrade pollution control equipment, install covered sheds for pellet and pulverised coal stockpiles, recovery and reuse of waste water, increasing green cover and improved monitoring of effluents.

*Above: Ongoing work at Jamshedpur, India.
Below: Blast furnace, Jamshedpur, India.*

The Ferro Chrome Plant at Bamnipal, India.



Ferro Alloys and Minerals Division

The Ferro Alloys and Minerals Division, commonly known as FAMD, is the largest non-steel business unit of Tata Steel. With chrome and manganese ore reserves in the mineral-rich state of Odisha, FAMD has set up an integrated value chain, commencing with mining, beneficiation, production and sales of Ferro alloys and minerals across the globe. It works in close co-ordination with TSKZN, South Africa and Tata Steel Asia Hong Kong to deliver value to its customers in India and abroad.

Today, FAMD is the sixth-largest high carbon Ferro Chrome producer in the world, with a domestic market share of 25% and global market share of 5%. This business unit sells both Ferro Chrome and Charge Chrome.

The Company caters to the complete requirement of high carbon manganese alloys at Tata Steel India and in South East Asia. In addition, it sells manganese alloys globally.

In Financial Year 2011-12, FAMD achieved year-on-year growth of 17% in Ferro Alloys sales. Going forward, there are plans to augment the production of Ferro Alloys. Accordingly, 55,000k tonnes of Ferro Chrome and Silico Manganese each are expected to be operational in Gopalpur and Nayagarh respectively by 2014. Order for capital equipment for the Gopalpur project has already been placed post the environmental clearances. Preliminary jobs for site clearances are underway at Nayagarh.

Mr. H. M. Nerurkar, Managing Director, Tata Steel, flagged-off the preparatory work of the Underground Chrome Mining Project on 10 March, 2012 at Sukinda. This event coincided with 50 years of mining at Sukinda. Feasibility of the project has been completed and it is has been planned with state-of-the-art "Trackless Mine Technology".

The Greenfield Expansion Project at Odisha

This project at Kalinganagar, Odisha is expected to provide an addition of 6 mtpa to the flat product capacity. The execution of the project is in full swing, with clearances required for project execution, including environmental clearance, having been obtained. Orders for major technological packages like Blast furnace, Sinter and Coke plant, Steel Melt Shop and Hot Strip Mill have been placed. The site work is making steady progress. Major piling work of the Blast Furnace has been completed and approximately 1.3 lakh cubic metres of concreting work accomplished.

On completion, the project is expected to enrich the Company's product mix with the production of premium grades of Auto-AHSS (Advanced High Strength Steel), high-end galvanised coil and cold-rolled coils for general engineering. This will complement the value-added steel grades currently being manufactured at Jamshedpur.

Construction work in progress at the greenfield expansion, Odisha, India.

