



Steel Pipe to Zoom with Booming Economy

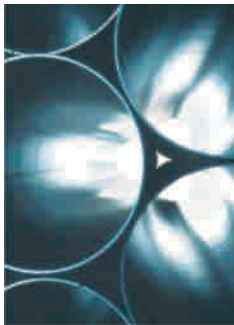
- Steelworld Research Team

The setting up of transportation infrastructure in the wake of burgeoning crude prices is increasing the demand for SAW pipes. SAW pipes' demand is likely to remain robust due to diverse point of uses of crude and concentration of source of crude in the Middle East. Indian pipes manufacturers have the advantage of being in the close proximity to Middle East vis-à-vis other major pipe manufacturers in Japan or Europe. Transportation cost is a major cost for the pipe manufacturers to ship the pipes to Middle East, which around half as compared to that from Japan. Moreover the domestic demand is also high with various organizations have put their plans to lay pipeline infrastructure for oil transportation. Seamless pipes' demand is also likely to take a leap on account of depleting reserves and rising complexity in the oil exploration and production (E&P) process.

SAW pipes – the energy carriers

SAW pipes are large diameter pipes, which are manufactured by welding the edges of plates or by spiral welding of hot rolled coil (HR coil). The SAW pipes manufactured from plates are called LSAW pipes as they are rolled and welded to form a pipes shape. There is longitudinal welding in LSAW pipes. HSAW pipes are made from HR coil, where in the coil is welded spirally to give a shape of pipe. In HSAW pipes the length of welding is larger as compared to that in LSAW. Depending on the length of welding, the HSAW pipes are perceived to be weaker as compared to the LSAW pipes. But now, due to substantial advancement in the welding technology, there is almost negligible difference in the pressure-bearing strength of the two types of pipes.

Indian pipe sector is set to capitalize on the booming global demand for pipes. Around US\$118 billion global opportunity is likely to unfold in next five years. Urgency to create oil & gas transportation infrastructure due to burgeoning



crude oil prices and rising depletion of global crude reserves is stimulating global demand for SAW (submerged arc welded pipes used in oil & gas transportation) and seamless pipes (used in oil & gas exploration). Indian pipe manufacturers are set to benefit from the global demand-supply imbalance and their participation in the global demand boom is visible from their expanding order book. Tight supply situation is likely to prevail for FY08 & FY09E would keep realizations firm.

Global demand – supply set to remain in favor of India...

USA, Middle East and domestic market would be key volume driver for Indian pipe players. The three geographies account for over 40% of the total global demand of around 75 million tonne of SAW pipes. Globally, Indian pipe companies are expected to corner around 19% of total demand. Current order book position of industry players of US\$4.15bn suggests that Indian companies are well on course to garner the share.



Depleting reserves stimulating seamless pipes' demand ...

Depleting oil reserves has led to an increase in exploration efforts resulting in more wells. Demand for seamless pipes is directly proportional to the increase in number of wells. As per estimates, about 35 million tonne of seamless pipes demand is likely to come up in next 5 years.

Global demand likely to remain firm

Global demand for SAW and seamless pipes is likely to remain firm over the next five years due to rising crude prices and depleting oil reserves. Developed world's rising energy requirements and emergence of industrial powerhouses in developing countries like China and India are the major



catalysts of growth in the oil country tubular goods (OTCG) and line pipe (SAW pipes) markets. The expectation of a longterm bull market in oil and gas prices has resulted in an extended upturn in demand for SAW and seamless pipes. Global demand to be around 67 million tonne, with around 66% flowing from the Middle East, Asia and the

US. Although demand in Europe and Russia is likely to be met from the internal supplies, demand in Middle East and the US are likely to be met through imports due to supply constraints.

The supply constraints and higher demand is expected to keep the prices firm for at least two years through CY08 and CY09 escalating to mid 2010, where after it may start softening due to improved supplies.

Booming oil economy to boost pipe demand

Booming oil & gas exploration and production (E&P) activities have lead to a surge in demand for line pipes and tubular products. With expectation of a long bull market in oil and gas prices, previously unviable oil fields are being explored. Increased demand for steel pipes would continue in the medium term on account of increased exploration activities and thrust on setting up infrastructure to transport oil and gas. In India, rapid economic growth faces an urgent need to develop and improve water supply, which would also increase demand

for SAW pipes.

US to be the largest consumer

According to Simdex data, 189 line pipe projects involving 17.55 million tonne of SAW pipe are coming up in next 5 years in North America, which accounts for 23% of total global demand. Inadequate supply would increase in imports to the US markets. US imports will rise till new capacities go onstream. Indian pipe manufacturers are foraying into the US markets to give them a local presence. After ending its joint venture with Loan Star, Welspun Gujarat is putting up its own manufacturing facilities at a cost of US\$ 100 million. PSL is also putting up a 300,000 tonne plant as a joint venture. Man Industries is scouting for JV partners. Exports to the US would be one of the major revenue drivers for Indian pipe manufacturers.

Asia to lead pipe demand with strong growth in energy consumption

The demand for line pipes will be the highest in Asia. Simdex data shows that 33% of the global pipeline projects will come up in Asia. This is due to the stupendous energy requirement growth in the region. As per Energy Information Administration, growth in energy demand in the non-OECD Asia region is projected to grow at an



Global demand scenario for next 5 years

Geographical region	Total length (km)	Equivalent (Mn Tonne)	Demand distribution	Equivalent (US \$ Bn)	Assumed market share	Addressable market (US \$ Bn)
North America	57920	17.55	23%	18.43	5%	0.92
Latin America	34278	10.39	14%	10.91	5%	0.55
Europe	33822	10.25	14%	10.76	2%	0.22
Africa	11610	3.52	5%	3.69	10%	0.37
Middle East	21541	6.53	9%	6.85	50%	3.42
Asia	81736	24.77	33%	26.00	33%	8.58
Australasia	5566	1.69	2%	1.77	2%	0.04
Total		74.68		78.42		14.10

* Source: Simdex

* Assumptions: 1km=303.50 tonne, Average realization=US\$1050 per tonne

average rate of 3.2% per year over the 2004-30. In 2004, energy consumption in non-OECD Asia countries made up just over 48% of the total non-OECD while in 2030, its share is projected to be more than 56%. Increase in energy consumption is set to push the line pipe demand. China and India are likely to lead the line pipe consumption. China is expected to be the major player in planned pipeline projects. Internal manufacturers would meet Chinese demand, while that in India would be shared among domestic manufacturers, with virtually no imports.

Middle East – an important destination for Indian players

The Middle East is one of the important destinations for Indian pipe manufacturers. With high crude prices, oil companies are



flush with funds and they are increasing their capacities. As per Simdex, 9% of global planned projects are coming up in Middle East. Indian players have competitive advantage of being closer to the region vis-à-vis players in Europe and Japan. Indian

players would be supplying at least 50% of the total demand. In other markets such as Russia, China, Europe and Japan, internal supplies are expected to be sufficient.

Domestic scenario

Domestic demand for line pipes, therefore, is expected to grow faster with increasing crosscountry creation of oil & gas transportation network. One of the major factors to increase the demand is the creation of gas transportation infrastructure. Most of the demand would emerge from the natural gas segment. Pipeline infrastructure in India is likely to almost double in next 5 years to 39,000 km from existing around 20,000 km. The total demand for SAW pipes is likely to be around 12mn tonnes in next 5 years.

Gas transportation pipelines – a major boost

Worldwide, consumption of natural gas rose from 19% of

global primary energy in 1980 to 24% in 2002. Demand for natural gas is expected to grow at 3.9% per year between 2001 and 2025. The Indian natural gas market is relatively underdeveloped compared to other regions of the world. By 2024-2025, the share of natural gas would increase to 20% of total primary energy consumption, according to Hydrocarbon Vision 2025. With growth in consumption, the transportation infrastructure would also see traction. Higher usage of natural gas requires better & economical transportation medium and thus more pipelines.

The major gas pipeline companies such as Gail (India) and GSPL plans to put up major gas pipelines. Gail is setting up a national gas grid and has planned 5,052 km of pipelines.



Water resources management – another key area

Water resource management is another major area where huge demand is likely to kick in. Rapid economic growth in India has thrown up an urgent need to develop and improve water supply systems in urban areas. Water resources management has been one of the major focus areas of the government in the last few budgets. According to the World Bank, projects worth around US\$5.20 billion are either under execution or in the pipeline. Assuming a price realization of US\$1,000 per tonne (mostly HSAW pipes are used in water management), there is an opportunity of 5.2 million tonnes (US\$2.41 billion).

India set to benefit from global demand supply imbalance

Global supply of SAW pipes is likely to remain tight in coming couple of years. India is set to benefit from the supply demand imbalance. Global demand for SAW pipes, including India, would be in the range of 16-17 million tonne per annum. On supply side, an estimated 16 million tonne of SAW pipes were produced, in which India accounted 12% for both LSAW and

Domestic demand statistics for next 5 years

	Expected global demand in km	Conversion Factor	Expected demand in million tonne	Average realization (\$ per tonne)	Revenue generation in 5 years (billion, \$)
SAW Pipes	39000	303.50 tonne/km	11.84	1050	12.43
Seamless Pipes			2.50	1205	3.01
DI/CI Pipes			2.5	771	1.9
Total opportunity					17.37

HSAW, ranking at number 5.

Order book suggests strong demand for Indian pipes in US, Middle East

All major Indian pipe manufacturers are supplying to North America and Middle East. About 70% of the order book is for exports.

Order book position of Indian companies

Company	Order book position (Rs, Crore)
Welspun Gujarat	5160
Jindal SAW	2900
Maharashtra Seamless	1000
PSL Limited	2200
Man Industries	2400
Total	17170

Long-term outlook is bullish for LSAW

LSAW pipes would continue to score better than HSAW in terms of profitability. Currently, the difference between the price of plate (raw material for LSAW) and hot-rolled coil (raw material for HSAW) is about US\$250-300 per tonne for different grades of steel. Globally, a large capacity expansion is happening in plates. In coming 1-3 years, these facilities would be commissioned. Increase in supply would lead the prices of plates to fall and the price differential between plate and coil will fall upto US\$100. Lower raw material prices would lead the LSAW prices to decline without any erosion in margins.

Increase in plates capacity to boost margins on LSAW pipes

With global plate facilities going onstream, margins on LSAW would improve, as the increase in supply of plates would lower plate prices. In the domestic market, no major capacity expansion is happening in LSAW. In India, most of the capacity addition is happening in HSAW. Currently, LSAW capacity in India is roughly 2 million tonne, which requires 2.08 million tonne of plates (assuming 4% process loss). About 4-million tonne plate capacity is likely to come up in 2-3 years. Though plates are also used in other industries, there would be a comfortable supply of plates leading to decline in landed cost of plates.

Half the volume of sales in LSAW will earn the same profit as HSAW

Industry experts suggest that out of total demand for pipes, HSAW pipes constitute roughly 65%. But LSAW still looks as a good long-term business. Profits on sales volume of 50 million tonnes of LSAW pipes will be equal to the profit generated from the sales of 100 million HSAW pipes. From the

above exhibit, it is evident that the gross margin is almost half in HSAW as compared to LSAW. This augurs well for the players, which are diversified in both LSAW and HSAW pipes. Going forward, the margin differential to increase due to increase in supply of plates.

Indian players have more orders for LSAW pipes

Globally, demand for HSAW pipes is higher against LSAW pipes for on-shore projects, although the 63% of order book of Indian companies is for LSAW pipe.

Going forward, orders for LSAW pipes would remain high due to its pressure bearing strength. Further, the decline in plate prices as a result of increased supply would lower realizations for LSAW pipes, which would further induce more demand.

Capacity additions in HSAW pipes - competition may intensify

Currently, the Indian pipe sector has a total HSAW capacity of 1.75 million tonnes. By FY08, additional capacity addition of 0.8 million tonne is

expected to be added. Indian players such as Welspun Gujarat, PSL and Man Industries are putting up around 0.8 million tonne HSAW capacity in the US. Increased supply of HSAW pipes is likely to increase the bargaining power of buyers.

Increase in competition may put pressure on HSAW prices. On raw material front, HR coil prices are likely to be softened.



Forthcoming Events

- **WIRE TUBE 2007**
16-18 October,
Bangkok, Thailand.
- **EXTRUSION SUMMIT 2007**
26-27 October,
World Trade Centre, Mumbai.
- **Metalex 2007**
15-18 November,
Bangkok, Thailand.