

**20. A brief write-up of the unit.****i. Unit Profile :**

Established in 1907, Tata Steel is Asia's first and world's 6<sup>th</sup> largest integrated steel plant. With its captive iron ore and coal mines and one of the world's most modern steel making and finishing facilities at Jamshedpur in eastern India, which includes a state-of-the-art Cold Rolling Mill complex, Tata Steel is among the lowest cost producer of steel in the world.

The 4 million tonne Jamshedpur plant, which produces both flat and long products, is undergoing a million tonne capacity expansion. The company intends to raise its capacity to 15 million tonnes per annum by 2010 through organic growth and acquisitions. The Jamshedpur capacity will produce 6.8 million tonnes and the balance capacity will be put up or acquired elsewhere in India and overseas. Tata Steel recently announced its first major overseas investment in NatSteel, Singapore, which will give it a manufacturing footprint in six countries in the Asia Pacific region and China.

Tata Steel's relentless quest for excellence through initiatives like ASPIRE, which combines TPM, Six Sigma, Total Operational Performance, Suggestion Management and Quality Circles, has reaped rich benefits. The company has been conferred the prime Minister's Trophy for the Best Integrated Steel Plant five times from the Indian Ministry of Steel. It was the first Tata company to win the JRD Quality Value Award, categorising its operations as "world class" under the Tata Business Excellence Model. It has been ranked among the top four world class steel companies by World Steel Dynamics, USA, for the past four years. It was also awarded Asia's Most Admired Knowledge Enterprise Award-2003 by Teleos, an independent Knowledge Management company of South Korea.

**Products**

Tata Steel's products include hot and cold rolled coils and sheets, galvanised sheets, tubes, wire rods, construction re-bars, rings and bearings. In an attempt to 'discommoditise' steel, the company has introduced brands like Tata Steelium (the world's first branded Cold Rolled Steel), Tata Shaktee (Galvanised Corrugated Sheets), Tata Tiscon (re-bars), Tata Pipes, Tata Bearings, Tata Agrico (hand tools and implements) and Tata Wiron (galvanised wire products). The Construction Solution Group explores new avenues for steel utilisation by techniques that are economical, use less natural resources and energy. Tata Steel has also developed "galvannealed" cold rolled steel with technical assistance from Nippon steel & Arcelor for high-end auto applications.

**Corporate Social Responsibility**

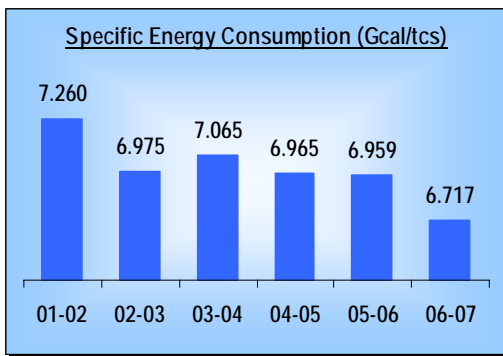
The welfare of its employees and the upliftment of the communities in which it operates are critical part of Tata Steel's guiding values and principles, inextricably interlocked with productivity at the steel plant. This belief has resulted in a mammoth social outreach programme covering the town of Jamshedpur (population 0.65 million) and over 600 villages in and around its manufacturing and raw materials operations. The company-run town of Jamshedpur has India's only ISO 14001 certified municipal services and is also amongst the six participating cities of the UN Global Compact Cities Pilot programme for addressing intractable social, economic and environmental issues in the urban context. The company has dedicated agencies for community welfare work in diverse areas such as education, community health and HIV/AIDS awareness, income generation for economic well-being, environment management, relief, sports, art and culture, etc. Regarded globally as a benchmark in corporate social responsibility coupled with its record of 75 years of industrial harmony, Tata Steel's commitment to its employees and the community remains the bedrock of continued sustainability.

## ii. Energy Consumption :

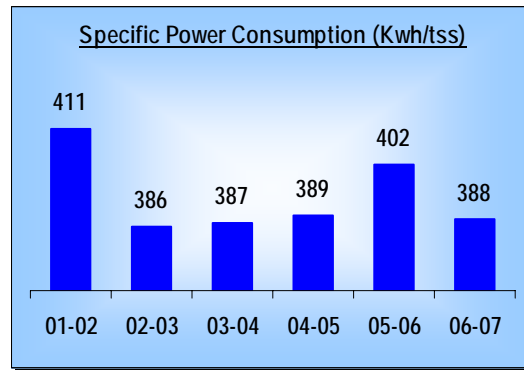
The energy consumption figures for the last three is as shown below :-

Sl. <b>Particulars</b>	<b>Unit</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>
a. Light Diesel Oil	Tonne	2387	3229	5728
b. Coking Coal	Tonne	3378387	3354493	3106011
c. Coal for injection in Blast furnaces	Tonne	177404	336352	443759
d. Boiler/Middling Coal	Tonne	602987	598654	329091
e. Electricity	10 <sup>3</sup> KWh	1597917	1819626	1910403
f. Plant Specific Energy Consumption	Gcal/tcs	6.965	6.959	6.717
g. Total Manufacturing Cost	Rs. Crores	4696.18	4993.59	5732.88
h. Total Energy Bill	Rs. Crores	1273.00	1713.00	2103.08
i. Energy as % of total cost of production	%	27.11	34.30	36.68

Thermal Energy Consumption



Electrical Energy Consumption

iii. Energy Conservation Commitment, Policy & Setup :

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. The company's efforts are focused towards the followings :

- Benchmarking of the processes & sub-processes, identification of gaps.
- Online monitoring of energy parameters (100%).
- State-of-Art instrumentation & Control
- Process Integration
- Waste Heat Recovery
- Enhancing awareness of energy efficiency by publicity & competitions.

The following activities are taken up each year to promote energy conservation & awareness:

- a. The detailed variance of stage wise energy consumption is analyzed on monthly basis & reported the concerned Departmental Chiefs & Heads for necessary action at their end to improve efficiency and reduction in specific energy consumption.
- b. Numbers of Aspire, Self Initiated Projects are taken up in area of energy conservation all over the plant.
- c. Knowledge sharing “ Knowledge Manthan” on energy conservation was organized in the year 2006.
- d. For efficient use of energy through online Knowledge Management System. Various knowledge communities / sub-communities in the area of electrical energy, thermal energy & its conservation are working within the steel works.
- e. Oil conservation week / fortnight is celebrated every year where emphasis laid on conservation of petroleum products.

Note : *The organizational set-up for energy conservation has been documented in 13c of the application.*

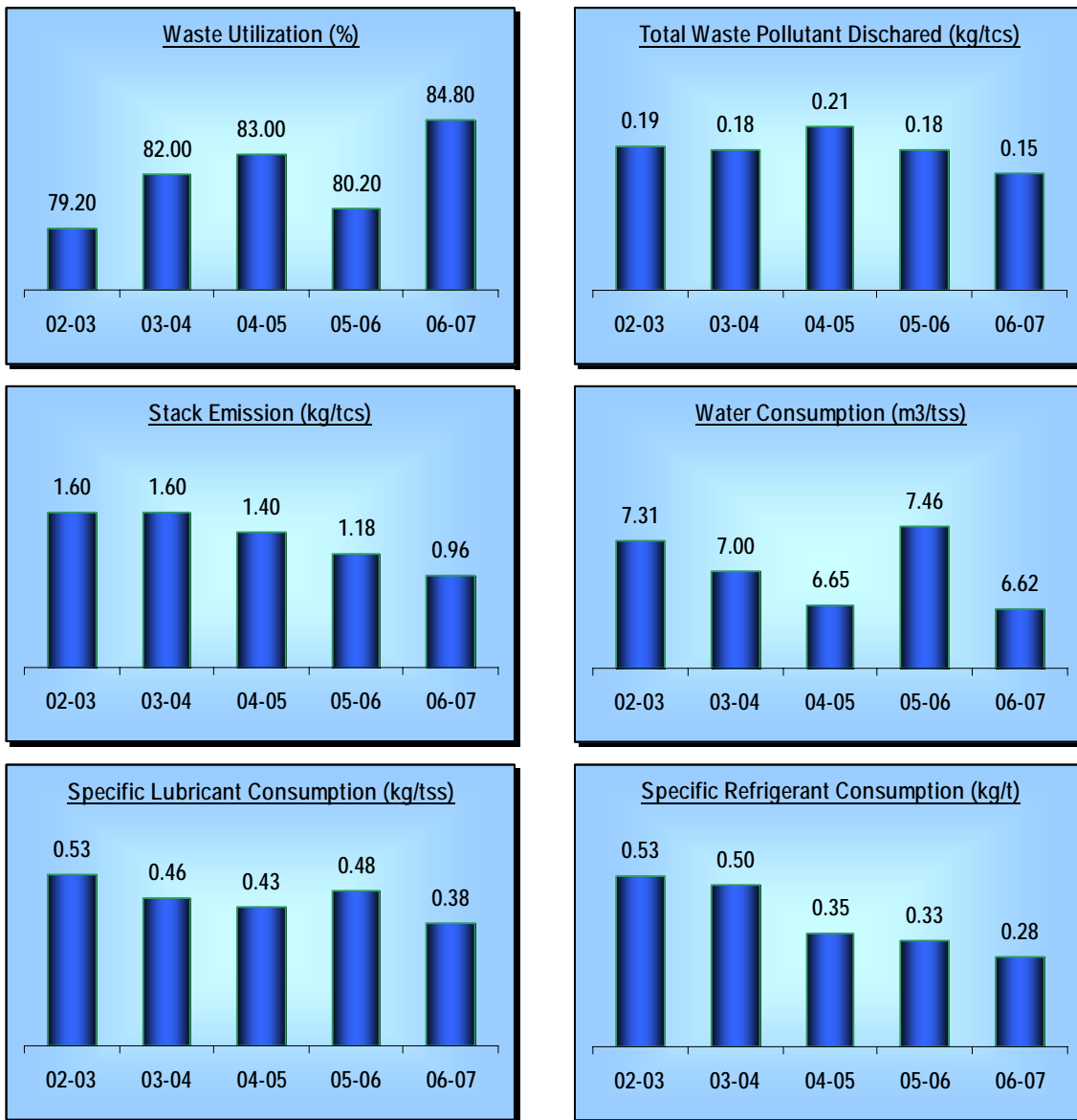
*The Energy Policy of the organization has been documented in 13e of this application.*

#### iv. Energy Conservation Achievements :

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

- Environmental Management System was modified as per ISO-14001: 2004 standards. The Occupational Health & Safety Management System (OHSAS-18001) was integrated with the Dupont Recommendations. Both the systems were successfully renewed by M/s. IRQS for EMS & OHSAS Certificates.
- 5th Corporate Sustainability Report of Tata Steel rated NUMBER ONE in developing country economies by the United Nations and Standard & Poor.
- Participation at IISI in finalizing “Sustainability Indicators” for Steel Industry.
- LD Slag as a Soil Conditioner - Government of Jharkhand, in principle, agreed to the use the LD Slag as a Soil Conditioner for Waste Land Development.
- Rain water harvesting from roof top of ITS Building, R&D Building, Blower & Pump House, Transport Nagar , Tata Worker’s Union and West Marshalling Yard
- Air Quality Modeling for Steel Works pollution sources on city of Jamshedpur completed.
- Highest ever solid waste utilization of 84.80% was achieved for the year 2006-07.
- Lowest ever water pollution 0.15 kg/ton of crude steel – 17.12% reduction over previous year.
- Lowest ever Stack emission 0.96 kg/ ton of crude steel – 18.64 % reduction over previous year.
- Lowest Refrigerant Consumption 0.28 kg/ton of refrigeration, 15.2% reduction over previous year.
- Lowest ever specific lubricant consumption of 0.38 kg/ton of saleable steel.
- The company has recently published its 6 Corporate Sustainability Report for the year 2005-06. Tata Steel takes pride in being the only Indian Company included in “SustainAbility Biennial Benchmark Survey 06-07” of the top hundred Global Corporate Sustainability

The graphs depicted in the next page shows the achievement made towards energy conservation in last 5 years



#### v. Energy Conservation Plans & Target

Tata Steel is committed to bring down the plant specific energy consumption to a level of 5.675 Gcal/tcs from its current level of 6.717 Gcal/tcs. To achieve this Tata Steel has benchmarked its Plant Specific Energy Consumption with IISI Reference Plant. The gaps identified have studied for its economical & technological feasibility and some ambitious projects are to be undertaken during the Growth Plan when steel making capacity will be enhanced to 6.8mtpa. Some initiatives planned that will bridge the gap are:

- New Blast Furnace with “high top pressure” and “Top Recovery Turbine”.
- Replacement of old and inefficient turbo blower.
- By-Product fired boilers for steam and power generation.
- Recovery of sensible heat of red hot coke for generation of steam
- Recovery of sensible heat of red hot coke for generation of steam through “Coke Dry Quenching”.
- Sensible heat recovery from stoves flue gas at Blast Furnaces.
- Rationalization of by-product gases and utilities network to reduce losses.

vi. Environment & Safety

## ENVIRONMENTAL PERFORMANCE

Tata Steel is fully aware of the impact of its activities, product and services on the environment, not only at the local but also at the global scale. Today the world over sustainable development is at the core of business. It is this abiding involvement with the environment which has earned the company recognition for its achievements.

The company was adjudged as the top 10 Greenest Companies in India in the survey by TERI & Business Today. Tata Steel has also achieved the distinction of being as ISO 14001 certified company.

## IMPORTANT ENVIRONMENTAL IMPROVEMENT PROJECTS IMPLEMENTED

- Use of Ld slag in cement manufacturing (1st time in India).
- Commissioning of ESP for waste gas cleaning at Sinter Plant # 1.
- Commissioning of Stock House & Cast House Fume Extraction system at F Blast Furnace.
- Commissioning of Dust Suppression System for emission control at Blast Furnaces.
- Installation of emission control system for Zero Kiln at Refractories.
- Mechanized road sweeping facility put into service in Steel Works to re-claim uncontrolled spillage during material handling.
- Fume Extraction System installed at Electric Arc Furnace to control fugitive dust generated during furnace operation.
- Dust Extraction system installed at Shot Blasting Machine of Segment Shop.

## CHALLENGES AHEAD

Toward building sustainability through environmental excellence, significant challenges ahead of the companies are as follows

- Meaningful integration of environmental, societal & economic issue to improve & sustain companies overall business performance through a transparent & structured stake holder engagement process.
- Broadening the stake holder base for transparency, credibility & excellence.
- To achieve waste utilization to the level of world benchmark (99% plus) through cleaner processes and technological innovations and make the city of Jamshedpur a zero dumping city.
- To achieve water consumption in the steel works to world benchmark level of 5 m<sup>3</sup>/tss.
- To convert the steel works to 100% visible emission free site.
- Effective integration of environmental, occupational health & safety performance of the company under one umbrella.

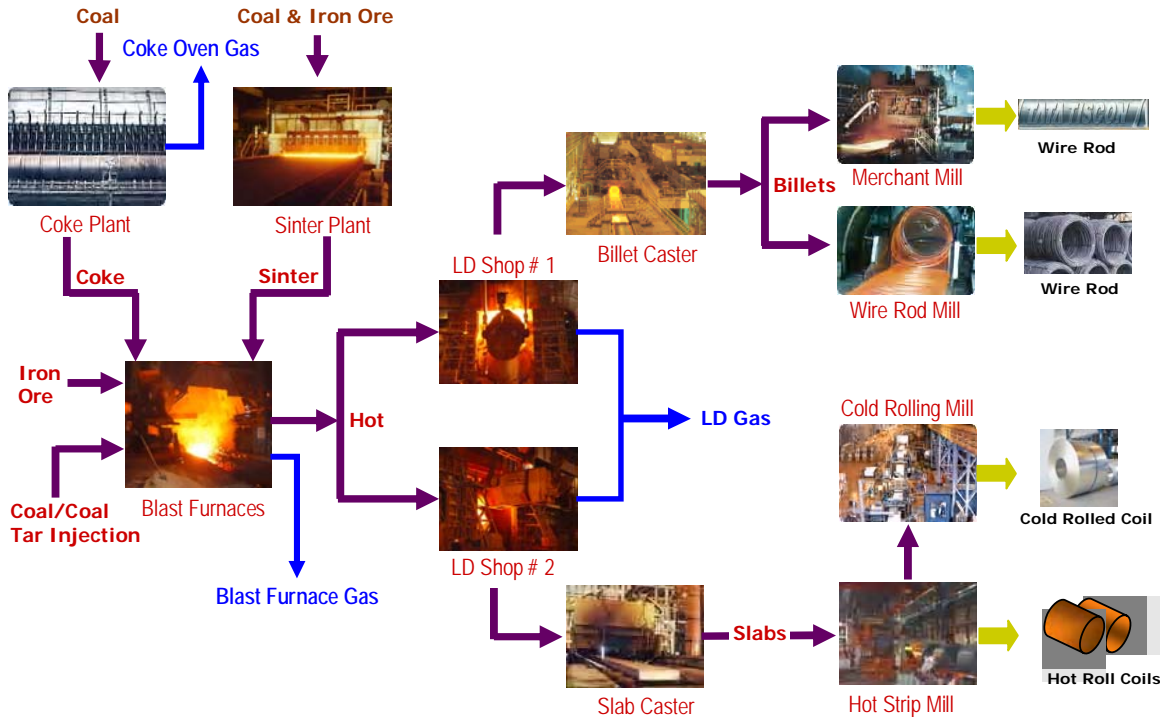
21. Whether any dispute pertaining to statutory requirement of Safety and Pollution Control is pending with any Government Agency ? If yes, give details :

**None**

## 7. Production &amp; Capacity Utilization Details

Year	Main Product	Unit	Installed Capacity (A)	Actual Capacity (B)	% Capacity Utilization (B/A)
2004-05	Saleable Steel	tonne	4,000,000	4,109,001	102.73
2005-06	Saleable Steel	tonne	4,500,000	4,524,407	100.54
2006-07	Saleable Steel	tonne	5,000,000	4,928,546	99.32%

## 8. Schematic diagram showing the production process of Entire Unit is shown below



Blended coal is heated in coke ovens to produce coke by the process called carbonization. The gas produced during carbonization is used for fuel elsewhere in the steelworks. Fine-sized ore is mixed with coke and fluxes and heated in a sinter plant to produce clinkers called sinter. Iron ore lumps and pellets, coke, sinter are charged into the blast furnace. Hot air is blasted into the bottom of the furnace and the oxygen in the air combusts with the coke to form carbon monoxide gas. The carbon monoxide flows up through the blast furnace and removes oxygen from the iron ores on their way down, thereby leaving iron. The heat in the furnace melts the iron, and the resulting liquid iron (or hot metal as it is called in the industry). The hot metal is converted to steel by blowing pure oxygen at high pressure in the converters at the Basic Oxygen Steelmaking Shop.

The molten steel from the converter is further refined at the Ladle Metallurgy facility where the chemistry and temperature are finely adjusted before casting into slabs and billets.

In a continuous casting machine, molten steel is poured into water cooled mould where the outer shell of the steel solidified. The steel is drawn down to form slabs and billets in this process.

Semi-finished products called billets and slabs are heated in the Re-Heating Furnaces and then rolled into strips or rods at the Finishing Mills. The hot rolled coils are further processed at the Cold Rolling Mill.

## Energy Conservation Measures Implemented IN 2006 - 07

ID to be filled by BEE

Title of the measure

Sector : Iron &amp; Steel

Year to be filled by BEE

Conversion of boilers to By-Product Gas Firing at  
Power House No. 3

Technology

**Description of the Energy Conservation Measure**

With the increase in production levels in the plant, the by-product gas generation too increased. The surplus Blast Furnace gas being generated was being flared as there was no consumer for the lean gas having a caloric value of about 900 Kcal/Ncum.

Instead of investing in new boilers, and having the experience of converting coal fired boilers to blast furnace gas fired boilers, the decision was taken to convert 4 boilers at Power House No. 3 to by-product gas fired boilers. The fuel now being used is BF gas, CO gas & LD gas there by reducing the boiler coal consumption in the plant.

After implementation of this project the heat input to boilers through coal has reduced from a level of 49% in 2001 to a level of 26% in 2007.

Two Boilers (5&6) at PH#3 has been converted from Coal Firing to Gas Firing in year 2006 and the other two are under conversion.. The consumption of boiler coal in these boilers has become zero and has given benefit in utilization of 1,10,000 Nm<sup>3</sup>/hr BF Gas ,which was earlier being flared earlier.The specific energy consumption has reduced by 0.072 Gcal/ tons of steam.



Agency that executed the project (with complete address & email) : Thermax Ltd.

Dhanraj Mahal, 2nd Floor, Chatrapati Shivaji Maharaj Marg, Nr. Gateway of India, Mumbai - 400 039

Total Investment, Rs : 95 lakhs

Year of Implementation : 2006

First year Energy Cost Savings, Rs. : 650 lakhs

First year other savings, Rs. :

On Annual Basis	kWh 000'	Coal (tons)	Gas (Nm <sup>3</sup> )	Oil (KL)	Others
Energy Consumption before		201464			
Energy Consumption after		0			
Energy tariff, Rs/kWh/ton/Nm <sup>3</sup>		882			

Company complete address:

Tata I Steel Limited, Jamshedpur – 831 001

Telephone : 0657 – 422757

Contact person who could be contacted for more information

Mr. J.P.N. Singh, Chief, Fuel Management

Email : [jpn.singh@tatasteel.com](mailto:jpn.singh@tatasteel.com)

We authorise Bureau to use this information for dissemination

Signature : (JPN Singh)

Date : 24-10-2007

**ID to be filled by BEE**

**Title of the measure**

**Sector : Iron & Steel**

**Year to be filled by BEE**

Recovery of additional LD gas by installation of 2nd  
LD Gas Holder

**Technology**

**Description of the Energy Conservation Measure**

The LD gas recovery system can provide approximately 0.166 Gcal/tls of fuel gas for distribution in and use in the steel works. 81Nm<sup>3</sup>/tls of LD gas can be recovered and used as fuel in the plant.

LD gas holder no. 1 with one export stream was installed in 1985. The gas recovered from LD Shop No. 1 was mixed with Coke Ovens Gas for utilization in the steel works. The 2<sup>nd</sup> export stream was commissioned in 1997 to cater to recovery of gas from LD Shop no. 2. With one gas holder and two export streams in place the recovery rate was at the level of ~ 21,000 Nm<sup>3</sup>/hr even though the crude steel production steadily increased over the years. .

The Plant was not able to recover the full LD gas and a considerable gas was being flared into the atmosphere. and on most occasion the recovery miss was either because simultaneous blowing of converters at LD Shops or because of no storage volume in the gas holder.

This led to planning for the 2nd LD gas holder duing 1 mtpa expansion programme so that at 5 mtpa crude steel production, the LD gas recovery potential could be fully exploited.



Photograph showing the new LD gas Holder

**Agency that executed the project (with complete address & email) :**

MB Engineering & Service, Clayton Works, Midland Road, Hunslet, Leed, UK

**Total Investment, Rs :** 30 lakhs

**Year of Implementation :** 2006

**First year Energy Cost Savings, Rs. :** 365 lakhs

**First year other savings, Rs. :**

<b>On Annual Basis</b>	<b>kWh 000'</b>	<b>Coal (tons)</b>	<b>Gas (Nm<sup>3</sup>)</b>	<b>Oil (KL)</b>	<b>Others</b>
------------------------	-----------------	--------------------	-----------------------------	-----------------	---------------

**Energy Consumption before**

**Energy Consumption after**

**Energy tarrif, Rs/kWh/ton/Nm<sup>3</sup>**

**Company complete address:**

Tata I Steel Limited, Jamshedpur – 831 001  
Telephone : 0657 – 422757

**Contact person who could be contacted for more information**

Mr. J.P.N. Singh, Chief, Fuel Management  
Email : [jpn.singh@tatasteel.com](mailto:jpn.singh@tatasteel.com)

**We authorise Bureau to use this information for dissemination**

**Signature :** (JPN Singh)

**Date :** 24-10-2007

**ID to be filled by BEE**

**Title of the measure**

**Sector : Iron & Steel**

**Year to be filled by BEE**

Recovery of Flash & Condensate steam from PRDS at  
Power House No. 5

**Technology**

**Description of the Energy Conservation Measure**

At present total LP steam demand in the works is being supplied by Power House-5. Total steam supply is being met by 30 MW Back Pressure Turbine and Boiler-D. To maintain uninterrupted process steam supply even after TG tripping or outage ,2x50 % PRDS are kept in hot standby. To make the PRDS as hot standby steam @ 30 tph is passed through it. A condensate recovery system which collects all the steam condensate being drained out and pumps back to our condensate storage tank. It also helped us in improving environment condition in PRDS area



← **Before**



← **After**

**Agency that executed the project (with complete address & email) :**

Forbes Marshall, PB No. 29, Mumbai-Pune Road, Kasarwadi, Pune

**Total Investment, Rs :** 8 lakhs

**Year of Implementation :** 2006

**First year Energy Cost Savings, Rs. :** 8.34 lakhs

**First year other savings, Rs. :**

<b>On Annual Basis</b>	<b>kWh 000'</b>	<b>Coal (tons)</b>	<b>Gas (Nm<sup>3</sup>)</b>	<b>Oil (KL)</b>	<b>Others</b>
------------------------	-----------------	--------------------	-----------------------------	-----------------	---------------

**Energy Consumption before**

**Energy Consumption after**

**Energy tariff, Rs/kWh/ton/Nm<sup>3</sup>**

**Company complete address:**

Tata I Steel Limited, Jamshedpur – 831 001

Telephone : 0657 – 422757

**Contact person who could be contacted for more information**

Mr. J.P.N. Singh, Chief, Fuel Management

Email : [jpn.singh@tatasteel.com](mailto:jpn.singh@tatasteel.com)

**We authorise Bureau to use this information for dissemination**

**Signature :** (JPN Singh)

**Date :** 24-10-2007

ID to be filled by BEE

Title of the measure

Sector : Iron &amp; Steel

Year to be filled by BEE

Reduction in power rate of 2x275 tpd Oxygen Plant  
reducing delivery pressure.

Technology

**Description of the Energy Conservation Measure**

Oxygen is supplied for Iron & Steel making through pipeline network, one high pressure operating at 32 kg/sqcm & the other low pressure network operating at 6 kg/sqcm. For steel making through BOF route, high pressure oxygen is required. But for Blast furnaces, the requirement of oxygen is at 6 kg/sqcm as the oxygen is injected in the cold blast main of the blast furnaces.

Oxygen being supplied from the in-house oxygen plant to G Blast furnace was being supplied at high pressure through the pipeline network inside the plant and just before the injection point, the pressure was reduced to 6 kg/sqcm through Pressure Reducing Station.

The requirement of G Blast furnace oxygen was such that it matched the 2 x 275 tpd oxygen plant capacity hence the oxygen supply network was modified and air compressors of 2 x 275 tpd oxygen plant made to operate at a pressure of 16kg/sqcm in place of 32 kg/sqcm.

Thus by reducing the supply pressure, power saving of 6 kWh/ ton of oxygen was achieved.

Photograph showing the oxygen piping network which supplies oxygen to G Bl. Fce.



**Agency that executed the project (with complete address & email) :**

Project implemented in-House

**Total Investment, Rs :** 100lakhs

**Year of Implementation :** 2006

**First year Energy Cost Savings, Rs. :** 15.07 lakhs

**First year other savings, Rs. :**

On Annual Basis	kWh 000'	Coal (tons)	Gas (Nm <sup>3</sup> )	Oil (KL)	Others
Energy Consumption before	784kwh/t				
Energy Consumption after	778kwh/t				
Energy tariff, Rs/kWh/ton/Nm <sup>3</sup>	2.5				

**Company complete address:**

Tata I Steel Limited, Jamshedpur – 831 001

Telephone : 0657 – 422757

**Contact person who could be contacted for more information**

Mr. J.P.N. Singh, Chief, Fuel Management

Email : [jpn.singh@tatasteel.com](mailto:jpn.singh@tatasteel.com)

**We authorise Bureau to use this information for dissemination**

**Signature :** (JPN Singh)

**Date :** 24-10-2007

**ID to be filled by BEE**

**Title of the measure**

**Sector : Iron & Steel**

**Year to be filled by BEE**

Installation of variable frequency drive in combustion blowers of Furnace No. 2 at Hot Strip Mill

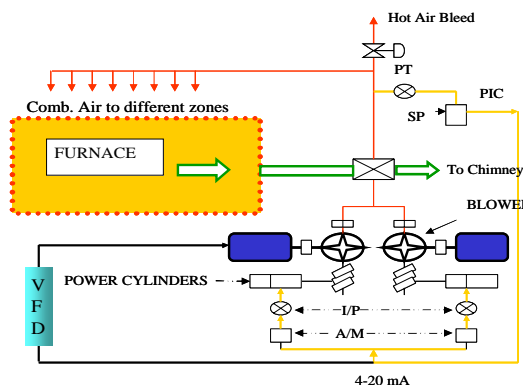
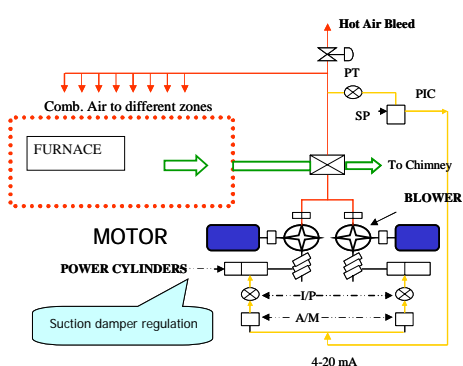
**Technology**

**Description of the Energy Conservation Measure**

Hot Strip Mill has two walking beam type 350 tons per hour reheating furnace. The fuel to the furnace is mixed gas of Cv 2900 Kcal/Nm<sup>3</sup> and air to the reheating furnace is supplied through four air blowers of 75,000 Nm<sup>3</sup>/hr capacities.

The variable frequency drive is already installed for Combustion Blower # 1 & 2 in Furnace-1 in 2005 and variable speed drive was installed for furnace no. 2 in 2006.

Due to the elimination of damper in Combustion Blower the power consumption was reduced by 147 kW at same flow and pressure condition.



**Agency that executed the project (with complete address & email) :** ABB Limited  
Khanija Bhavan, 2nd Floor, East Wing, No. 49, Race Course Rd, Bangalore - 560 001

**Total Investment, Rs :** 70 lakhs

**Year of Implementation :** 2006

**First year Energy Cost Savings, Rs. :** 16.13 lakhs

**First year other savings, Rs. :**

On Annual Basis	kWh	Coal (tons)	Gas (Nm <sup>3</sup> )	Oil (KL)	Others
Energy Consumption before	350				
Energy Consumption after	147				
Energy tariff, Rs/kWh/ton/Nm <sup>3</sup>	2.5				

**Company complete address:**

Tata I Steel Limited, Jamshedpur – 831 001  
Telephone : 0657 – 422757

**Contact person who could be contacted for more information**

Mr. J.P.N. Singh, Chief, Fuel Management  
Email : [jpn.singh@tatasteel.com](mailto:jpn.singh@tatasteel.com)

**We authorise Bureau to use this information for dissemination**

**Signature :** (JPN Singh)  
**Date :** 24-10-2007

**ID to be filled by BEE****Title of the measure****Sector : Iron & Steel****Year to be filled by BEE**

Installation of variable frequency drive in combustion blowers of Furnace No. 2 at Hot Strip Mill

**Technology****Description of the Energy Conservation Measure**

Variable Frequency Drives are being used in the descaling operation of Hot Strip Mills. Descaling operation is done to remove scales from the surface of strips being rolled in the mill at a pressure of 200 Bar. The Motor used for this purpose rotates at a speed of 1500 rpm continuously whether descaling operation / mill is ON or OFF.

Now Using the VFD we are reducing the speed of the motor from 1500 rpm to 700 rpm when descaling in not taking place or the mill is down for more than a period of 5 mins. This ultimately led to saving of Power.

Photograph shown below is of the Descaler pump VFD Panel & Transformer



**Agency that executed the project (with complete address & email) :** ABB Limited  
Khanija Bhavan, 2nd Floor, East Wing, No. 49, Race Course Rd, Bangalore - 560 001

**Total Investment, Rs :** 200 lakhs

**Year of Implementation :** 2006

**First year Energy Cost Savings, Rs. :** 12.26 lakhs

**First year other savings, Rs. :**

On Annual Basis	kWh'000	Coal (tons)	Gas (Nm <sup>3</sup> )	Oil (KL)	Others
Energy Consumption before	153.5				
Energy Consumption after	148.6				
Energy tariff, Rs/kWh/ton/Nm <sup>3</sup>	2.5				

**Company complete address:**

Tata I Steel Limited, Jamshedpur – 831 001

Telephone : 0657 – 422757

**Contact person who could be contacted for more information**

Mr. J.P.N. Singh, Chief, Fuel Management

Email : [jpn.singh@tatasteel.com](mailto:jpn.singh@tatasteel.com)

**We authorise Bureau to use this information for dissemination**

**Signature :** (JPN Singh)

**Date :** 24-10-2007

**ID to be filled by BEE**

**Title of the measure**

**Sector : Iron & Steel**

**Year to be filled by BEE**

Modification in shopfloor lighting system at Hot Strip Mill

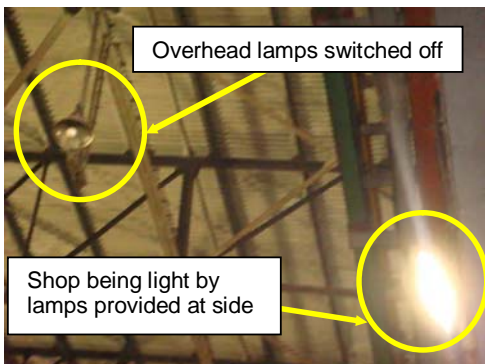
**Technology**

**Description of the Energy Conservation Measure**

The entire shop-floor at Hot Strip Mill is provided with sodium/mercury vapour lamp to create proper working atmosphere at the shop floor, The 3 million ton Hot Strip has different bays right from slab yard to coil ship shipping yard and the 400 watt overhead lighting is used to light the shop floor.

At present 60 of the 400 watt overhead lamps have been switched off and the shop floor is now being light-up by 150 watt lamps which are provided at lower level on the two sides of the shop.

Photograph showing the change in lighting



**Agency that executed the project (with complete address & email) :** In-house

**Total Investment, Rs :** 3 lakhs

**Year of Implementation :** 2006

**First year Energy Cost Savings, Rs. :** 3.15lakhs

**First year other savings, Rs. :**

<b>On Annual Basis</b>	<b>kWh</b>	<b>Coal (tons)</b>	<b>Gas (Nm<sup>3</sup>)</b>	<b>Oil (KL)</b>	<b>Others</b>
------------------------	------------	--------------------	-----------------------------	-----------------	---------------

**Energy Consumption before**

**Energy Consumption after**

**Energy tariff, Rs/kWh/ton/Nm<sup>3</sup>**

**Company complete address:**

Tata I Steel Limited, Jamshedpur – 831 001

Telephone : 0657 – 422757

**Contact person who could be contacted for more information**

Mr. J.P.N. Singh, Chief, Fuel Management

Email : [jpn.singh@tatasteel.com](mailto:jpn.singh@tatasteel.com)

**We authorise Bureau to use this information for dissemination**

**Signature :** (JPN Singh)

**Date :** 24-10-2007