TATA STEEL LIMITED

Jamshedpur (Jharkhand)

Building Profile

Established in 1907 at Jamshedpur, India and one of Asia's first integrated private sector steel companies, the Tata Steel group is among the top-ten global steel companies with an annual crude steel capacity of over 28 million tons per annum (mtpa). A Fortune 500 company, it produces a spectrum of steel products and mainly feeds the market sectors of construction, automobiles and engineering. The Tata Steel Group, with a turnover of US$ 26.63 billion in FY'11, has over 80,000 employees across the five continents.

Post its globalization initiatives that established its presence in Europe and South East Asia, Tata Steel is the world's second-most geographically-diversified steel producer, with operations in 26 countries and a commercial presence in over 50 countries. Tata Steel possesses and operates iron ore and coal mines in India and has made investments in Africa, Canada and Australia to ensure long-term raw material security for its global operations.

Tata Steel is increasing its crude steelmaking capacity at the Jamshedpur Works from 6.8 mtpa to 9.7 mtpa via a 2.9 mtpa brown field expansion project. The project comprises setting up:

i) One 6 mtpa Pellet Plant,
ii) Two coke oven batteries, each with 0.7 mtpa capacity,
iii) One 2.9 mtpa Blast Furnace and
iv) LD Shop and a Thin Slab Caster and Rolling Mill (TSCR) of 2.4 mtpa to produce hot rolled coil (HRC).

The company has on the anvil three Greenfield steel projects in the states of Jharkhand, Odisha and Chhattisgarh in India.

The 6 mtpa Greenfield Integrated Steel Plant at Kalinganagar, Odisha, will make hot and cold rolled flat products and will be built in two phases, each of 3 MTPA. The first phase of the project is expected to be commissioned by January 2014. This phase will have a 3 mtpa crude steel capacity feeding hot and cold rolling mills. The second phase, with an additional 3 mtpa crude steel capacity, is scheduled to be completed by March 2015.

The Group's vision is to be the world's steel industry benchmark in "Value Creation" and "Corporate Citizenship" through the excellence of its people, its innovative approach and overall conduct. Underpinning this vision is a performance culture committed to aspirational targets, safety and social responsibility, continuous improvement, openness and transparency.

Energy Consumption

The energy consumption figures for the last three is as shown below :-

Sl.	Particulars	Unit	2008-09	2009-10	2010-11
a.	Light Diesel Oil	Tonne	4019	3384	3808
b.	Coking Coal	Tonne	2983335	3119669	3231927
c.	Coal for injection in Blast furnaces	Tonne	554261	847359	837942
d.	Boiler/Middling Coal	Tonne	133527	127334	94745
e.	Electricity	103 KWh	2261560	2479930	2381671
f.	Plant Specific Energy Consumption	Gcal/tcs	6.587	6.125	6.006
g.	Total Manufacturing Cost	Rs. Crores	8525.19	9429.69	10649.39
h.	Total Energy Bill	Rs. Crores	3328.45	4156.68	4672.54
i.	Energy as% of total cost of production	%	39.04	44.08	43.88

Energy Conservation Commitment, Policy & Set up

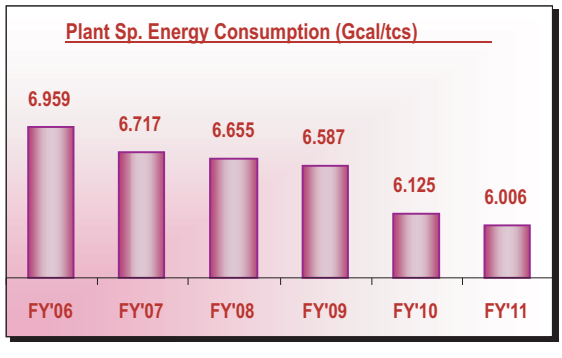
Sustainability and environment friendliness is at the core of every business. Tata Steel is fully aware of the fact that the energy supply is mainly supported by fossil fuels, whose reserves are limited and emission of carbon dioxide is caused by energy combustion. Hence it is committed to energy conservation efforts.

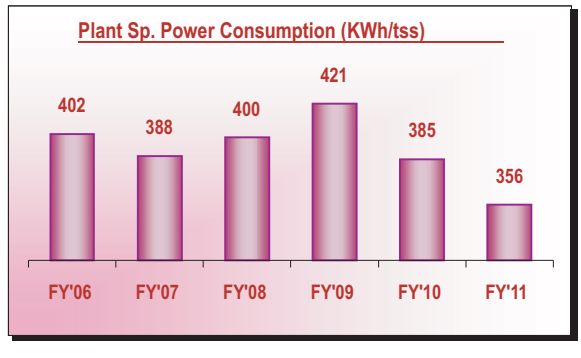
With the introduction of the "Energy Conservation Act", Tata Steel has reaffirmed its commitment to rationalization of energy use, matters relating to the recovery and waste utilization. To meet the commitment concrete measures for efficient use of energy, its recovery and waste utilization have been formulated.

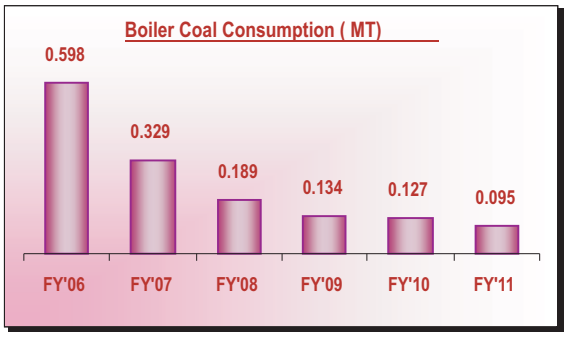
In order to secure a stable energy supply and reduce cost, as well as preserve the environment, Tata Steel has implemented a variety of energy conservation measures. The measures implemented in the last 11 years have yielded good results and the specific energy consumption has reduced from 7.401 Giga calories per ton of crude steel to 6.006 Giga calories per ton of crude steel. This reduction in Specific Energy Consumption has been achieved mainly by various phases of modernization, phasing out of energy inefficient process, improving operational practices, and adopting innovative technologies. The trend of specific energy consumption is depicted below.

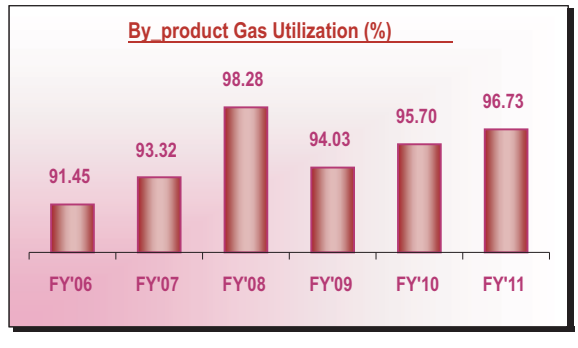
Energy Conservation Achievements

Energy Conservation achieved through introduction of new technologies, optimization of operational practices and process intensification during the last Six years are :





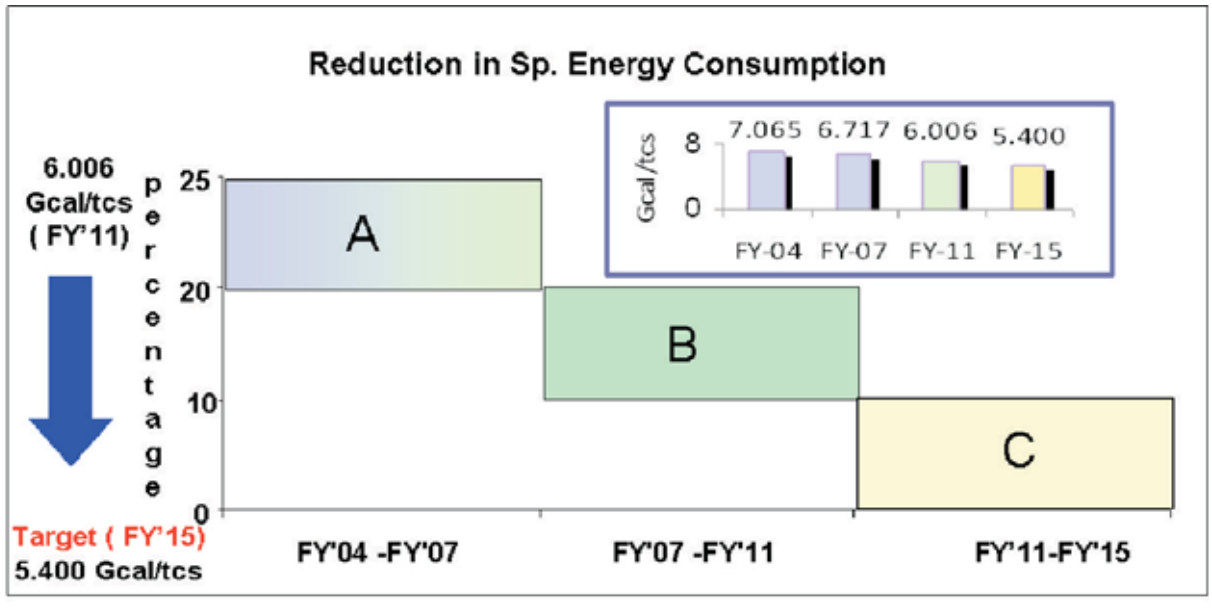




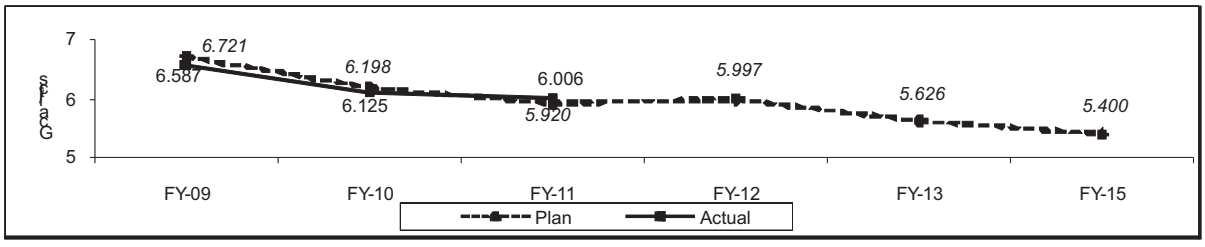
Energy conservation Measures, Plans & Target

During the decade Tata Steel has implemented a number of measures to improve energy efficiency to sustain reduction in specific energy consumption which are depicted below :

A journey started with (**A) Implementation of best practices** for energy conservation such as Utilization of by product gases for Steam and Power generation, Phasing out old and energy inefficient Units, Enhancing by product gas recovery and optimization of operating practices. With the above efforts reduction in Specific Energy Consumption was felt at a very low pace. An effort was than redirected towards **(B) Adopting best available technologies** to reduce Sp. Energy Consumption such as Waste heat recovery from waste gas of Blast Furnace stoves, Installation of Top Recovery Turbine, Use of Regenerative Burners, Coke dry quenching and application of V/F drives. This has resulted in significant reduction in Specific Energy Consumption.



Currently no single breakthrough technology is available in the Iron and Steel sector that could reduce the Specific Energy consumption drastically. Hence challenges are to improve energy efficiency by adopting **(C) New and emerging technologies such as** Combined Cycle Power Plant on by product gases, Thin Slab Caster & Rolling, Use of Pellets and shift on alternate fuel (ie gas mixing) for utilizing lean by-product gases.



Environment and Safety

Environment

Tata Steel Group puts emphasis on minimizing the environmental impact of its operations and its products by adopting sustainable practices and continuous improvements in environmental performance. Manufacturing steel unavoidably produces carbon dioxide (CO2). However, Tata Steel products are part of the solution to climate change as steel has inherent environmental advantages of being durable, adaptable, reusable and recyclable. CO2 emissions in steel production are off set by reductions in emissions through the life cycle of steel products, achieved through effective product design and through recycling at end of life.

It is this abiding involvement with the environment which has earned the company recognition for its achievements.

- 4th On-line Ambient Air Quality stations commissioned in Steel Works
- 11 On-line Stack Monitoring Systems installed at Steel Works.
- Highest ever solid waste utilization of 94.40% was achieved for the year 2010-11.
- Environment Clearance and NOC (i.e. Consent to Establish) obtained for 9.7 MTPA
- Expansion Plan for Jamshedpur Steel Works.
- Successful re-certification of Steel Works for OHSAS-18001: 2007 standards.
- Successful surveillance audit of EMS: ISO 14001:2004 standards for Steel Works.
- Participated in Carbon Disclosure Project (CDP 2010). Tata Steel achieved Carbon Disclosure Leadership Index (CDLI) score of 71% based on CDP 2010 response (63% scored in 2009) to secure highest amongst Indian Steel sector.

Tata Steel has implemented a variety of control measures to improve the working environment at the shop floor. The objective has been to create an atmosphere that respects both nature and community at the same time. The Jamshedpur works is the first in the world to be conferred the SA 8000 for work conditions and improvements in workplace. All its operations have achieved the ISO-14001 certification for Environment Management.

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ENERGY POLICY

Tata Steel reaffirms its commitment to be a part of a national mission for mitigating climate change issue by efficient use of energy and shall endeavour to:

- Comply with national and international regulations
- Adopt the best available technology to enhance energy efficiency
- Implement world class operating practices so as to conserve energy and natural resources
- Conduct regular energy audit for continual improvement
- Promote energy conservation through mass awareness

Date : 1st April, 2011

H M Nerurkar
Managing Director

TATA STEEL