

## Toyo Rolls Limited, Jamshedpur

### Unit Profile

Tayo was promoted in 1968 by Tata Steel in collaboration with Yodogawa Steel Works Limited and Nissho Iwai Corporation of Japan for production of cast iron and cast steel rolls for metallurgical and non-metallurgical industries. It installed and commissioned a centrifugal casting machine in 1992 in collaboration with M/S Eisenwerk Sulzau-Werfen (ESW), Austria. The company manufactures state-of-art rolls for modern flat and long product rolling mills. Through two successive phases of modernization, the company installed appropriate facilities and successfully developed centrifugally cast rolls and later high performance Hi-Chrome rolls for Hot Strip Mills. The initial installed capacity of 7,800 tonnes of rolls is being enhanced to 17,000 tonnes/annum over the years. Equipped with Japanese, European and indigenously developed technologies, Tayo always prepared itself ahead of the changing needs of the steel industry in India and overseas by developing rolls to meet the exacting demands for various applications. The company has also diversified into area of Special Castings for Thermal Power Plants. As a cost reduction initiative and to bring down energy cost, Tayo has undertaken a backward integration programme by way of installing a MBF for manufacture of Foundry & Steel Grade Pig Iron. This has made Tayo the first company in the world to make roll directly from Iron Ore.

As a roll manufacturer Tayo has the necessary expertise in roll technology to advise the customers about the proper type of rolls to be used to achieve maximum efficiency called for in each individual application. Tayo takes care to meet the delivery schedules and other stipulations of all customers, big or small.

Accredited with ISO 9001:2000 certification, the company is implementing TQM continuously to improve customer satisfaction. Tayo is in process of implementing ISO 14001 & OHSAS 18001 by this financial year. Tayo has equipment, experience, capability and expertise to undertake manufacture of custom designed rolls to meet the most demanding mill requirements. Tayo rolls have been designed to roll ingots, slabs, blooms, billets, angles, channels, rods, tubes, strips, plates, sheets and various other flat and section products. In the non-metallurgical area, Tayo rolls find wide application in paper, rubber, textile and several other industries. However, non-metallurgical applications provide only a fraction (less than 1%) of our business.

Products are directly delivered to customers through road transport in domestic market and through sea route for overseas markets.

Tayo Rolls Limited is an Associate Company of Tata Steel and is a signatory to BEBP agreement with Tata Sons Limited. The company has imbibed the Tata culture and values and takes pride in being associated with house of TATA's. Tayo takes active part in all initiatives undertaken at group level and at the level of Tata Steel. "Working-together" is the philosophy of excellent union-management relations and employee participation in all activities.

### Energy Consumption

Specific Power Consumption Details				
	Unit	2002-03	2003-04	2004-05
* Annual Production	Tons	11023	11531	11783
* Total Energy Consumption / Ton on finished product	KWH/Ton	1884	1724	1712

* Total Thermal Energy Consumption	Million K Cal/Ton	8.35	7.6	7.52
* Total Manufacturing Cost (including depreciation)	Lakhs	8241.65	8610.36	11459.00
* Total raw material cost	Lakhs	1919.26	2385.50	5011.95
* Total Fuel Cost	Lakhs	1403.93	1330.80	1448.13
* Energy Cost as % of manufacturing cost	%	17	15	13
* Energy cast as % of raw material	%	73	56	29

### Energy Conservation Plans and Targets

Energy Conservation Measures (Planned)	Anticipated savings		Approx. investment (Rs.lakhs)	Project Commencement & Completion year
	Energy Value (specify units)	Rs. Lakhs		
Installation of Mini Blast Furnace	100 KWH/Ton	57 / year	1300	By April, 2005
Use of Blast Furnace Gas for Laddle pre-heating	10 Lit/Ton	15 / year	10	By March, 2006
Use of Blast Furnace Gas for MDO	25 Lit/Ton	38 / year	60	By October, 2007
Conversion of one Oil Fce. To Gas Fired.	78 KL/year	9 / year	42	By January, 2006
Revamping of one old HT Fces to make them more efficient.	27 KL/year	3 / year	10	By February, 2006
Optimisation in Heat Treatment Cycle	5 KL/year	0.60	Nil	By March, 2006