

(i) Unit Profile:

Jindal South West Steel Limited (JSWSL) is an integrated green field venture in Karnataka based on the COREX ironmaking technology, with an investment of over Rs. 6,000 crores. It is supported by joint ventures, namely, Jindal Praxair Oxygen Company Ltd. (JPOCL), Jindal Thermal Power Company Ltd. (JTPCL) with co-generation concept, Vijayanagar Minerals Private Ltd. (VMPL) and South West Mining Limited (SWML). The world class performance of COREX plant at JSWSL has justified the vision and concept of such large investment with cluster of joint ventures at one location. This conglomerate concept is most adaptable in developing countries where there exists significant growing market for steel, power, cement, industrial gases, mining and mineral processing.

JSWSL earlier envisaged 1.60 mtpa capacity integrated steel plant, and now the capacity enhanced to 2.5 mtpa stage (Aug-2004) and project activities are under way for increasing the production to 4.0 mtpa stage by March-2006 . The plant is located in the midst of rich iron ore belt of Bellary-Hospet region in south India spread over 3000 acres of land. It has good access to major ports such as Goa and Chennai in both the eastern and the western coasts of India providing connectivity to the outside world, for import of raw materials as well as export of finished products. The plant site is also well connected through railways; network of state and national highways and air linkage is also available.

Major technologies, equipment and facilities of JSW Steel are shown in the table:

Sl. No	Technology / Plant	Supplier	Year of Commissioning	Rated Capacity, Mtpa	Actual production 2004-05	% Capacity utilisation	Remarks
1	Pellet Plant	Kvaerner Metals, USA	2000-2004	3.0-4.2	3.615	120.7	Utilises Corex sludge(waste) and Corex gas as source of energy, first time in the world
2	Coke Oven	Sesa Kembla, India	2004	0.6	0.83	138.33	Non-recovery ovens with vibro-compacting, first time in the world. Project time 14 months 17 days, National record
3	CORE X	VAI, Austria	M-1-1999 M-2-2001	1.6	1.568	98	World benchmark performance
4	Blast Furnace	Mecon, India	2004	0.9	0.409	45.4	Project time 17 months 14 days, National record
5	BOF-CCP	SMS Demag, Germany	1999-2004	1.6-2.5	1.875	117.2	Lining life 4739 National benchmark
6	HSM	Danielli, USA	1997-2004	1.25-1.6	1.766	110.4	Highest percent of hot charging based on in-house design

Figure below shows JSWSL total integration starting from the mines to the finished products coupled with joint venture companies such as power plant, oxygen plant and captive mines.



It is to be noted that the power plant having a capacity of 2x130MW, markets 120 MW of power after catering to the need of JSWSL and JPOCL. JPOCL operates the largest oxygen plant in the world having a capacity of 5000 tonnes per day (2 x 2500tpd units) which caters to both COREX and BOF units of JSWSL. Being the only producer of HR coils in the south India, JSWSL is a dominant player in this market. Besides, the Group Company (Jindal Iron and Steel Co.) located near Mumbai, provides JSWSL an assured market of about 40% of its HR coils for value addition to cold rolled and galvanized products, marketed worldwide.

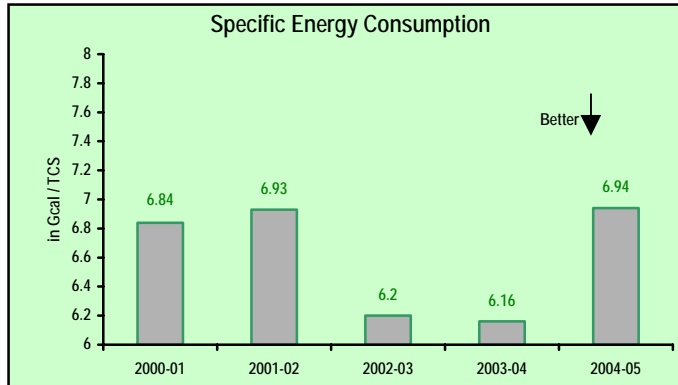
(ii) Energy Consumption

Year (April – March)	Annual Energy consumption					Producti on Million Tonnes of Crude steel	% of manufacturi ng cost	Specific Energy Consumption/ tcs	
	Electrical		Thermal					kg tcs	/ Gcal/t cs
	Millio n kWh	Rs Millio n	Type of fuel	Quantity (inTonne s)	Rs Millio n				
2002-03	520	1,492	Coal	1,242,696	3,869	1.457	46%	853	6.20
			Coke	256,256	1,261			176	
			LPG	1,574	31			1.08	
2003-04	611	1,754	Coal	1,292,343	3,993	1.608	51%	804	6.16
			Coke	323,670	2,759			201	
			LPG	1,434	29			0.89	
2004- 2005	717	1971	Coal	1,315,563	5,865	1.875	61%	702	6.94*
			Coke	614,005	11,207			327**	
			LPG	2,623	76			1.40**	

During 2004-05, specific energy consumption / tcs has increased due to the commissioning of new units namely Blast Furnace and Coke Oven as operation is yet to get stabilised in these units. Further BF gas and Coke Oven gas was not getting utilised for which power plants were under construction / commissioning.

** Coke consumption is higher due to addition of one Blast Furnace which consumes coke. LPG consumption has increased because of its use in new units.

Graphical Representation of Specific energy consumption:



JSW Steel has achieved best figures in specific energy consumption compared to any other unit in India except 2004-05 due to increase in project activities as higher usage of coal fines in Corex plants and high Al_2O_3 pellets. As already stated, the major source of energy is non-coking coal and not coking coal which is used in conventional blast furnace based steel plants. Further, in JSW Steel, practically no petro-fuel is used.

(iii) Energy Conservation Commitment, Policy and Organisational Set Up

Energy Conservation Commitment:

JSW Steel has committed to reduce energy consumption by adopting / optimising the energy efficient processes and utilising all the energy of gases released for power generation and saving some energy to nation.