

**SHRI PRITHVI STEEL ROLLING
MILLS PRIVATE LIMITED**
Jaipur (Rajasthan)

Unit Profile

In 1990 first rolling mill of the group in the name of **Shree Ganesh Rolling Mills** was started for manufacturing flats & bars. In 1992 **Shree Prithvi Steel Rolling Mills Pvt. Ltd** was setup for manufacturing of iron & steel sections as per **BIS** Specification bearing. **IS:7452 & 2062 & ISO:9001** with brand name **PRITHVI** and soon gained big reputation in the market. Today, the group owns and runs 4 Steel Rerolling mills and has a combined turnover of over 100 crore per year.

The mill was initially started as completely manual mill having installed capacity of 3Tons Per Hour. With time, newer technologies were introduced and the mill today is completely automated having maximum capacity of over 15 Tons Per Hour. Even, the product portfolio has been by the addition of customized M.S.windows, door and ventilator sections. Today Shri Prithvi Steel Rerolling Mills Pvt. Ltd. is one of the largest structural rolling mills.

In 2004, an Induction Furnace was also added to Shree Prithvi Steel Rolling Mills Pvt.Ltd at the same location for production of Raw Material 'Ingots' so as to avoid totally dependency of raw material from market.

Presently, the unit manufactures the following products –

1. Angles (upto size 130X130X12)
2. Channels
3. Beams
4. Sections for doors, windows and ventilators (F7D, EZ7, F4B, T2,T6 etc)

By the introduction of inhouse technologies, Shri Prithvi Steel Rerolling Mills Pvt. Ltd. Has been metamorphosed to one of the lowest cost producer of Structural Steel in India. It is due to strict compliance of quality control norms that has enabled the company to serve prestigious institutional customer like M/s Sail India Ltd., M/s KEC International, ABB, JVVNL, M/s Power Grid Corporation Ltd etc. The unit was recently awarded as MSME(**national award**) for excellence in quality by the Hon'ble Prime Minister for the year 2009.

The list of various technological interventions in the old furnace and mill for ramping up production and diversifying product portfolio without proportionate increase in energy consumption is as given below : -

1. Conversion to 3 zone furnace from single zone furnace – The modification ramped up production capacity from 3 TPH to 5 TPH. This also resulted in reduction of scale losses.
2. Introduction of ejector type discharge system
3. Innovative refractory brick arrangement in the hearth in place of solid skid system to reduce down time
4. Reworking of Chimney Height
5. Introduction of conveyors for stock movement
6. Installation of Chain Transfer system for better product management
7. Installation of Roughing mill for reduction in energy consumption
8. Installation of direct coupled Geared reduction system in place of belt drive for Energy Conservation
9. Installation of Fiber Neck Bearing in the mills
10. Recent introduction of Universal Spindle and Roller Neck Bearing for energy conservation in mill extension

The unit has also undertaken large scale plantation. The hygiene and safety as well as health system management in the unit complies with all regulations.

It was this innovative approach that helped Prithwi Steel become the first Model Unit in India selected by UNDP GEF STEEL Project. Company have also successfully introduced the suggestions of external experts and that is how the ECOTECH Options of UNDP GEF STEEL was successfully implemented in 2007-08 resulting in huge energy savings in the following year.

The modifications done under the project with the help of UNDP GEF STEEL PROJECT are listed below:

1. Conversion of 2 zone furnace to 3 zone furnace – Unit new design was duly engineered and the design was verified with the help of CFD modeling so as to arrive at the most optimal design. This 3 zone furnace is the only such furnace to have been installed in SME sector in India.
2. Instrumentation for optimizing the performance
3. Complete refurbishment of the refractory so as to save on radiation from shell of the furnace

4. Reduction of stock temperature by reducing rolling time with the help of automation in the material handling system.
5. Design and implementation of new coal pulverization system to ensure 80% 100 mesh output.

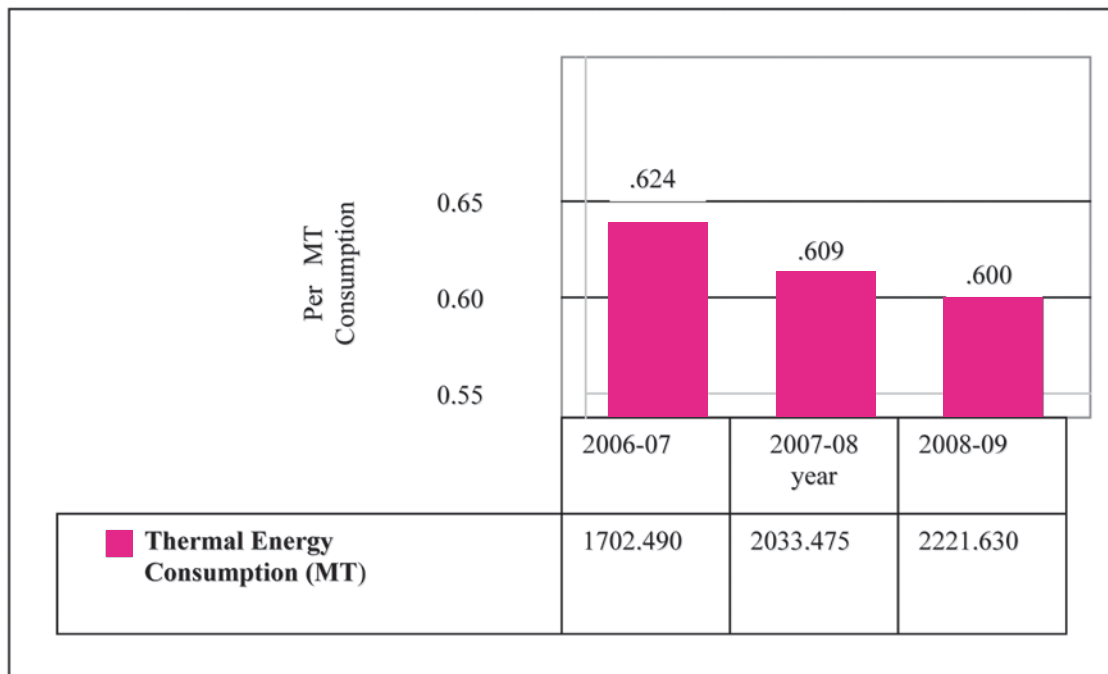
Under the project, the unit has also implemented 5s lean manufacturing system.

A snapshot of company performance in last 3 years is as follows:

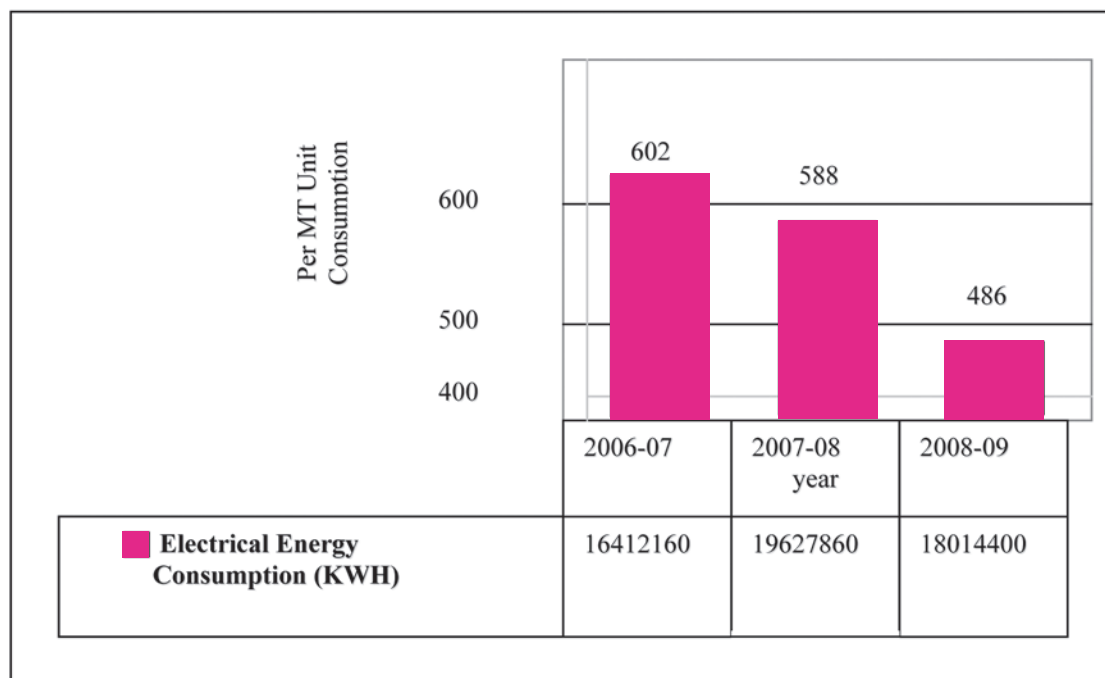
Energy Consumption

Particulars	Year 2006-07	2007-08	2008-09
Turnover (Rs Crore)	38.95	56.44	61.19
Production (MT)R/M	16072.110	16116.670	21938.882
Ind. Furnace	11185.650	17238.126	15075.350
Electricity Consumption (Kwh)	16412160	19627860	18014400
Fuel Consumption (MT Coal)	1702.490	2033.475	2221.630

Specific Thermal Energy Consumption



Electrical Energy Consumption



Energy Conservation Commitment

Energy Conservation Policy

SHREE PRITHVI STEEL ROLLING MILLS PVT. LTD.

(AN ISO 9001 CERTIFIED COMPANY)

ENERGY POLICY

We, at Shree Prithvi Steel Rolling Mills Pvt.Ltd. Jaipur, are committed to continuously improve the specific energy consumption against the benchmarking with the best in business.

To meet this goal, we will strive for:

- Energy efficient production and processing of steel and sustain continuous reduction in energy consumption year after year.
- Involvement of employees for energy conservation through awareness and recognition.
- Conserve and optimally utilize raw materials.
- Establishing and maintaining a energy management information system designed to support managerial decision making.

This can be achieved through dedicated teamwork, participation and commitment from all employees.

Date: 24/6/09

Suadesh Sharma

SUDESH SHARMA

(DIRECTOR)

SHREE PRITHVI STEEL ROLLING MILLS PVT.LTD.

Energy Conservation Achievements



Project Management Cell UNDP/GEF Project (Steel) Ministry of Steel, Government of India

UNDP/GEF/1491

Dated: 29th September, 2009

Shri Sudesh Sharma
Director
M/s Shree Prithvi Steel Rolling Mills (P) Ltd.
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Jaipur – 302 013 (Rajasthan)
Fax no. 0141-5108478
Ph no. 0141-2330478

Sub: UNDP/GEF Project (Steel)
Energy Efficiency Improvement in your unit.

Dear Sir,

We are pleased to inform you that based on the Energy Efficiency Technology adopted in your unit for the use of pulverized coal as fuel in the re-heating furnace, it has been observed that there has been saving of energy consumption by around 15% and corresponding reduction in Carbon dioxide emissions. The information is based on the reading taken by our team at the Baseline level and the same after intervention of Technology i.e. post - commissioning level and the same are reproduce below:-

Parameter	Baseline	Post-Commissioning
Coal Consumption Kg/MT	67 Kg / MT	57.03 Kg/MT
Power Consumption Kwh/MT	85 Kwh/MT	78.62 Kwh/MT
Mill Yield %	93.85%	97.22%
Mill utilization %	45.2%	82.18%

Thanking you,

Yours faithfully,

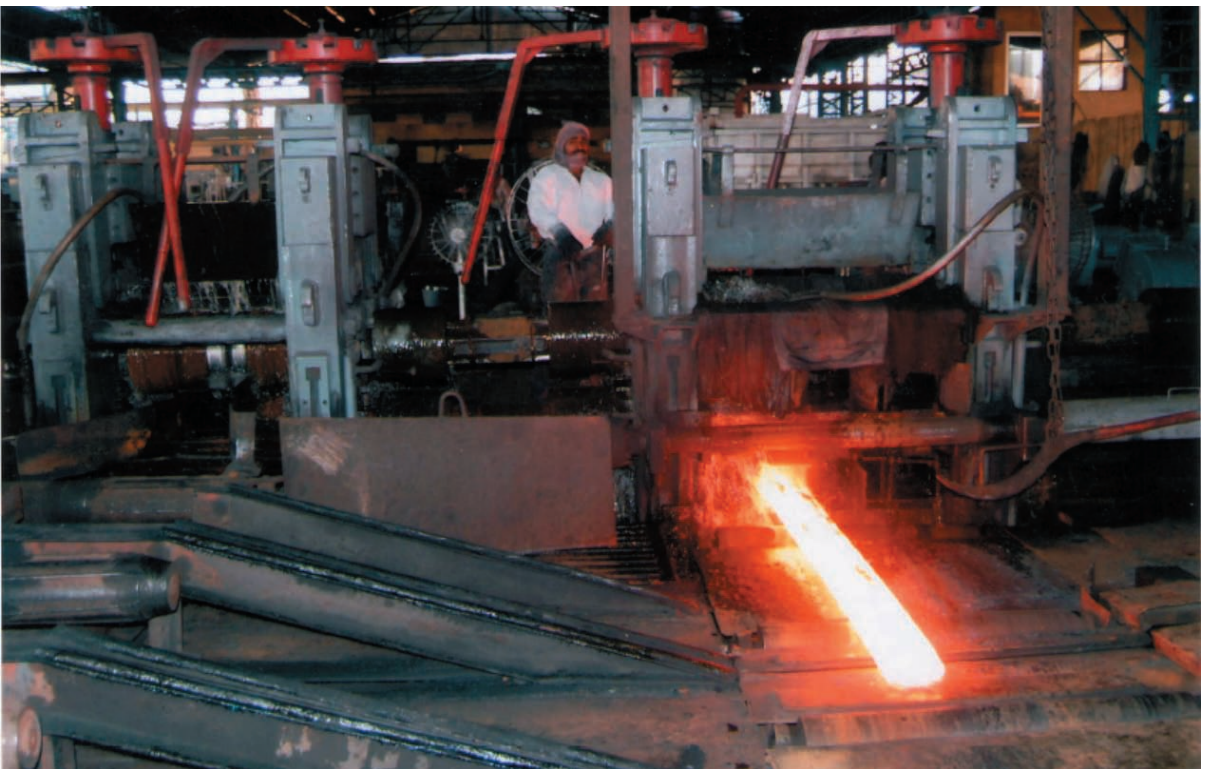
(G. Mishra)

National Project Coordinator (I/c)

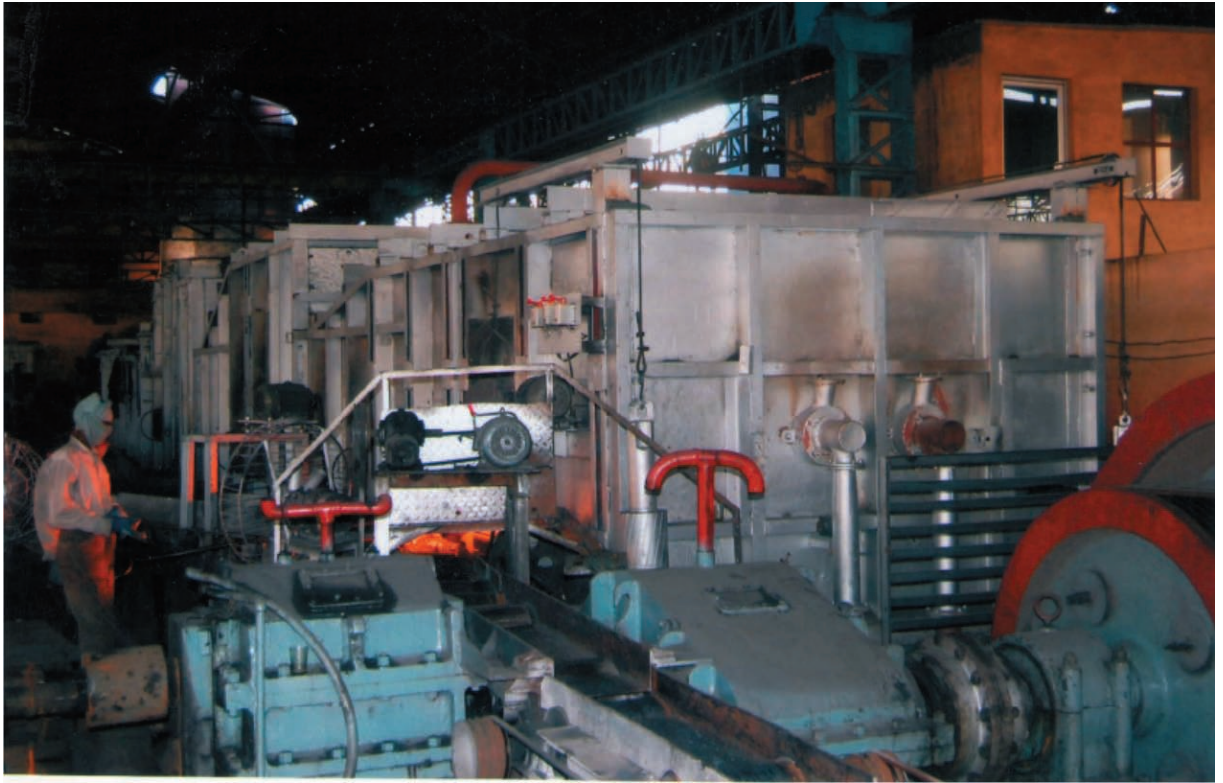
The photographs of the modifications are given below:



Photograph 1 – Automatic Rolling



Photograph 2 - View of Automatic Rolling of Steel



Photograph 3 - Reheating Furnace after complete renovation for Energy Conservation



Photograph 4 - New Rolling Stands with low Energy features