Asit C. Mehta
Investment Interrmediates Ltd.

COMPANY REPORT

REDUCE

15 May, 2008

Key Data	INR
CMP	589.5

Key Data	
Bloomberg Code	JSAW IN
Reuters Code	JIND.BO
BSE Code	500378
NSE Code	JINDALSAW
Face Value (INR)	10
Market Cap. (INR mn.)	31275
52 Week High (INR)	1,224.90
52 Week Low (INR)	523.00
Avg. Daily Volume (6m)	70018
Beta (Sensex)	1.02
F&O	
Market Lot	250
Turnover (INR mn)	20.84

Shareholding	%
Promoters	43.76
Mutual Funds / Bank/ FI	17.21
Foreign Institutional Investors	17.09
Bodies Corporate/Individuals/ Others	21.94
Total	100.0

Particulars	FY06	CY07 (15M)	CY08E	CY09E
Revenues (Rs. mn)	38,731	70,157	37,684	52,782.4
Op. Profit (Rs. mn)	4,065	8,008	4,099	5,111
OPM %	10.5	11.4	10.9	9.7
PAT (Rs. mn)	1,649	13,293	1,699.2	2,361.9
EPS (Rs.)	34.1	259.9	30.3	38.5

FY06: September Ending

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Jindal Saw Ltd

Introduction

Jindal Saw Ltd (JSL), promoted by Mr. O P Jindal started its operations in1984. JSL is the largest pipe manufacturer in India offering total pipe solutions. It manufactures SAW Pipes, Ductile Iron (DI) Pipe and Seamless Tubes, which find their application in exploration and transportation of oil, gas and water infrastructure projects. JSL's major focus is on international market especially Middle east, with over 60% of its revenues coming from exports. JSL is accredited by major international Oil & Gas players.

Investment Rationale

- **Global & domestic demand for pipe:** Total world demand for pipes is estimated at USD 74 bn (235,171 km) for next five years from 2007-2011 (Source: Simdex). The major portion of world demand for pipes is expected to come from Middle East and Asian countries constituting over 45% of the world demand followed by North America (33%) and Europe (15%). There also exits a strong domestic demand for SAW pipes. Domestic demand for SAW pipes is approximately USD 5.5 bn. Indian player due to their locational advantage carry potential to cater to entire domestic demand of USD 5.5 bn.
- **Capacity Addition:** In order to tap growing global as well as domestic demand for pipes, JSL is undertaking significant capacity addition. Installed capacity will increase from 1.25 mn tonne pa to 1.95 mn tonne pa by CY08 and will be major volume driver. Capacity build up will mainly address growing demand from Middle East and India.
- **Strong Order book:** JSL has a strong order book of USD 1 bn, executable by January 2009. Current order book is equivalent to 1.2x times of JSL's 2007 sales (annualized) from Indian operations.

Valuation and Recommendation

We believe that there is opportunity in global pipes and tubes sector and JSL being one of the leading player in the industry is likely to benefit from the incremental demand. However, to curb inflation and growing steel prices, Government has taken a policy stance to increase domestic supply of steel by reducing import duty on steel and discouraging exports of steel by imposing export duty. In this, steel tubes and pipes are also included. According to the notice of amendments government has proposed

- 20% duty on exports of steel pipes and tubes, but has issued a notification No.66/2008-Customs which levies custom duty of 10% on such exports.

This action seems to be temporary stand taken by Government. However such levy would definitely have a negative impact on company's earnings till date such levy remains enforced.

Our impact analysis shows that if export duty stays for CY08 then CY08E EPS will come down to Rs 30.3 from our estimates of Rs 52.11 (Annexure I: Without considering impact of export duty).

The sharp decline in EPS of JSL is due to decrease in operating margins, as manufacturers like JSL would not be able to pass on the additional burden of export duty. Reduction in EPS will also negatively impact the company's cash flows and its debt repayment capacity.

We have also done an impact analysis on quarterly basis for CY08E, we observe that if export duty remains levied for Q2CY08, Q3CY08, Q4 CY08, its EPS for CY08E would reduce to Rs 48.12, 40.66 and 30.29 respectively.

Similarly if duty remains levied for another year i.e. CY09, its EPS may reduce down to Rs 38.5 from our estimate of Rs 81.91 (Annexure I: Without considering impact of export duty).

Rs. mn

Particulars	Without Export Duty	With Export Duty		Without Export Duty	With Export Duty	
	CY08E	CY08E	Difference (%)	CY09E	CY09E	Difference(%)
Net Sales	39,396.60	37,684.55	-4.35	56,249.36	52,782.40	-6.16
Operating Profits	5,811.00	4,098.95	-29.46	8,578.03	5,111.07	-40.42
PAT	2,923.28	1,699.22	-41.87	5,031.03	2,361.93	-53.05
Operating Profit Margin (%)	14.75	10.88	-26.26	15.25	9.68	-36.5
Net Profit Margin (%)	7.42	4.51	-39.23	8.94	4.47	-49.97
EPS (Rs.)	52.11	30.29	-41.87	81.91	38.45	-53.05

(Source: ACMIIL Research, Annexure I)

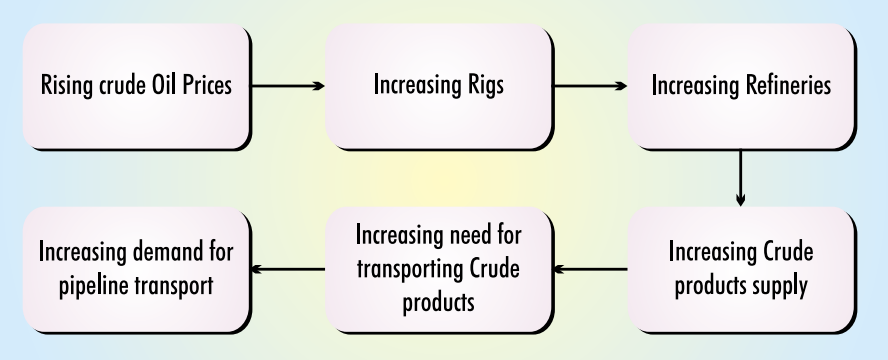
Hence, we at present, recommend clients to reduce the exposure. If steel ministry is able to convince the Government then export duty may be rolled back. At this juncture it is advisable for investors to be cautious and avoid fresh investments.

> "Burgeoning global crude oil prices is stimulating global demand for SAW pipes"

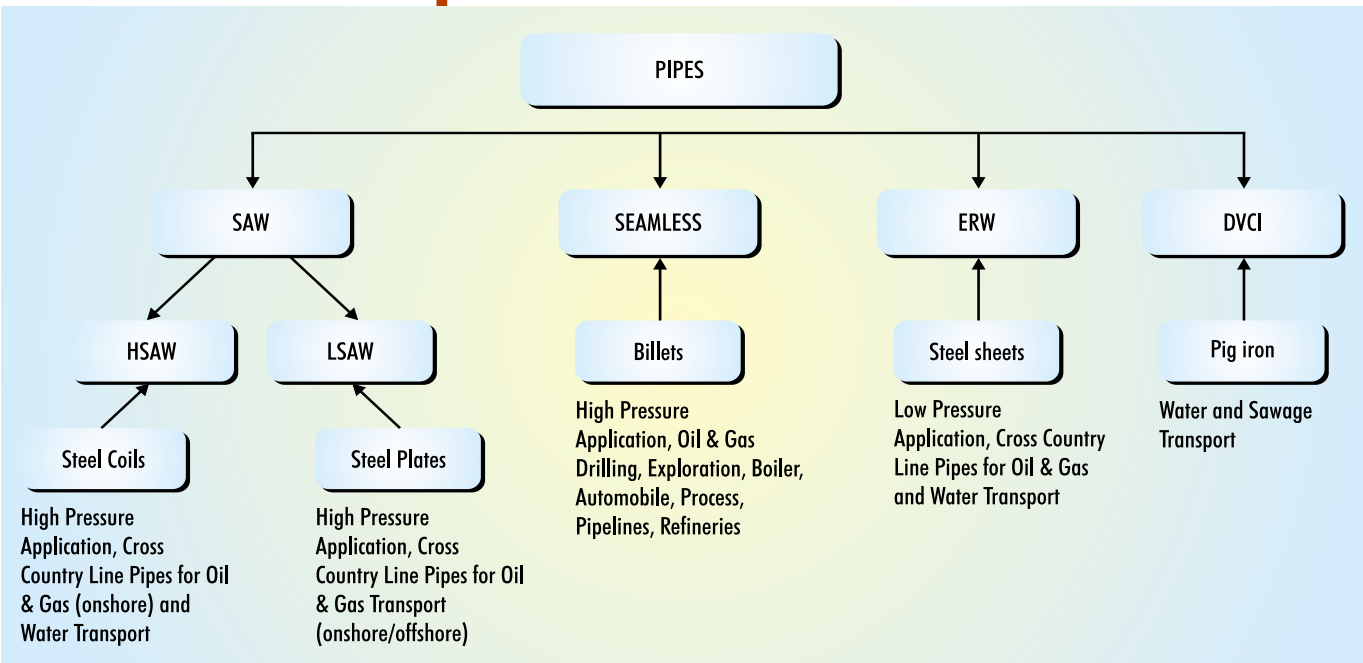
Why to look at Indian pipe Industry now:

The setting up of transportation infrastructure in wake up of burgeoning crude prices, uneven resources for Oil and Gas, is increasing demand for SAW pipes (exhibited in diagram below). Indian pipe sector is set to capitalize on the booming global demand for pipes. Around US$118 billion global opportunity (SAW +SEAMLESS) is likely to unfold in next five years (FY2007-11) (Source: Steel world Research). Urgency to create oil and gas transportation in 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 and gas transportation) and Seamless pipe (used in oil and 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. With such robust demand drivers in place for this industry, Indian pipe manufacturers look an attractive bet.

Brief profile for industry:



Types and Characteristics of Pipes: SAW pipes are large diameter pipes, which are manufactured by welding the edges of steel plates or by spiral Welding of hot rolled coil (HR coil). The SAW pipes manufactured from plates are called LSAW. 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.



LSAW-Longitudinal Submerged Arc Welded

HSAW-Helical Submerged Arc Welded

ERW- Electric Resistance Weld

DI- Ductile iron

CI- Cast iron

Source: ACMIIL Research.

Demand drivers for pipe industry

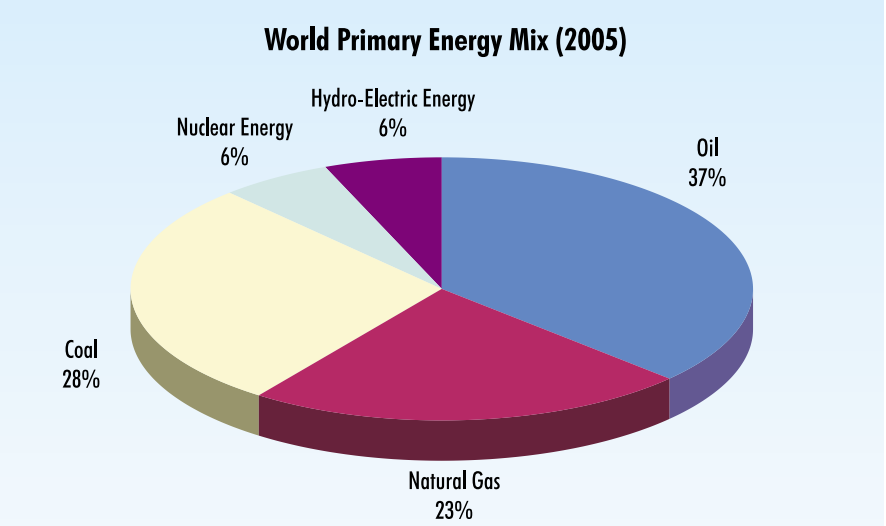
Source: Simdex, Company

"US $ 118bn worldwide opportunity for pipe manufacturing companies"

"Oil and Gas dominates the Energy Source"

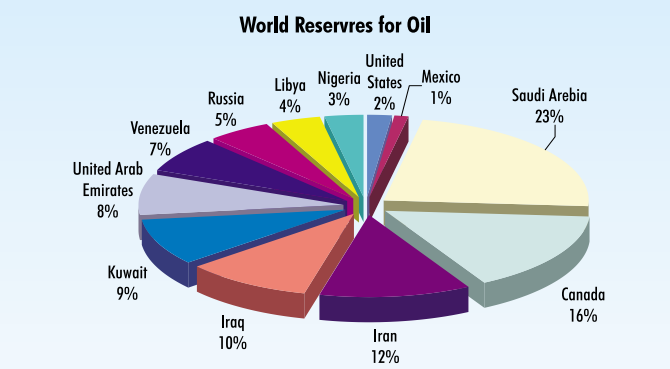
Oil and Gas: Most important source of energy

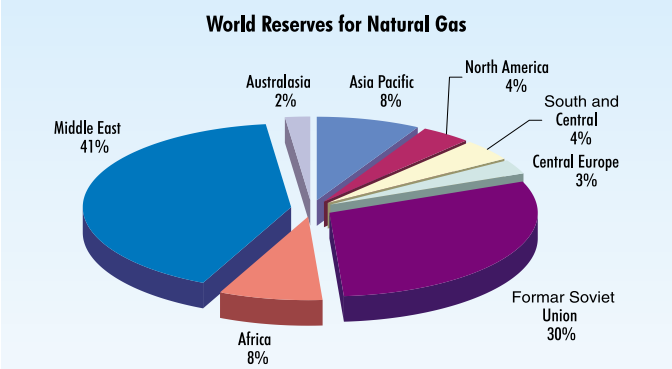
World Energy Quotient: The global economy literally runs on energy. To support the continued economic progress for the world's growing population, more energy will be required. The growing economy therefore demands energy security in terms of new energy sources, be it domestically in the form of oil & gas finds or internationally, through tie-ups with oil & gas rich regions. Gas and Crude Oil both has historically predominantly been most widely used and traded sources of energy. In years to come such energy quotient is expected to continue remain dominated by Crude oil and Natural Gas.



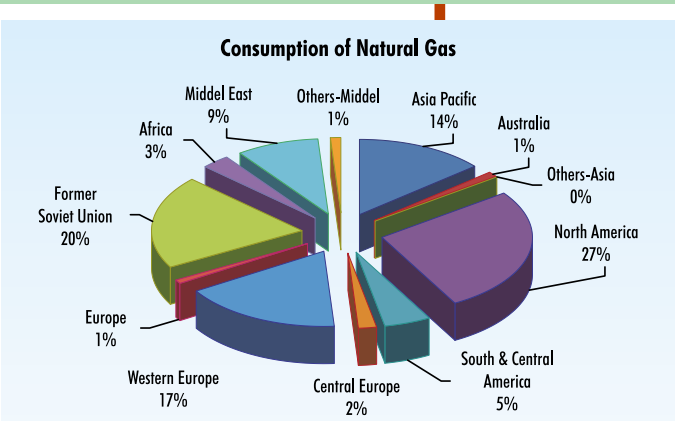
Source: Cris Infac

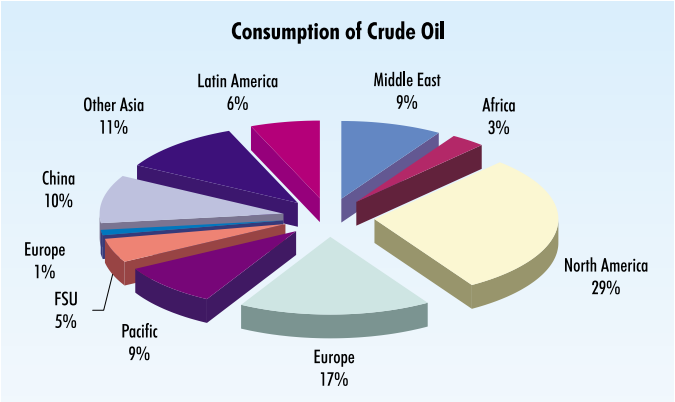
Distribution pattern for Reserves and Consumption for Oil and Gas:





Source: Crisil Research





Source: Crisil Research

> Uneven distribution of Reserves and consumption destination lures out need for transporting Oil and Gas

Middle East countries controlling nearly 60% of world reserves for Oil and nearly 40% for Natural Gas have predominantly dominated reserves for Oil and Gas. Whereas demand for crude oil and Gas is dominated by OECD countries (North America, Europe and Pacific) consuming nearly 55% of world's crude oil and 51% of natural gas demand.

To meet its energy requirement such energy deficit countries have to either:

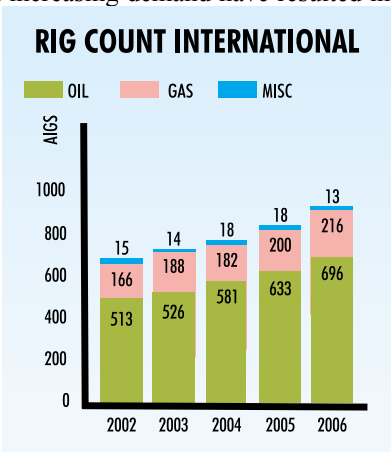
1) Explore more domestic reserves , or

2) To trade from oil and gas rich countries

Increasing Oil and Gas Exploring and Processing activities:

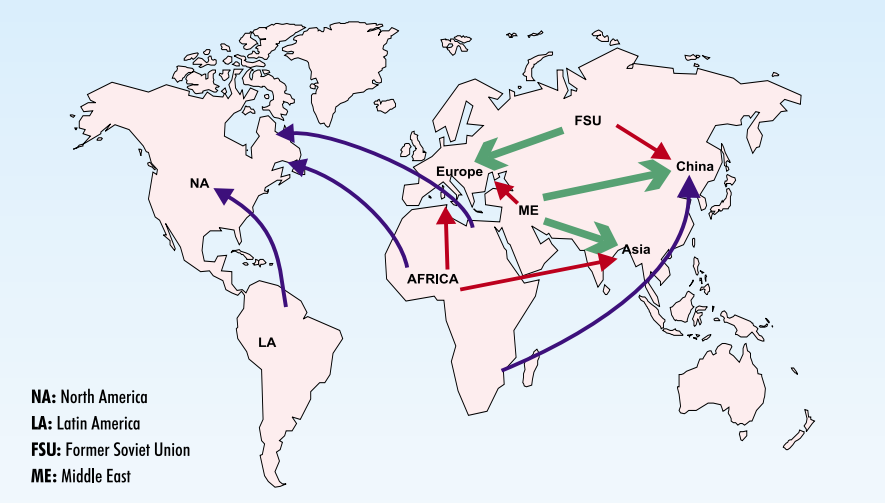
Global Scenario: The unprecedented and continued firmness in crude oil prices, depleting output from productive oilfields and increasing demand have resulted in significant investments from oil majors in hectic E&P activities. This is evident from the sharp increase in the rig count (number of rigs developed for E&P activities). Demand for seamless pipe is directly correlated with number of Rigs. With number of Rigs count increasing progressively it spells boom for pipe manufacturers as it would translate into growth in demand for seamless pipes(used for exploration) and for line transportation pipes used for transporting oil and gas over long distances.

> Increased E&P activities subsequently leads to need for transportation



Source: Baker Hughes

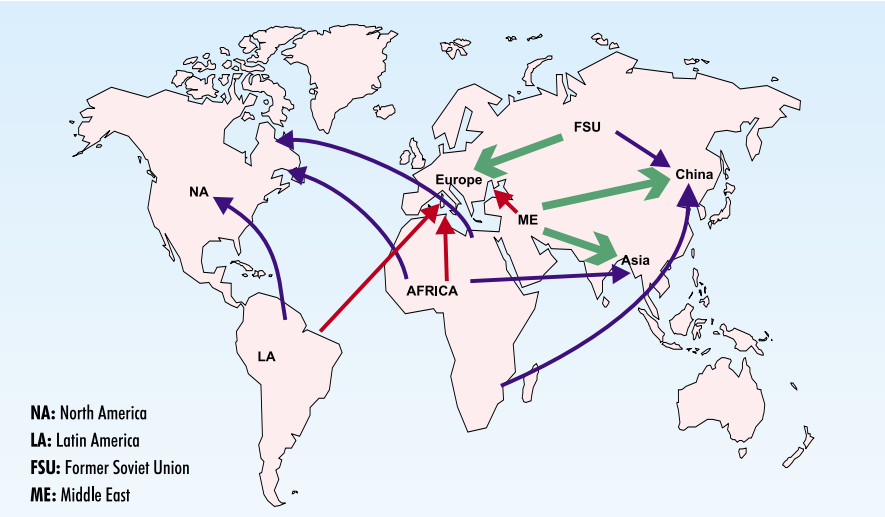
Crude Oil Trade Scenario(2005): Subsequent to oil exploration incepts a need for transporting.



Source: CRISIL Research

The Middle East accounted for the largest share in global crude oil exports with 46.0 per cent, followed by the FSU with 14.2 per cent; North America accounted for the largest share in imports with a share of 29 per cent, with USA being the largest importer in the region (the country accounted for 26.5 per cent in total global oil imports). China and other Asian countries together accounted for 26.3 per cent of total crude oil imports.

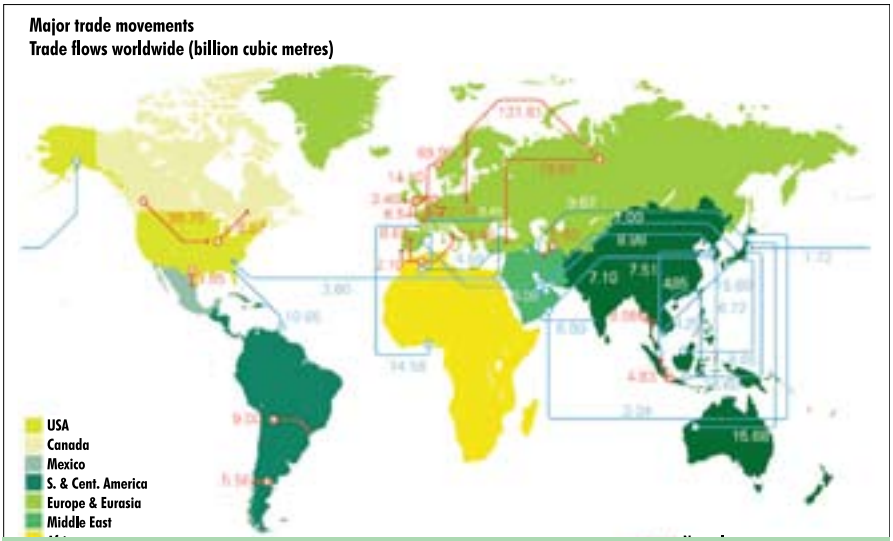
Expected Crude Oil trade scenario(2011):



Source: CRISIL Research

Besides the Middle East, Other Asia and China are expected to significantly augment their refining capacities. Together, they are likely to account for 40 per cent of the incremental refining capacity being added by 2011, thus adding to their crude oil requirements. These regions are expected to emerge as the largest importers of crude oil, with a share of 31 per cent of the total crude oil import. With no major refinery capacity being added, the share of North America and Europe. the erstwhile largest importers . is likely to decline. The share of North America is likely to fall from 29.0 per cent in 2005 to 27.1 per cent of the total oil imported in 2011, while Europe's share is likely to reduce from 27.8 per cent in 2005 to 26.0 per cent in 2011.

Current Natural Gas and LPG's movement through pipes:



Source: BP statistical Review

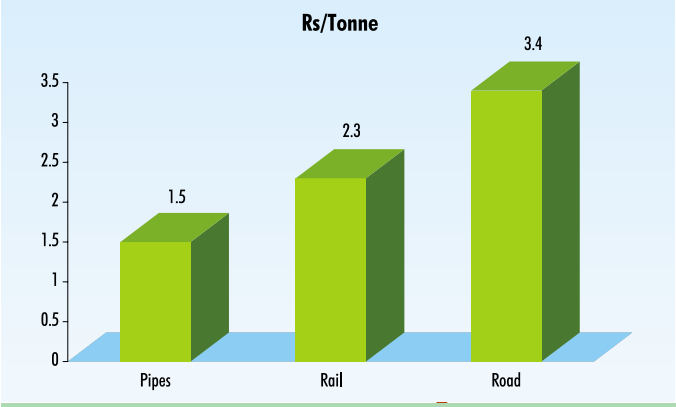
USA is the largest importer of natural gas, importing nearly 99.83 bcm and major exporter being Middle East countries. The OECD (Organization for Economic Cooperation and Development, formed by 30 developed countries) accounts for 59% of the global oil and 52% of natural gas consumption. However with domestic supply being unable to keep pace with the rapidly rising demand, these countries are becoming increasingly reliant on imported Oil and Gas. This has given impetus to the demand to the oil and gas infrastructure.

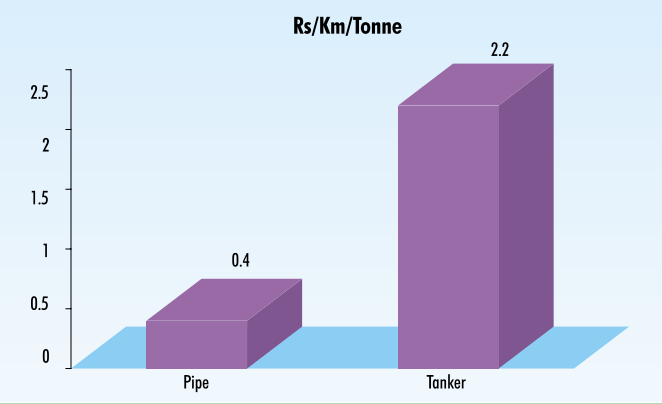
> "Pipelines remains the most **efficient mode of transporting** Oil and Gas"

Pipeline Transportation the most efficient mode of transporting Oil and Gas:

Pipeline transportation is the most cost efficient mode of transporting Oil and Gas. Transportation by pipes costs around Rs1.5 per ton vis-à-vis Road and Rail transportation of Rs2.3 per ton and Rs3.4 per ton respectively. Even transportation by tankers (ocean transport) is Rs2.2 per ton per Km when compared with Pipe transportation of Rs 0.4 per tonne per Km.

Besides cost efficiency other factors which given an edge to the pipeline transport are safety, eco-friendliness and protection against pilferage.





Source: Crisil Research

Global opportunity

Indian pipes manufacturers set to capture worldwide deficit for SAW Pipes

Demand for Pipeline transport

	Planned Projects	Total Length (Km)	Share in demand	Required tonnage (Mn tonnes)	Total Value (US $bn)	Addressable Mkt size for Indian Players	Addressable for Indian Players (US $bn)
North America	141	49724	21%	15	16	10%	1.6
Latin America	41	27941	12%	8	9	2%	0.2
Europe	73	34591	15%	10	11	2%	0.2
Africa	22	10098	4%	3	3	15%	0.5
Middle East & Asia	165	107832	46%	32	34	40%	13.6
Australasia	12	4985	2%	1	2	5%	0.1
Total	**454**	**235171**		**71**	**74**		**16**
Assumption:	1) 1km=303.5ton						
	2) Avg Realizations= US$1050 /ton						

Source: SIMDEX, ACMIIL Research.

"Indian players well poised to capture world demand"

According to Simdex (Future pipeline worldwide guide) Total world demand for pipeline is estimated at 71mn tonnes for next five years from 2007-2011. The major portion of world demand for pipelines is expected to flow from Middle East and Asian countries demanding over 45% of world demand followed by American countries 33% and European countries 15%. This demand scenario clearly indicates three leading markets for pipes industry i.e Middle East & Asia, America and Europe.

World Supply scenario: India controlling more than 15% of world supply for pipes

Capacities worldwide for saw and seamless pipes:

Name	Country	Mn tonne	
Sumitomo	Japan	3	10.5 mn tonne
Nippon Steel	Japan	2.8	
JFE (Kawasaki)	Japan	2.5	
Seah Steel	Korea	1.2	
Hyundai Pipe Co	Korea	1	
V&M (Now Europ)	Germany	2.5	10.4 mn tonne
Europipe	Germany	1.1	
Illva	Italy	1.6	
Vyksa Steel	Russia	1.5	
Volzsky Pipe	Russia	1.3	
Corus	UK	0.6	
Khartsyzsk Tube	Ukraine	1.8	
Oregon,	USA	0.4	2.5 mn tonne
Berg	USA	0.4	
Ippsco	Canada	1.2	
Welland Pipe	Canada	0.5	
Confab Industrial	Brazil	0.5	4.35 mn tonne
Jindal Saw	India	1.25	
PSL	India	1.1	
Welspun Gujarat	India	1	
Man Industries	India	1	

Source: Industry, ACMIIL Research
Note: Capacities mentioned are nameplate capacities i.e (theoretical).

Clear deficit in world market
for saw pipes

Worldwide supply for SAW pipes is estimated at 16 mn tonnes (Metal bulletin Research 2006, Company). Of companies mentioned above majority of them are catering to world's demand for seamless pipes. Only about 65-70% of these capacities are considered as operable (Source:Industry). Japan and Korea leads the world supply for pipes controlling nearly 40% of world supply followed by European countries controlling 35%and India contributing nearly 15% to the world capacities.

All major linepipe manufacturing companies in America, Russia, and Europe have their order book full in respect with their capacities and new capacities are yet to come on the floor (probably in late FY2010 or FY2011) (shown in table below). With domestic demand in India for pipelines still being under explored and capacities already in setup, Indian companies are in a sweet spot to explore worldwide demand for Pipes.

We have not considered Chinese players while finding out current world capacities because as a Chinese market had huge internal demand for pipes, thus leaving limited room for exports by Chinese companies. However with internal demand meeting up gradually and newer capacities added up in coming years we can't rule out some competition coming from Chinese players especially in LSAW market. However we don't expect competition to be stiff enough in short term primarily due to two reasons

1) Accreditations procedure are long drawn which will take Chinese players' time to penetrate into them posing threat to world market.

2) Chinese government has been imposing additional duties on export of such pipes which discourages exports of the same.

New SAW pipe capacities (planned for next 2-3 years)

Company	Country	Mn Tonnes
Baosteel	China	0.40
Khartsyzsk	Ukraine	0.20
Arabian pipes	Saudi Arabia	0.30
Europipe/Ahwaz	Iran	0.40
Europipe/V&M	Brazil	0.09
Severstal - Izhora 2	Russia	0.45
Iraq Industry of Minerals	Iraq	0.35
OMK	Russia	0.35
Total LSAW		2.54
Berg	USA	0.20
TMK	Russia	0.07
Alison	China	0.15
Borusan Mannesmann	Turkey	0.20
Borusan Mannesmann	Central Asia	0.20
Ipsco	USA	0.20
Oregon Steel	USA	0.22
Iraq Industry of Minerals	Iraq	0.15
USS-POSCO-SeAH	USA	0.30
PSL	USA	0.30
Welspun	USA	0.30
Jindal Saw	India	0.20
Total HSAW		2.49
Total HSAW + LSAW		5.03

Source: Metal Bulletin Research, ACMIIL Research

Total of 5 mn tonne capacities are expected to be added up worldwide within next three years. However as explained above such capacities are name plate capacities. Only 3 to 3.5mn tonne are expected to be operational. Such capacities are expected to be added up in phases and all capacities are expected to be added up by 2010. Thus we see from FY2011 onwards markets shrinking marginally for pipe industry due to such capacity addition, but however volume growth would still drive this industry further in passing years.

World opportunity: India set to Explore

Opportunity	Type of demand	Deficit/Surplus	Country which can cater to the opportunity	Zone which India can cater
Middle East	Fresh	Deficit	India, Europe, Japan	√
America	Fresh+ Replacement	Deficit	Japan, India, China, USA	√
Asia	Fresh	Exportable Surplus	Japan, India, China	√
Europe (Excluding FSU)	Fresh	Self sufficient	Japan, Europe	×
FSU	Fresh+ Replacement	Self sufficient	FSU, Japan, Europe	×

Source: ACMIIL Research

Most prominent players like Sumitomo, Nippon Steel, Hyundai Pipe co, Ippsco, IIIva,Corus are fully integrated players. Pipe manufacturing for such companies is secondary operations. Whereas, for Indian companies are dedicatedly pipe manufacturing companies and two Indian companies are included in top 20 global companies. Indian companies have well timed capacities lined up ahead of anticipation of robust global demand.

Which Market can Indian firms cater to? And Why?

Europe and FSU

Europe and FSU are self sufficient in meeting their own demands. Russia is expected to witness a demand for SAW pipes of 2.5mn tonne. Most capacities in Ukraine and Russia are utilized to satisfy domestic demand in accordance with govt of Russia directives. So no major export opportunities are expected from Russia, in fact Russia's demand is expected to be met through imports from many European countries. With European and Russian markets being self sufficient due the strong presence of domestic players and feasible imports from Japan, Indian players have limited opportunity to cater to their markets

North America

North America accounts for roughly 21% of the total new SAW pipeline CAPEX. Demand comes from both replacements of old pipes and new pipelines for natural gas. Significant efforts are under way to expand U.S natural gas pipeline capacity; the Rocky Mountains states of Colorado, Utah and Wyoming are high on the list. They account for nearly 22% of the total natural gas reserves in the U.S. Another key area is northeast Texas. In natural gas, year in review 2006 the EIA (Energy Information Administration , USA) notes new pipeline mileage grew by 44% in 2006. The EIA report states that almost half natural gas pipeline projects completed in the U.S during the year were located in the Rockies or northeast Texas. A recent growth driver of pipes is the demand arising from the replacement of old pipelines. The average life of a pipe used for transportation is approximately 25 years to 30 years. More than 1 million miles of gas pipelines out of 1.5 million miles in U.S.A were laid prior to 1975.(Source: Industry)

Some of the major pipeline projects in North America			
Projects	**Estimated mn tonnes**	**Pipeline Miles**	**Tube Diameter (inches)**
Alaska Gas	1.9	1800	48
Altex	0.57	2000	30
Mackenzie Gas	0.42	760	30
TCPL-Keystone	0.4	1200	30
Enbridge-Alberta Clipper	0.39	1000	36
Enbridge-Gateway	0.36	721	36
Kinder Morgan- TMX	0.35	1000	30-36
Enbridge- South Access Phase 2	0.14	321	36-42
Enbridge- Gulf Coast	na	2055	36
Tecas Gas	na	555	36-42
Centre point	na	730	30-42
Total	4.53	12142	
Source: Company			

U.S pipelines:

Most of the lines planned by U.S.A are across the Eastern region of its country. Considering the advantage of project location and proximity to steel suppliers many Indian firms like Welspun Gujarat stahl rohnen Ltd, PSL Ltd and Man industries are setting up their plants in eastern region of America. Setting up manufacturing location in U.S.A is cost effective rather than exporting pipes to United States. This can be evidently seen from below where manufacturing pipes in plants located in United states costs $1110 per tonne in comparison to exporting from India costs $ 1350 whereas imports from Japan and European firms costs around $1325 and $1235 respectively.

	Local	Indian firms	European firms	Japanese firms
Cost of plate (USD/MT)	1000	1000	1100	900
Conversion cost (USD/MT)	110	100	150	175
Total pipe cost (USD/MT)	1,110	1,100	1,250	1,075
Freight (USD/MT)	0	250	175	250
Total landed cost (USD/MT)	1,110	1,350	1,235	1,325
Disadvantage (%)		**-21.00**	**-11.25**	**-20.00**
Source: ACMIIL Research,Company				

Middle East & Asia (Excluding India, Japan and China)

Middle East countries and other Asian countries like Japan and China have huge demand for Oil and Gas, which in turns also throws out huge demand for transportation pipes. China is self sufficient for its pipe demands and it does not presently export any of its capacities. Middle East with virtually no manufacturing capacity for transportation pipes potters huge demand for pipes. India and Japan with sufficient capacities can cater to Middle East demand for pipes. Europe too with marginal surplus can cater to Middle East demand. However India has proximity advantage to , which rests out European and Japanese firms to cater to Middle East markets.

(US$/tonne)	Indian Manufacturer	European Manufacturer	Japanese Manufacturer
Cost of plate	1000	1100	900
Cost of value addition	100	150	175
Total cost of pipe	1100	1250	1075
Freight	110	175	275
Total cost	1210	1425	1350
Cost advantage (%)	-	18	12

Source: ACMIIL Research, Company

This can be evidently seen that Indian exports are cheaper than European and Japanese firms which give and advantage to Indian firms.

Domestic scenario

Domestically SAW pipes find its application in transporting Oil and Gas as well as in transportation of water and sewage.

I Oil and Gas

Energy Quotient in India:

(Per cent)	Coal	Oil	Gas	Hydel	Nuclear
1997-98	55	35	7	2	1
2001-02	50	32	15	2	1
2006-07	50	32	15	2	1
2010-11	53	30	14	2	1
2024-25	50	25	20	2	3

Source: Crisil Research

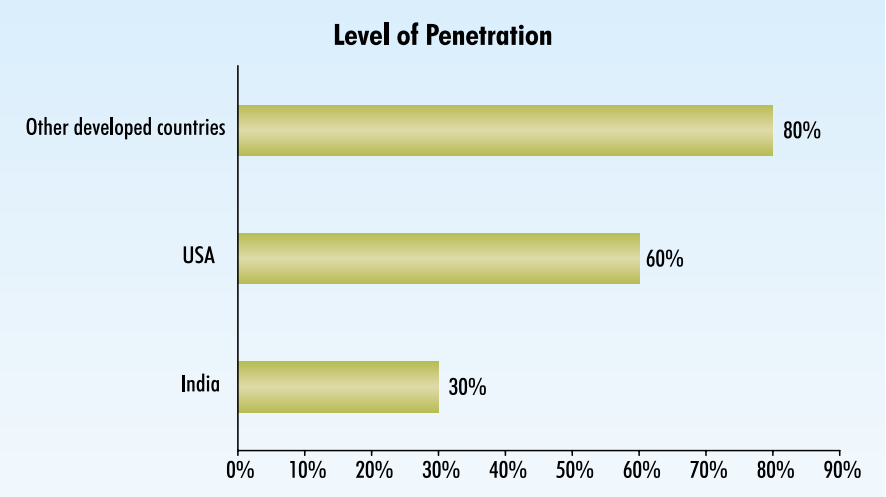
India's energy requirement is heavily dependent on Coal (50%) followed by Oil and Gas both jointly accounting for 47%. Going ahead in 2024-25 such ratio is estimated to remain same but with Gas gaining momentum in total energy consumption.

India has traditionally been net importer of all source of energy (Source: KPMG) .To meet its energy security Government has continuously been encouraging investment in various energy sectors

To meet its Oil and Gas requirement India has been trying various supply mix. India has been importing Oil and Gas in considerable quantity predominantly from Middle East countries. Increasing investments in these sectors has led to exploration of Domestic reserves for Oil and Gas.

"India: Lowest pipe penetration for transporting Oil and Gas"

Pipes penetration for transporting Oil and Gas



Source: Company

Only 30% of India's Oil and Gas transportation is through pipelines as compared to 60% in U.S.A, which means there is great potential for pipelines to be used domestically. Growing supply for Oil and Gas domestically (by way of exploring new reserves) as well as through imports, impetus a strong need for Pipeline Infrastructure to be set upped in India.

Pipeline scenario for Oil in India:	Length (Kms)
Current Pipeline	7814
Under Construction	1846
Planned Pipeline	2718
Total	12378

Source: Crisil Research

Currently, the crude pipelines in India cover 7,814 km. IOC holds a major share of the onshore crude oil pipelines in the county, while Oil India Limited and Oil and Natural Gas Corporation of India (ONGC) hold the major share of the offshore crude oil pipelines. Most of the crude pipelines are located in the western and northeastern regions. The crude pipelines transports indigenous crude as well as low-sulphur and high-sulphur imported crude. Refineries use a combination of domestic and imported crude. The imported crude is transported from various ports, and most of the indigenous crude is transported from the country's northeastern parts.

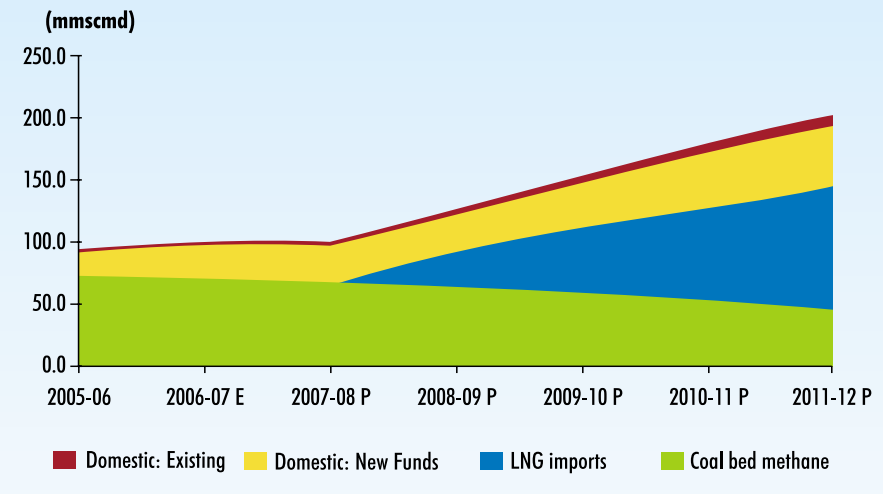
Average consumption per Km	303.5 tonnes
Total demand of pipes for Crude Oil	0.825 mn tonnes
Average realization of per tonne	US$1050
Total demand for SAW pipes for transporting Crude	**US$0.87 bn**

Source: ACMIIL Research

A total pipeline under construction for transporting crude oil is around 1846 km; such pipelines are expected to get completed by 2008-09 (Source: CRISIL Infac). New pipelines of 2718 km are proposed for construction for meeting country's growing demand for Crude Oil. With average realizations of US$ 1050 per tonne and average consumption of 303.5 tonne per km stimulates a demand of US$ 0.87 bn for SAW pipes used in transporting crude oil for next five years.

Current Pipeline scenario for Natural Gas:

Natural Gas supply trend

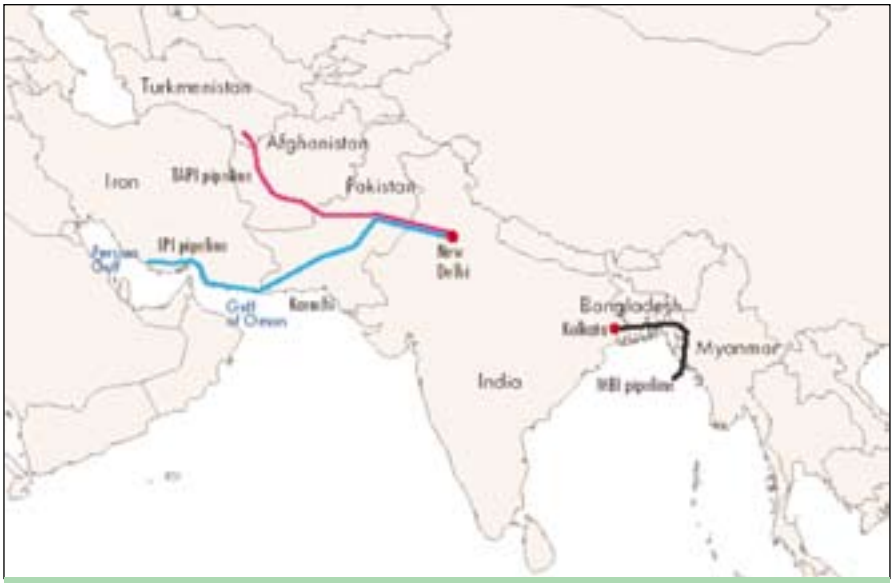


Source: CRISIL Research

For Meeting the signicant potential for growth in natural gas demand in India, it will require a substantial increase in its gas supplies. This could be achieved through a number of avenues, including an increase in domestic gas production, the construction of natural gas pipelines from international sources of supply, and by imports of LNG. This is been demonstrated by CRISIL Research, which estimates increasing new finds as well as increasing imports. Such scenario sets robust demand drivers for domestic seamless and transportation pipe manufacturing companies.

To meet India's growing demand for Natural Gas the Government has been considering various cross-country and intra country pipelines.

Proposed transnational Pipelines routes expected to serve India



Source: Abare Research Report

Project	Length (Kms)
Iran–Pakistan–India (IPI) pipeline	2775
Turkmenistan–Afghanistan–	
Pakistan–India (TAPI) pipeline	1900
Myanmar–Bangladesh–India (MBI) pipeline	950
Total	**5625**
Source: Abare Research Report	

Government of India has considered various pipelines, biggest of all being IPI pipeline that is expected stretched for 2800km. Other pipelines, which are under consideration, are TAPI and MBI. If such pipeline construction decision gets matured, it would incept a demand for construction of 5625km of SAW pipes .i.e for 1.71 mn tonnes of pipe.

Particulars	
Average consumption per Km	303.5 tonnes
Total demand of pipes for Crude Oil	1.71mn tonnes
Average realization of per tonne	US$1050
Total demand for SAW pipes for transporting Gas through International pipelines.	**US$1.8 bn**
Source: ACMIIL Research	

However there are many uncertainties (like political interference) in regards to such pipeline construction. Hence such demand is yet to get materialize.

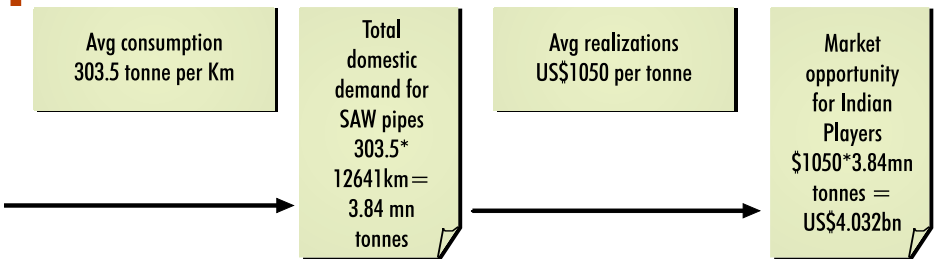
Intra country Pipeline for transporting Gas:	
Particulars	**Length (Kms)**
Current Pipeline	11061
Under Construction	
Planned Pipeline	12641
Total	**23702**
Source: Crisil Research	

India has a total pipeline infrastructure of around 11,061 km, supplying about 93mmscmd of gas (excluding the internal consumption). GAIL India Ltd is the country's largest gas transmission and marketing company. It currently owns and operates around 53 per cent of the onshore pipeline network, with over 5,826 km of pipeline concentrated mainly in northwestern India, but spread over all regions of the country. Gujarat State Petroleum Corporation (GSPC), a Gujarat government-owned company, has also been in the gas transportation business through its subsidiary, Gujarat State Petronet Ltd (GSPL). GSPL is setting up a 1,069 km pipeline network for transporting gas. Among the other regional pipelines, Assam Gas Company has a prominent pipeline network in the northeast. Reliance Industries Limited also has firm plans to make a foray into gas pipelines for carrying its gas finds in the KG basin to the western and southern markets. This includes laying the 1,200 km Kakinada-Uran trunk line and the 2,500 km Jamnagar-Kochi pipeline. GAIL, GSPL, Gas Transportation & Infrastructure Company Ltd (GTICL) and other players have planned various cross-country and regional pipelines

"Domestic opportunity of USD 4 bn for transporting Gas"

Total domestic demand for SAW pipes required for transporting Natural Gas:

Company	Length (Km)
GAIL	5181
GSPL	860
Reliance	6600
Total	**12641**
Source: ACMIIL Research.	



India needs total 17,205 kms of pipeline transport for transporting Natural Gas and Crude Oil within the country. Besides such pipelines India is also considering 5625 km of transnational pipelines to cater to the burgeoning demand for Natural Gas.

(Km)	Existing	Expected	Total	Total-without transnational Pipelines
Crude Oil	7814	4564	12378	12378
Natural Gas-Domestic Supply	11061	12641	23702	23702
Natural Gas-Transnational Pipeline	0	5625	5625	0
	18875	22830	41705	36080

Source: Crisil Research, Abare Research

This need for pipeline infrastructure creates a total domestic demand for SAW pipes for 7 Mn kms i.e $7.8 bn (With transnational pipelines) and 5 Mn Kms i.e $5.5 bn (without transnational pipelines)

Scenario	Mn Kms	US$ Bn
Total domestic demand for SAW pipes-With transnational pipelines	7	7.28
Total domestic demand for SAW pipes-Without transnational pipelines	5	5.5

"Domestic market is immune from imports"

India has and advantage when compared with imports from foreign countries

(US$/tonne)	Indian Manufacturer	European Manufacturer	Japanese Manufacturer
Cost of plate	1,000	1,100	900
Cost of value addition	100	150	175
Total cost of pipe	1,100	1,250	1,075
Freight	20	200	150
Import duties	0	75	70
Total landed cost	1,120	1,525	1,295
Cost advantage (%)	-	36	16

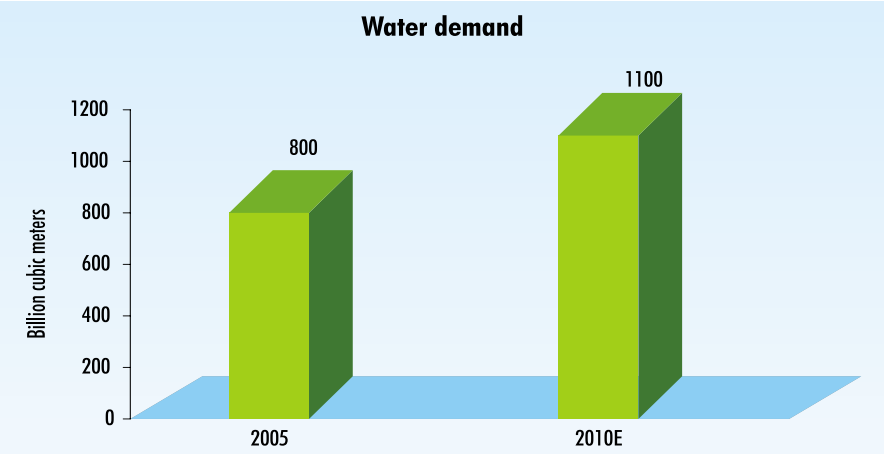
Source: ACMIIL Research, Company

Thus Indian player carry significant potential as well as competitive advantage as to cater Global demand for US$16bn of which domestic demand accounts for US$ 5.5bn.

Water transport an additional demand driver for domestic pipe industry

"Water transport spurges additional demand for pipes"

Spiral, ERW and DI pipes are used for water transportation and sewage systems. Countries with deficiency in potable water, like the Middle East, have been spending heavily on building efficient water and sewage infrastructure. In other countries too, the need to transport water to consumers leads to pipeline demand. India is among the most populous countries in the world and availability of safe and drinking water is a challenge. Based on data provided by JSAW, we estimate that demand for water in India should record a CAGR of 6.5% from 800bcm in 2005 to 1100 bcm in 2010



Source: Industry

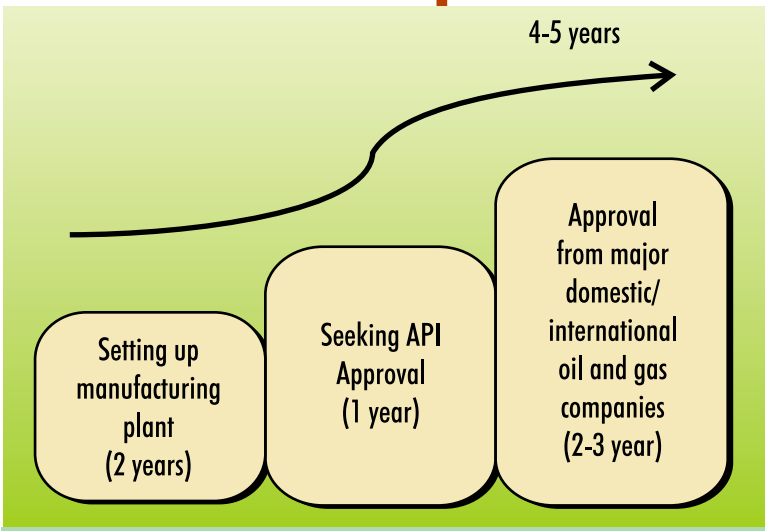
We note that US$4 bn worth of water projects are currently under various stages of constructing, planning and designing in the country. The Central government is negotiating US$270 mn line of credit with the Asian Development Bank (ADB) through which it plans to finance the overhaul of the infrastructure and institutions governing the states' water supply. Apart from this, ADB is currently funding a few other water distribution projects in association with the state governments.

Project	Status	Approval date	close date	Cost (US$ mn) (a)
Kerala Rural Water Supply and Environmental Sanitation Project	Active	7-Nov-00	31-Dec-07	90
Second Karnataka Rural Water Supply and Sanitation Project	Active	18-Dec-01	31-Dec-07	193
Maharashtra Rural Water Supply and Sanitation "Jalswarajya" Project	Active	26-Aug-03	30-Sep-09	269
Karnataka Urban Water Sector Improvement Project	Active	8-Apr-04	31-Dec-08	52
Hydrology Project Phase II	Active	24-Aug-04	30-Jun-12	135
Uttaranchal Rural Water Supply and Sanitation Project	Active	5-Sep-06	30-Jun-12	224
Punjab Rural Water Supply and Sanitation	Active	14-Dec-06	31-Mar-12	261
TN Irrigated Agri. Modernization and Water-Bodies Restoration and Mngmt. Project	Active	23-Jan-07	31-Mar-13	566
IN: National Urban Infrastructure Fund	Proposed	N/A	N/A	200
Integrated Coastal Zone Management Project	Proposed	N/A	N/A	107
Andhra Pradesh Rural Water Supply & Sanitation Project	Proposed	N/A	N/A	250
Delhi Water Supply & Sewerage	Proposed	N/A	N/A	250
Capacity Building for Urban Local Bodies - NURM Capacity Building	Proposed	N/A	N/A	40
Tamil Nadu Rural Water Supply and Sanitation Project	Proposed	N/A	N/A	625
Dam Rehabilitation & Improvement Project	Proposed	N/A	N/A	400
Andhra Pradesh Urban Reform & Municipal Services Project	Proposed	N/A	N/A	303
Note (a): Cost represents total cost for commissioning of the water project - not specifically the pipeline cost.				

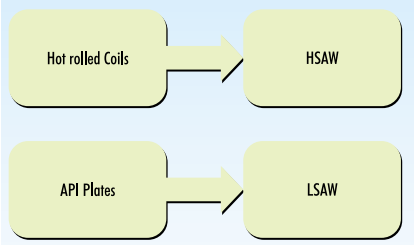
Source: World Bank

ENTRY BARRIERS:

Oil and Gas transportation carries an inherent risk of spillage and leakage, which may cause severe harm to environment. Thus in order to minimize such hazardous events Oil and Gas transportation companies have laid down stringent norms for pipe suppliers. Therefore, pipe manufacturers, in order to become suppliers to international/ local oil majors, require accreditation from these companies. This is very similar to the crude oil transportation business, where each tanker has to be approved by the individual oil companies. Pipe manufacturers have to get their products as well as facilities approved. This is a very lengthy process and it takes up to 2-3 years to get the requisite approvals from major players (Source: Company). Before getting approval from major domestic/international oil and gas companies every company in order to cater to international customers need to get certified by American Petroleum Institute (API). Such approval procedures take around 9-12 months (Source: Company). Total time required for setting up Greenfield project for manufacturing pipes takes 2 years (Source: Company).



Source: Industry, Company



Industry cost structure:

Raw material cost accounts for nearly 70% of sales realization and 80% of cost of production of pipes.

% of sales	
Raw material	70-75%
Power	1-2%
Freight	4-5%
Other costs	2-3%
Margings	15-20%
Source: Company, ACMIIL Research	

Timely and economic availability of raw material is a prime concern for every standalone (non-integrated) manufacturing companies. Two basic raw materials that are used for manufacturing pipes are HR coils for HSAW pipes and Plates for LSAW pipes.

We note that LSAW line pipe prices have been ruling high due to bottlenecks in API plate supplies. API plate production has been historically dominated by Western Europe and Japan, requiring imports into supply deficient regions- India and Russia (Source: Hatch Bedows). We believe as the new plate mills capable of producing API plate start in these supply- deficient regions, we could see LSAW becoming more competitive in international markets. In India, about 5 mn tonness of plate mill is expected to get operational over FY2010.

> "Expected steel plates facilities would provide cushion to Indian LSAW pipe manufacturers"

Producer	Start date	Mn tonnes
Welspun	2008	1.5
Essar Steel	Q4 2007	1.5
Jindal Steel & Power	Apr-07	1
Jindal Steel & Power	2008/9	1.2
Total		5.2
Source: Company, ACMIIL Research		

A shortage of API plates has not only pushed LSAW pipe prices higher but also increased the demand for HSAW pipes for onshore applications. Despite upcoming LSAW capacities in the next 2-3 years, we believe availability of API plates will determine real supply demand for LSAW pipes. Increasing availability of plates will reduce the differential between HSAW and LSAW pipe prices.

Key concerns for the industry and correspondingly Indian Players:

1) **Capacities for pipes building faster than expected times:** We note that addition of around 5 mn tonnes of linepipe (LSAW and HSAW) capacities has been announced worldwide. Any faster-than-expected line pipe addition or revival of unutilized capacities will ease the tight Supply-demand balance much earlier-than-expected, thus adversely impacting realizations, volumes and margins for Indian line pipe manufacturers. Though we build a price decline from 2011, we note price declines can take place much earlier if all the new capacity were to come up as scheduled as or earlier than that.

2) **Stiff Competition:** We note that with large capacities becoming operational in US over the next 2-3 years, Indian Players would have to actively explore other regions such as Africa to increase its exports. Though Indian players export to Middle East and Latin America, we expect markets outside USA will see high competition as players from other geographies such as china, Japan increasingly Target these markets. We believe China, which has seen linepipe imports drop to 12,000 tons (2006) from around 295,000 tons (2003) could have an increasing presence on the LSAW export market once the West-East pipeline development is complete. However, we believe there is a possibility that competition from China may not be intense as potential pipelines from Russia, Central Asia could keep Chinese LSAW/HSAW producers further busy. Further, Japanese players, which face duties in US, will also try to increase their exports to Africa and Middle East.

However, we assume declining realization for Indian players post FY2010.

3) **Appreciating Rupee:** As majority of Indian Players are catering to international markets all companies are inheredly exposed to foreign currency which is usually dominated in U.S dollars. With rupee continuously appreciating Indian players are significantly exposed to vulnerability in Foreign exchange risks.

4) **Weak Bargaining Power**: Indian pipe manufacturers heavily depend on imports for its raw mateial procruement. Such suppliers are large players in international markets, who have significant control over their prices. Thus Indian pipe manufacturers have limited bargaining power in terms of raw material pricing. Conversly customers of indian pipe manufacturers are also large players in international oil and gas industry. This leaves limited room for indian players to pass on the rise in raw material prices to such players as these players may not be willing to accept a price rise beyond certain level. Thus any unreasonable price rise in raw material prices may affect indian pipe manufacturers margins as they wont be able to pass on the price rise completely.

Indian Basket of Pipe Companies

Players

Jindal saw is the most diversified player having capacities almost all types of pipes except ERW. Whereas other players like WGSRL and Maharashtra Seamless are focused either on Saw or Seamless pipes.

Players	SAW Pipes		Seamless Pipes	Ductile/Cast iron (DI/CI) Pipes	ERW Pipes
	LSAW	HSAW			
WGSRL	√	√	X	X	√
Jindal Saw	√	√	√	√	X
PSL	X	√	X	X	X
Maharashtra Seamless	X	X	√	X	X
Man Industries	√	√	X	X	X
Others	X	X	√	√	X

Source: ACMIIL Research

Capacity

Jindal Saw is the largest manufacturer of Lsaw pipes, were as PSL is the largest manufacturer of Hsaw pipes.

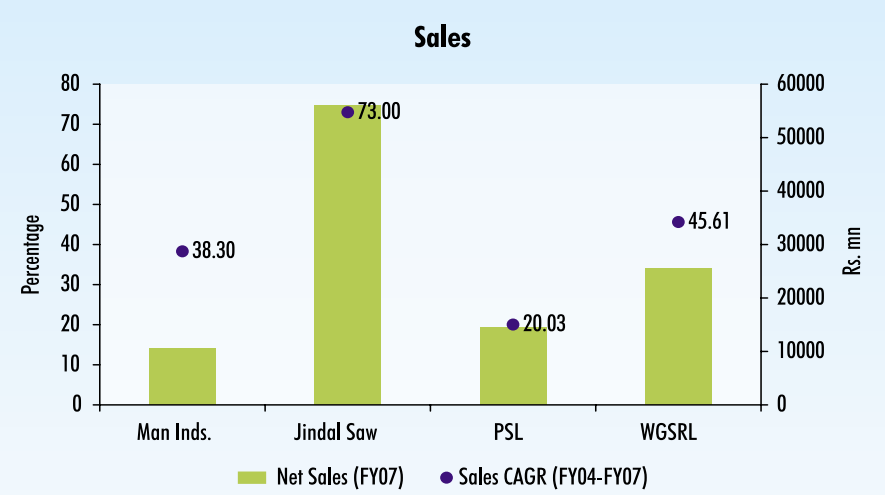
Capacities (MTPA) FY07					
Particular	Jindal Saw	WGSRL	PSL	Man Industries	Total
LSAW	800,000	350,000	-	275,000	1,425,000
HSAW	150,000	400,000	1,100,000	150,000	1,800,000
Seamless Pipe	100,000	-	-	-	100,000
Ductile Iron Pipe	200,000	-	-	-	200,000
ERW	-	250,000	-	-	250,000
Total	1,250,000	1,000,000	1,100,000	425,000	3,775,000

Source: ACMIIL Research

To cater to world's burgeoning demand of pipes, all major players are undertaking capex, which are expected to be operational by FY10. Players like WGSRL, Man Industries and PSL are setting up facilities in USA to specifically cater to US demand.

Capacities Post Expansion (MTPA) by FY10					
Particular	Jindal Saw	WGSRL	PSL	Man Industries	Total
LSAW	1,000,000	650,000	-	500,000	2,150,000
HSAW	500,000	850,000	1,400,000	800,000	3,550,000
Seamless Pipe	250,000	-	-	-	250,000
Ductile Iron Pipe	200,000	-	-	-	200,000
ERW	-	250,000	-	-	250,000
Total	1,950,000	1,750,000	1,400,000	1,300,000	6,400,000
(Note: Capacities includes Capacity Expansion in USA WGSRL: 300,000 MTPA: HSAW; PSL: 300,000 MTPA: HSAW; Man Industries: 300,000 MTPA: HSAW)					
Source: ACMIIL Research					

Sales



(Note: Jindal Saw Sales are annualized)
Source: ACMIIL Research

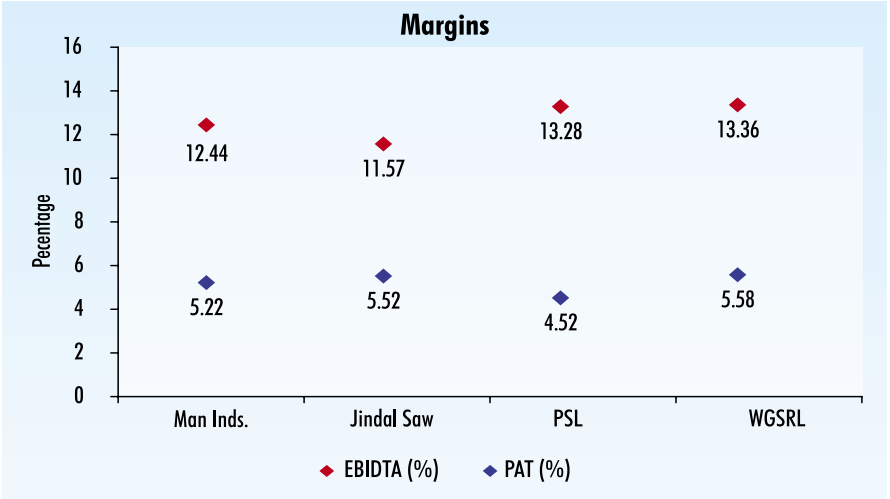
Jindal Saw is the largest player in term of volumes. Largest capacity, operation in USA and above average capacity utilization has helped the company to register sales more than double of its competitor.

WGRSL which has a smaller capacity than PSL has registered sales which is almost double than that of PSL mainly due to higher capacity utilization rate (Larger and heavier the pipe manufactured better would be the capacity utilization)

Both Jindal Saw and WRGSL sales have depicted unprecedented sales CAGR growth of 73% and 46% due to increase in capacity, increasing capacity utilization and increasing realization of pipes.

Margins

WGSRL has highest EBIDTA margin over its domestic peer players due to its presence in niche market and timely booking of its raw material. WGSRL with its backward integration (expected in FY08) would further improve company's EBIDTA margins Jindal Saw has lowest EBITDA margins primarily due low profitability of US operations, However, with divestment of US operations EBIDTA margins are expected to increase.



(Note: Margins: FY07, Source: ACMIIL Research)

High gearing of PSL and WGSRL has lead to erosion of EBIDTA margins. Both PSL and WGSRL PAT margins are lower with respect to EBIDTA margins due to higher interest cost.

Particulars	Man Industries	Jindal Saw	PSL	WGSRL
Debt Equity (FY07)	0.86	0.52	2.26	2.03

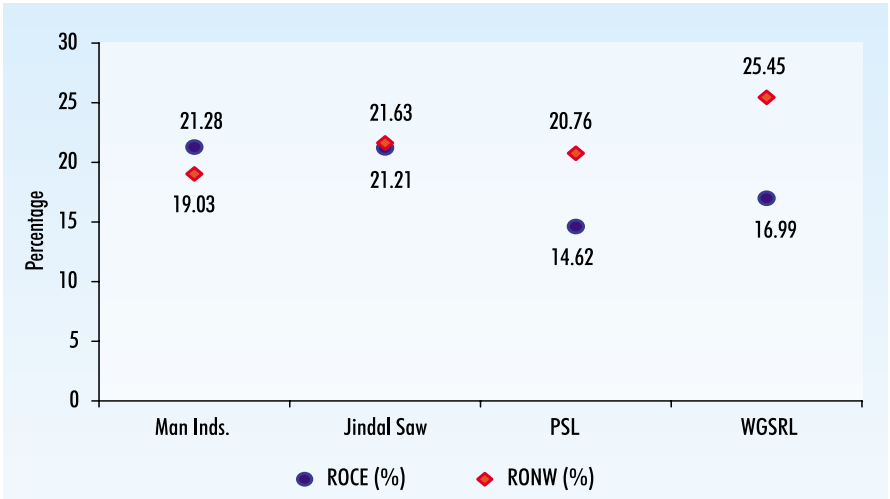
Source: ACMIIL Research

Quarterly Results				
	Man Industries	Jindal Saw	PSL	WGSRL
Net Sales FY07	10596.40	70157.05	14433.40	25551.30
Net Sales 9M	10575.70	70157.05	15656.30	27707.00
EBIDTA %	12.22	11.57	11.02	16.82
PAT %	5.39	5.52	4.24	8.99

(Note: Jindal Saw results are for 15M CY07)

Source: ACMIIL Research

Return ratios (FY07)

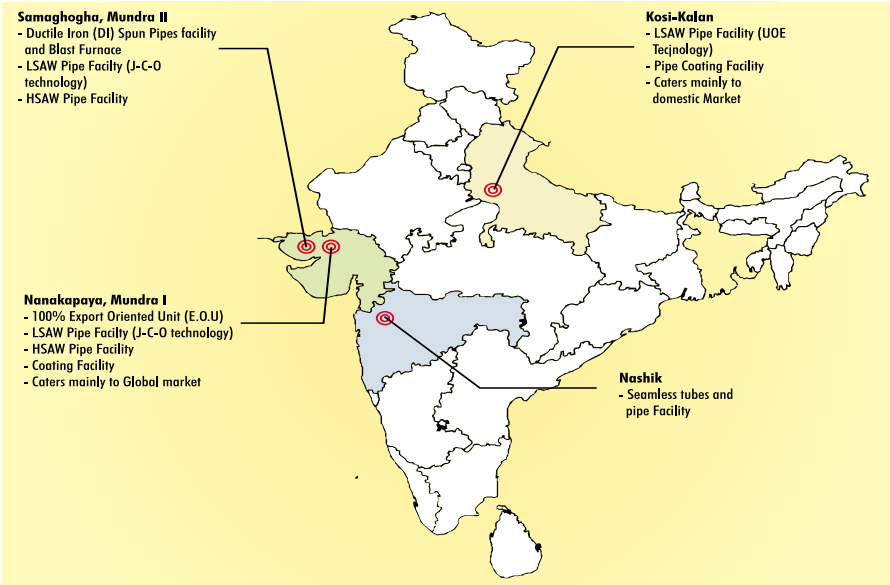


Source: ACMIIL Research,
Note: Jindal Saw's ROCE & RONW are annualized and normalized

"Prominent player in International and Domestic **Market**"

Company Background

JSL has its presence in both global and domestic market, approximately 65% of current order book constitutes of export while the rest 35% constitutes of domestic orders. JSL operates through its plants located at Mundra (Gujarat), Nashik (Maharashtra) and Kosi Kalan (Uttar Pradesh). The company manufactures SAW & Ductile Iron (DI) pipes at Mundra and Kosi Kalan, while seamless pipes are manufactured in Nashik. It also has pipe-coating plants at Mundra and Kosi Kalan.



(Source: Company)

To cater to global demand for SAW pipes, JSL has strategically selected Mundra as its manufacturing base. Mundra plant being on the western shore of India makes exports to the middle- east feasible and cost efficient. While, domestic demand for pipes is mainly address through its Kosi-kalan facility.

Key Positives

- **Diversified Product Mix**

Jindal Saw is the only manufacturer in India with a diverse product profile from SAW pipes to seamless and DI pipes. This places JSL in a position to grab opportunities arising in diverse industries from oil & gas exploration and transportation to Water infrastructure. Diversification also reduces risk related to concentration on a particular industry.

Particulars	Longitudinal Saw Pipes (LSAW)		Spiral/Helical Saw Pipes (HSAW)	Seamless Pipes	Ductile Iron Pipes (DI)
Location	Kosi Kalan	Mundra I & II	Mundra I	Nashik	Mundra II
Capacity MT PA	250,000	550,000	150,000	100,000	200,000
Operating Margins	14% to 15%		14% to 15%	9.5%	20%
Application	Oil & Gas Transportation.		Oil & Gas Transportation, Water Transportation.	Petroleum, Exploration, General Engineering, Boilers, Automotive.	Water Transportation, Sanitation & Housing.
Differentiator	Used under high pressure conditions Demand directly related to investments in Oil & Gas sector		Used under low pressure conditions Demand directly related to investments in Oil & Gas sector and water projects	Wide application in oil related and non-oil industries	Ductile is rapidly replacing Cast Iron steel pipes

Source: ACMIIL Research, Company

Products like DI pipes, which earn higher EBIDTA margins compared to LSAW and HSAW also helps JSL to keep up its margins.

- **Capacity to manufacture large diameter and thicker pipes**

Diameter and thickness of pipe determines its realization. Larger the thickness / diameter, better would be its realization. JSL is one of few players with the technology and capacity to manufacture thicker and large diameter pipes. It can manufacture LSAW and HSAW pipes with diameter as large as 56" and 100" and thickness of 38 mm and 18mm respectively.

Particulars	Longitudinal Saw Pipes (LSAW)	Spiral/Helical Saw Pipes (HSAW)
Jindal Saw		
Size	16" to 56" outer diameter	20" to 108" outer diameter
Thickness	38 mm	18 mm
Welspun Gujarat Stahl Rohren		
Size	16'' to 60'' outer diameter	18'' to 100'' outer diameter
Thickness	40 mm	25 mm
Source: ACMIIL Research, Company		

- **Presence in DI pipes**

DI pipes find their application mainly in water transportation, sanitation and housing. Over the years Cast Iron Pipes (CI) were used for water transportation. However, DI pipes are now replacing CI pipes due to better physical and mechanical properties, more water carrying capacity, high corrosion resistance, etc. (Annexure: II)

Jindal Saw, apart from Electrosteel Casting Ltd is the only player in India having presence in DI Pipe segment.

> "Only player, apart from Electrosteel Casting in DI Pipes segment"

Indian DI Pipes Manufacturers	Location	Capacity MT PA
Electrosteel Casting Ltd	Kolkata	250,000
Jindal Saw	Mundra	200,000
(Source: ACMIIL Research, Company)		

Demand for DI pipes has grown at a CAGR of 23% and is expected to grow at a CAGR of 16% to 18% from 2006 onwards (Source: Industry). This is expected to benefit both players, as each caters to different market. Jindal Saw has its presence in western market as its manufacturing base is in Mundra and Electrosteel Casting Ltd with its base in Kolkota caters to the eastern market.

- **Strong Order Book**

JSL's order book stands at USD 1 Bn, executable by January 2009. Majority of the order book constitutes of LSAW followed by DI and HSAW.

Particulars	USD mn
Large Diameter pipes	860
Ductile Iron Pipes	165
Seamless Pipes	65
Source: Company	

Order book US $1bn includes export orders of more than 65%. In the domestic market, company has bagged USD 200 mn from Cairn Energy India (Cairns) to supply LSAW line pipes covering 600 kilometres for worlds' longest underground pre-insulated heat traced "Barmer Salaya pipeline". Further the company has bided for approx. US$ 3 bn worth of orders in domestic as well as international markets.

- **Accreditation from global and domestic manufacturers**

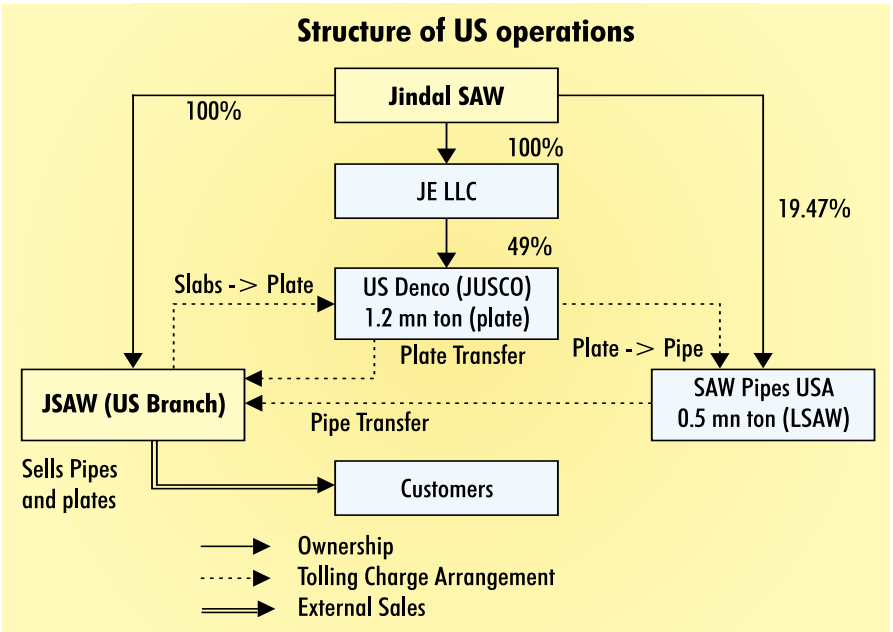
Oil and Gas transportation through pipes carries an inherent risk of spillage and leakage, which may cause severe harm to environment. Thus, in order to minimize such hazardous events Oil and Gas transportation companies have laid down stringent

norms for pipe suppliers. Therefore, pipe manufacturers, in order to become suppliers to international/ local oil majors, requires accreditation from these companies. JSL executed its first export order in 1995 for line pipe. Over the years JSL has marked its presence in global as well as domestic market and has received accreditation (an entry barrier for new entrant) from many major global as well as domestic manufacturers.

(Source: Company)

- **Sale of US Operations**

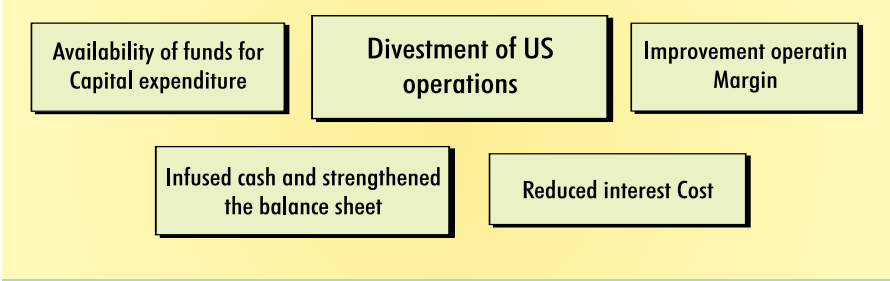
JSL had two affiliates in US namely US Denco engaged in manufacture of steel plates and SAW Pipes USA engaged in manufacture of LSAW pipes. JSL provided all necessary raw materials to its affiliates, which manufactured finished goods (steel plates and Pipes) and charged manufacturing fees or tolling fees for the same. These goods were then sold to US and neighbouring markets through JSL's subsidiary JSAW.



(Source: Company)

JSL's USA affiliates had a lower yield rate. Conversion ratio of slabs to plates was 80% as compared to Industry standards of 95%. Lower yield rate resulted into lower margins from US operations. EBIDTA margins from US operations were 7% - 8% as compared to 13% -15% margins of Indian operation in CY07, Thus acting as a drag on consolidated (US + Indian operations) margins, which were 11% in CY07 (15M).

To improve efficiency (yield rate) and reduce cost, US operations needed capital expenditure of more than US $60 mn. Both US Denco and Saw Pipes USA were processing facilities. They only processed orders of Jindal Saw and received processing fees for the same. Thus, capital expenditure (Yield improvement) if undertaken would have mainly benefited Jindal Saw. Majority shareholders of these affiliates were not willing to invest, as there was no incentive for them. Hence, JSL divested its US operations in November 2007.



(Source: ACMIIL Research)

Through the divestment, JSL received post tax cash of USD 200 mn on small investment of less than USD 3 mn. JSL also received additional USD 75 mn in cash for liquidation of net current assets in USA operations. These funds are now available for investments in Indian operations and debt repayment. Divestment has considerably strengthened the Balance sheet and reduced debt to equity ratio from 1.68 in FY06 to 0.52 in FY07.

Due to divestment, JSL shall not manufacture and sell LSAW pipes and steel plates in USA. However, JSL can sell HSAW and seamless pipes in USA. Majority of demand in US is for HSAW pipes as major Gas pipeline projects are being planned. To cater to this demand (HSAW pipes), JSL has setup a pipe coating facility in USA. This facility will coat HSAW pipes (manufactured in India and shipped to USA) and sell these pipes to US and neighbouring market.

- **Capital Expenditure to tap growing demand for pipes and improve efficiency**

  JSL is undertaking capital expenditure for

  - Capacity Expansion
  - De-bottlenecking exercise

A. Capacity Expansion

To tap global and domestic demand for pipes, JSL is undertaking USD 200 mn capital expenditure.

Pipes	Location	Capacity MTPA	Expansion MTPA	Completion date (E)	Capex USD Mn	Total (Post Capex)
LSAW	Kosi Kalan	250,000			30	1,000,000
LSAW	Mundra I & Mundra II	550,000	200,000	Sep-08		
Seamless Pipe & Tube	Nashik	100,000	150,000	Sep-08	75	250,000
HSAW	Mundra I	150,000	200,000	Sep-08	45	500,000
HSAW	Bellary, Karnataka		150,000	Sep-08		
Ductile Iron (DI) Spun Pipes	Mundra II	200,000			50	200,000
Total		1,250,000	700,000		200	1,950,000

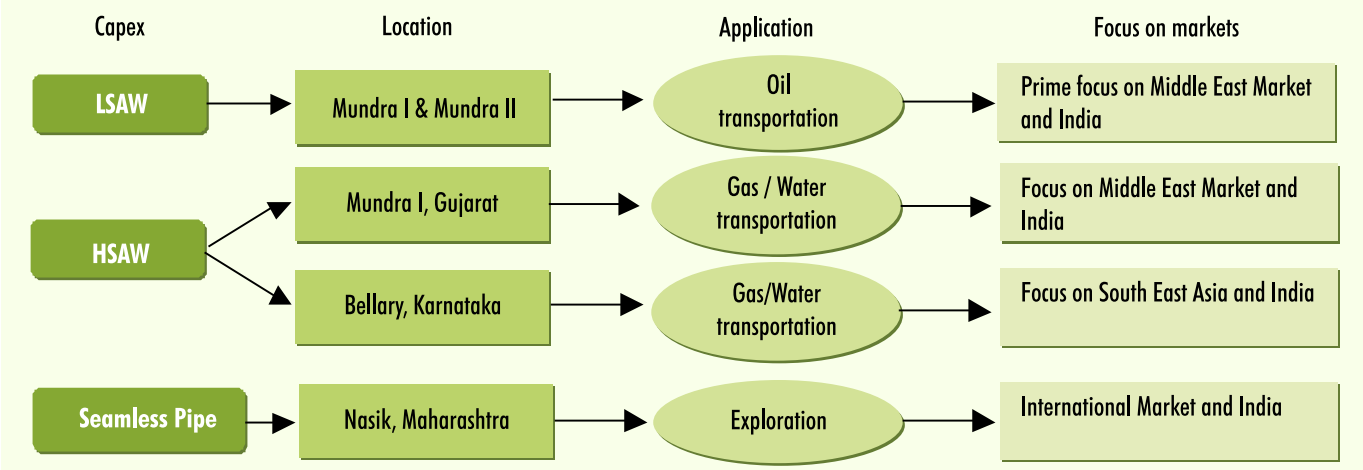
Source: Company

Post expansion JSL's total capacity will increase from 1.25 mn Mtpa to 1.95 mn Mtpa by September 08. JSL is doubling both HSAW and Seamless capacity. However, JSL will continue to be LSAW manufacturer primarily, with LSAW contributing more than 50% of total production.

"Prime focus on Middle East and **Domestic markets**"

Target Markets

JSL is undertaking capacity expansion considering global and domestic demand. JSL is primarily targeting Middle East and domestic market, banking on its locational advantage. Currently more than 90% of its export orders come from Middle East region.



(Source: ACMIIL Research, Company)

"**De-bottlenecking exercise** to reduce cost and improve quality"

B. De-bottlenecking exercise

Other than capacity expansion, JSL's capital expenditure is also focused on improving quality, reducing operating cost.

- **DI pipes facility (Mundra):**

To improve the yield rate i.e. conversion of hot metal to DI pipes instead of Pig iron, JSL undertook de-bottlenecking exercise at its DI Facility.

Particulars	Before De-bottlenecking exercise	After De-bottlenecking exercise
Blast furnace Capacity Utilization	100%	100%
Hot Metal Produced (MT)	250,000	250,000
DI Pipes (MT)	160,000	200,000
Pig Iron (MT)	90,000	50,000

(Source: ACMIIL Research, Company

Note: Pig Iron is a by product of DI Pipe Manufacturing process (Annexure III).)

Increased proportion of DI Pipes will lead to increase in profitability due to higher realization of DI Pipes. Average realization for DI Pipe was approx. Rs. 850 per tonne as compared to approx. Rs.530 per tonne for Pig Iron during 2007. In addition to de-bottlenecking, JSL has installed a sintering plant (Annexure III) to support blast furnace, it can now use iron ore fines instead of lumps. Both Sinter Plant and de-bottlenecking of the DI pipe facility has been completed.

The company is now installing a waste heat recovery based captive power plant of 15MW to utilize coke oven gases at Mundra, Gujarat.

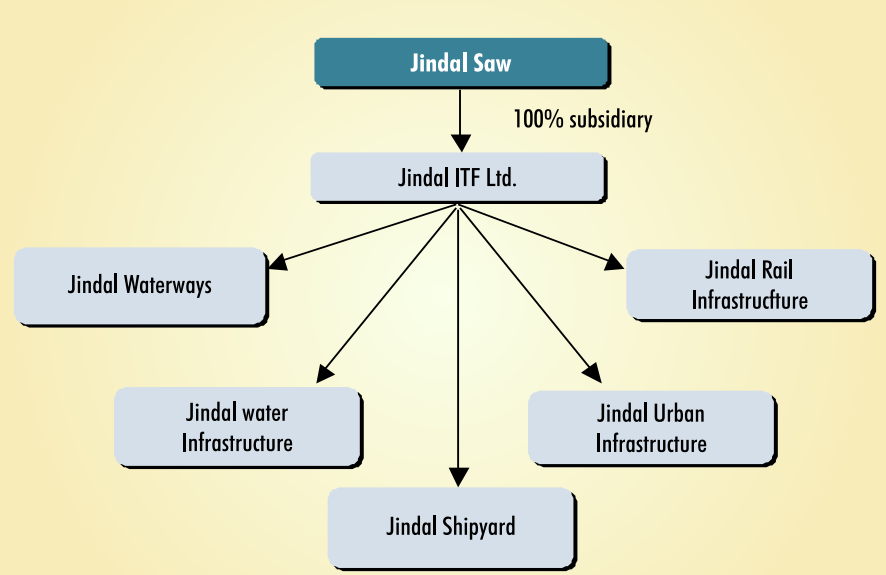
- **Seamless plant (Nasik):**

JSL is setting up PQF (Premium Quality Finishing) Mill, a 3-roll type retained mandrel mill. PQF technology improves the product quality & cost, widens the productive size range and wall thickness. PQF mill will enable JSL to manufacture higher grades of seamless pipes. Capital expenditure at it seamless facility will also result in yield enhancement from current 75% to 88% (Source: Company).

Capacity expansion and de-bottlenecking exercises will drive volumes and save cost.

New Ventures

JSL is foraying into infrastructure space through its newly formed subsidiary Jindal ITF, which has subsidiaries underneath it. JSL plans to deploy approx. Rs. 18000 mn through a debt equity mix of 3:1 in next two years. It has issued warrants and Compulsorily Convertible Debentures worth Rs. 4300 mn for the same.



(Source: Company)

Investment Planned	Rs. Mn
Jindal Waterways	6,000
Jindal Urban Infrastructure	2,000
Jindal Ship building	8,000
Jindal Water Infrastructure	2,000
Jindal Rail Infrastructure	

Source: Company

- **Jindal Waterways Ltd (JWL):**

  It is a water transportation company. The company has acquired 5 ships of 8,000 DWT - 10,000 DWT for USD 9mn each. Two of the five ships have been already deployed on west coast doing north to south connectivity. Ships carry cargo on spot basis with an average freight of USD 30 per tonne. The company is earning close to 30% EBIDTA and it plans to buy 5 more ships by the year-end. JSL expects each ship to earn freight of Rs. 25 mn per month (Source: Company).

- **Jindal water Infrastructure Ltd (JWIL):**

  Jindal water Infrastructure has current order book of USD 100 mn, executable by October 08. JWIL is executing three projects; water management for power utility, water management for clusters and common effluent treatment plant (CETP). The company has put forward bids for projects worth USD 600 mn. Future revenues will depend on its ability to win projects. The company expects JWIL to generate revenues close to USD 100 mn in CY08.

- **Jindal Urban Infrastructure Ltd (JUIL):**

  Jindal Urban Infrastructure recently won a contract to setup country's largest urban waste plant in Delhi. It is 20MW power generation project from urban waste.

The plant would run on about 6,000-8,000 tonne of waste. New Delhi Municipal Corporation and Municipal Corporation of Delhi would supply raw material to the company. JUIL has registered with United Nations Framework Convention on Climate Change (UNFCC) for availing carbon credits. JSL will invest approx. Rs.2,000 mn for the project. The project is expected to complete in 670 days by February 2010. JUIL will then sell power generated from the plant. Half of the power will be sold to State electricity board at Rs 2.45 per unit and remaining 50% will be sold to private players at merchant rate. JUIL is expected to earn revenues after CY09 on completion of power plant.

- **Jindal Rail Infrastructure Ltd (JRIL):**

  For manufacturing of railway wagons the company has entered into a joint venture with a Chinese company. The company expects to start its operation within next 8 to 12 months. JRIL is expected to earn revenues after CY09.

- **Jindal Shipyard Ltd (JSYL):**

  Jindal Saw also plans to venture into shipbuilding. It has acquired close to 510 acres of land in Gujarat. Company is planning to invest USD 100 mn for shipyard and another USD100 mn for setting up propellers, radar, etc. JSYL will be constructing ships having capacity ranging between 8,000 DWT - 10,000 DWT and is expecting its first ship to be out by 2009. Initially ships manufactured will be sold to JWIL.

Expected Revenues

Particular	CY08E	CY09E
Jindal Waterways Ltd	(USD 100 mn)	NA
Jindal water Infrastructure Ltd	(USD 50 mn)	NA
Jindal Urban Infrastructure Ltd	Revenues expected to flow post CY09	
Jindal Rail Infrastructure Ltd	Revenues expected to flow post CY09	
Jindal Shipyard Ltd	First Ship expected in CY09	

Source: Company

Key Concerns

- **Export Duty to erode JSL's earnings:** Government has levied export duty of 10% on export of pipes and tubes from May 10 2008. JSL's current order book is approximately 1 bn USD. 65% of the order book constitutes of export orders, which will now attract export duty. These orders are booked at predetermined rate with virtually no escalation clause. Thus the possibility of passing on such additional burden of export duty does not arise for CY08E. Out of total estimated sales of Rs. 40,656.9 mn in CY08E, sales worth Rs. 19,986.8 mn are estimated to invite export duty. Thus export duty will have a considerable impact on JSL's earnings.

Particulars	Earlier		With implementation of Export Duty @10%	
	LSAW	HSAW	LSAW	HSAW
Sales price per tonne (USD)	1500	1100	1500	1100
Raw material cost per tonne (USD)	1200	850	1200	850
Processing Cost per tonne (USD)	75	85	75	85
Export Duty borne by the Manufacturer (USD)			150	110
Operating Margin (USD)	225	165	75	55

(Source: ACMIIL Research, Company)

This action seems to be temporary stand taken by Government, which may not extended beyond 12 months. We have thus analyzed a situation, where if duty remains

enforced for each quarter what effect may be observed on company's earnings after each passing quarter.

Particulars	Q2	Q3	Q4	Net Sales (Rs. mn)	OPM (%)	NPM (%)	EPS (Rs.)
Export Duty				39093.65	14.09	6.91	48.13
(CY08E)				38504.06	12.77	5.92	40.67
				37684.55	10.88	4.51	30.29

Source: ACMIIL Research

However, if export duty stays for CY09E, we do not see any passing of such additional duty burden to foreign clients, as inclusion of export duty in biding prices will make Indian pipe manufacturer's price non-competitive against world foray of pipe manufacturers. Out of total estimated sales of Rs. 58048 mn in CY09E, sales worth Rs. 36,494 mn are estimated to invite export duty. Hence, export duty will continue to have a considerable impact on JSL's earnings in CY09E as well.

- **Diversification:**

JSL is venturing into diverse areas through its subsidiaries. These not being JSL core business activities, there exits inherent risk of failure. Subsidiaries being at nascent stage may erode consolidated earnings for initial period.

JSL plans to fund ventures through a debt equity mix of 3:1, which would considerably increase interest burden on JSL's earnings.

- **Raw material prices and procurement:**

Raw material constitutes 70-75% of sales. To pass on price risk, JSL places order to suppliers only after receiving orders from its clients. But there exists a small time gap and any major volatility in prices of raw material in such period may affect JSL.

JSL is totally dependent on import for procurement of plates (used for LSAW). Company mainly sources plates from Southeast Asia, which are transported by ships. Non-availability of transport or any delays may negatively affect JSL's operations.

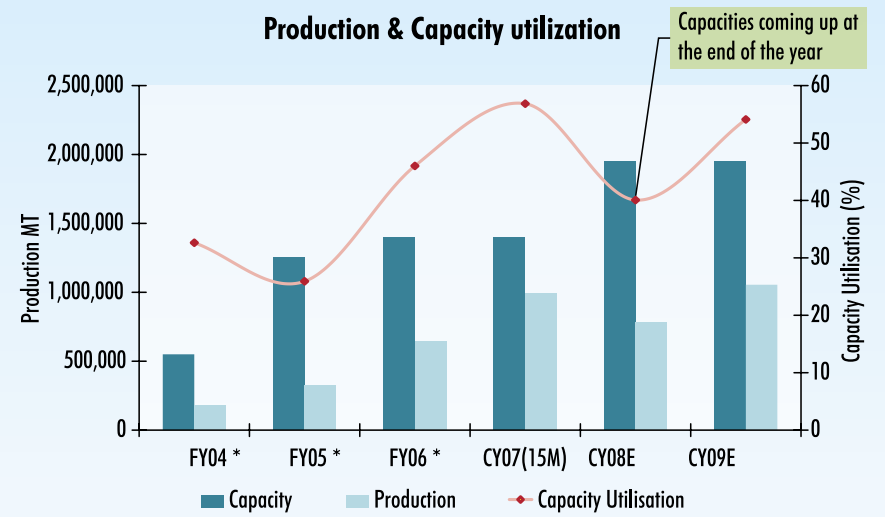
> "Capacity addition, increasing realisation and improved capacity utilization have contributed to sales growth"

Financials

We have not considered income as well as expenses from new ventures to arrive at our estimates. As all new ventures are at nascent stage and plans are being worked out, we are awaiting for more clarity on each project.

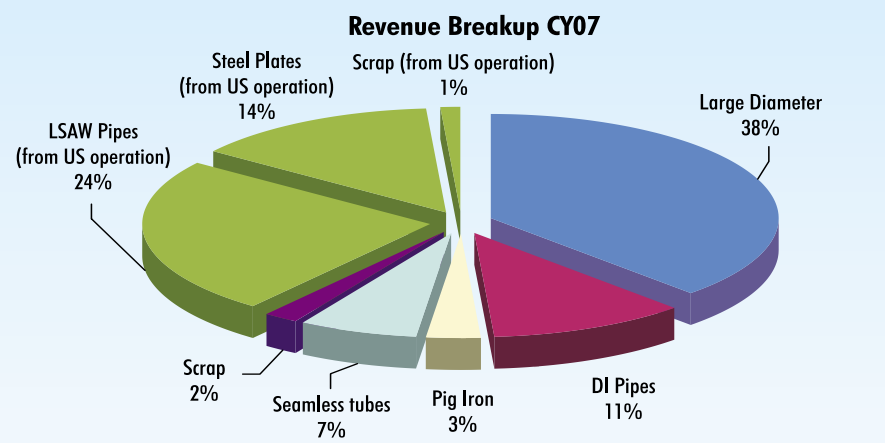
Net Sales

Net sales have grown from Rs. 10,856.35 mn in FY04 (September Ending) to Rs. 56,125.64 mn in CY07 (annualized) at a CAGR of 73%. Increase in sales was mainly due to increased realization in pipes, capacity addition and improved capacity utilization.



(Source: ACMIIL Research, Company)
(Note: CY07 Capacity utilization is annualized, * September Ending)

US operations constituted 39% of CY07 (15M) sales.

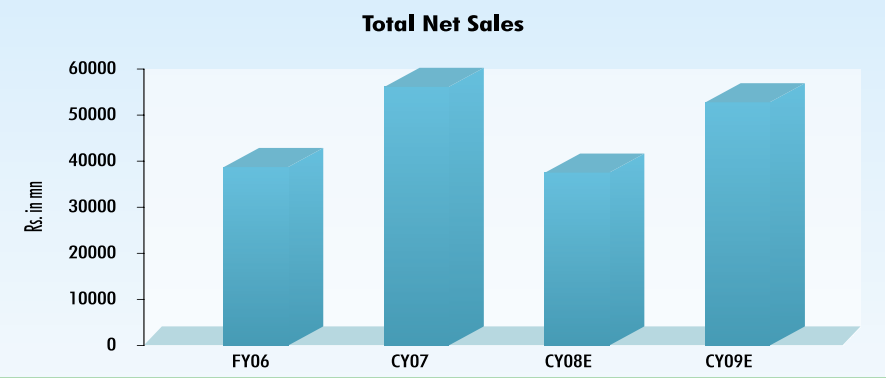


(Source: Company)
(Note: Sale of pipes & plates manufactured by US operations are marked as green)

JSL divested its US operations in November 2007. Capacity addition in domestic operations and increasing realizations of pipes were expected to compensate for fall in revenues due to discontinuation of US operations through these affiliates.

However, with imposition export duty of 10% on exports of pipes and tubes. Manufacturers like JSL will not be able to pass on this duty to its customers to maintain their competitiveness in the international market. Hence, Net Sales are now expected to decline from Rs. 56125.64 mn in CY07 (annualized) to Rs. 52782.4 mn in CY09E.

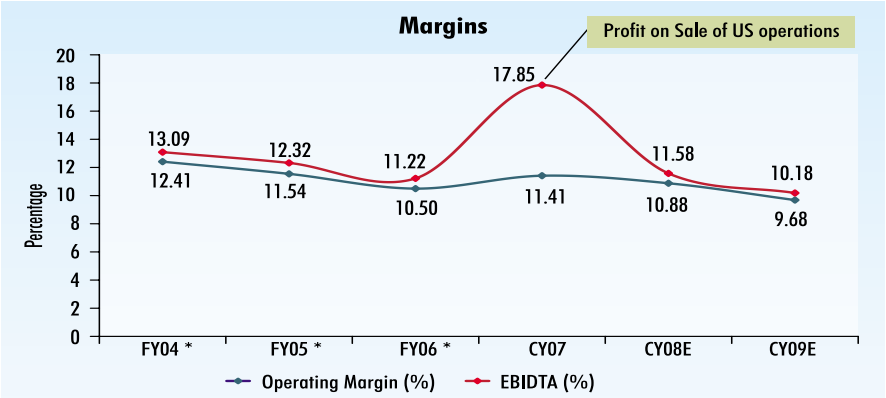
"Export duty to create a drag on Net Sales"



(Source: ACMIIL Research)
(Note: CY07 sales are annualized, FY06: September Ending)

Operating Margins

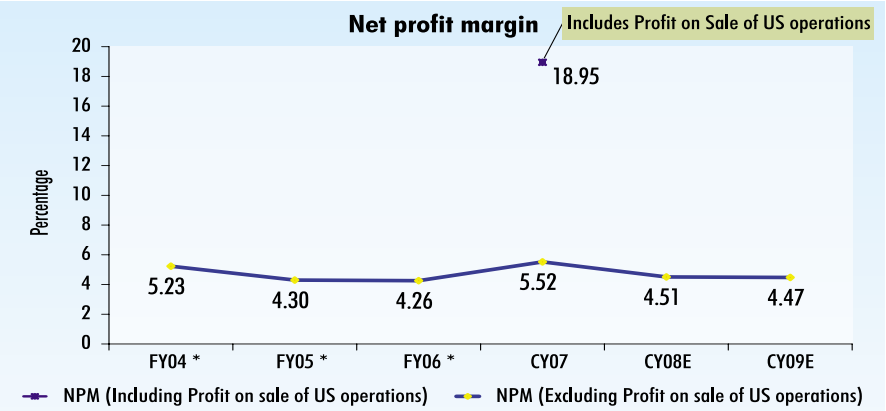
"Export duty to pull down operating margins"



(Source: ACMIIL Research, Company) (Note: * September Ending)

Operating margins were expected to improve from 11.41% in CY07 to more than 15% in CY09E due to divestment of US operations. However, with the levy of export duty, operating margins are now expected to fall to 9.68% in CY09E.

Net Profit Margin



(Source: ACMIIL Research, Company) (Note: * September Ending)

Over the years Net profit margins have been around 5%. Net profit margins in CY07 were 18.95% as JSL received post tax Rs. 9419 mn (other income: Rs. 4404 mn and Extra ordinary income: Rs. 5014.8 mn) from divestment of US operations.

Going forward, with levy of export duty, we expect net profit margin to fall to 4.47 % in CY09.

Capital Structure

JSL issued Foreign currency convertible bonds (FCCB) of JPY 9,090 mn convertible on or before 24 June 2011 into newly issued equity shares of Rs. 10 each at an initial conversion price of Rs. 675 per share with fixed rate of exchange of JPY 2.533= Re. 1.00

As of 31st Dec 2007, FCCB worth JPY 625 mn were converted into equity shares. We have assumed full conversion of the outstanding (JPY 8,465 mn) in FY08. Hence we expect equity share capital to increase from Rs.511.4 mn in FY07 to Rs. 560.9 in FY08

JSL has issued 2.6 mn warrants convertible into one equity shares of Rs 10/- each at a price not less than Rs 819 per share convertible on or before March 31, 2009.

JSL has also issued 2.73 mn — 9.5% Unsecured Compulsorily Convertible Debentures (CCDs) of Rs 819/- each convertible into one equity share of Rs 10/- each at a price not less than Rs 819 per share convertible during the period from April 01, 2009 September 20, 2009.

We have considered full conversion of both warrants and CCDs in CY09.

Profitability Ratios	FY04 *	FY05 *	FY06 *	CY07 (15M)	CY08E	CY09E
Debt/Equity	2.2	1.5	1.7	0.5	0.3	0.2

(Source: ACMIIL Research • Note: * September Ending)

Debt equity ratio reduced from 1.7 in FY06 to 0.5 in CY07 mainly on account divestment of US operations. We expect debt equity ratio to reduce further in CY08 and CY09 due to full FCCB and CCDs conversion.

Valuation and Recommendation

We believe that there is opportunity in global pipes and tubes sector and JSL being one of the leading player in the industry is likely to benefit from the incremental demand.

However, levy of export duty of 10% on exports of pipes and tubes would definitely have negative impact on company's earnings till date such levy remains enforced.

Our impact analysis shows that if export duty stays for CY08 then CY08E EPS will come down to Rs 30.3 from our estimates of Rs 52.11 (Annexure I: Without considering impact of export duty).

The sharp decline in EPS of JSL is due to decrease in operating margins, as manufacturers like JSL would not be able to pass on the additional burden of export duty. Reduction in EPS will also negatively impact the company's cash flows and its debt repayment capacity.

We have also done an impact analysis on quarterly basis for CY08E, we observe that if export duty remains levied for Q2CY08, Q3CY08, Q4 CY08, its EPS would reduce to Rs 48.12, 40.66 and 30.29 respectively.

Similarly if duty remains levied for another year i.e. CY09, its EPS may reduce down to Rs 38.5 from our estimate of Rs 81.91 (Annexure I: Without considering impact of export duty).

Rs. mn

Particulars	Without Export Duty	With Export Duty		Without Export Duty	With Export Duty	
	CY08E	CY08E	Difference (%)	CY09E	CY09E	Difference(%)
Net Sales	39,396.60	37,684.55	-4.35	56,249.36	52,782.40	-6.16
Operating Profits	5,811.00	4,098.95	-29.46	8,578.03	5,111.07	-40.42
PAT	2,923.28	1,699.22	-41.87	5,031.03	2,361.93	-53.05
Operating Profit Margin (%)	14.75	10.88	-26.26	15.25	9.68	-36.5
Net Profit Margin (%)	7.42	4.51	-39.23	8.94	4.47	-49.97
EPS (Rs.)	52.11	30.29	-41.87	81.91	38.45	-53.05

(Source: ACMIIL Research, Annexure I)

Hence, we at present, recommend clients to reduce the exposure. If steel ministry is able to convince the Government then export duty may be rolled back. At this juncture it is advisable for investors to be cautious and avoid fresh investments.

Profit & Loss Account (Normalized and annualized: CY07)						(Rs. in mn)
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07**	**CY08E**	**CY09E**
Net Sales	10,856.4	23,138.5	38,731.4	56,125.6	37,684.6	52,782.4
Total Expenditure	9,509.1	20,467.4	34,666.0	49,719.6	33,585.6	47,671.3
Operating Profits	**1,347.3**	**2,671.1**	**4,065.4**	**6,406.0**	**4,099.0**	**5,111.1**
Other Income	73.5	179.8	281.3	90.2	263.8	263.9
EBDIT	**1,420.8**	**2,850.9**	**4,346.7**	**6,496.2**	**4,362.7**	**5,375.0**
Depreciation	229.7	365.0	537.1	618.4	977.8	1,002.8
EBIT	1,191.2	2,485.8	3,809.6	5,877.8	3,384.9	4,372.2
Interest	408.5	984.6	1,290.2	1,547.0	991.7	1,045.5
PBT	782.7	1,501.2	2,519.4	4,330.8	2,393.3	3,326.7
Taxes	214.7	506.9	868.6	1,230.4	694.0	964.7
Profit After Tax	**568.0**	**994.3**	**1,649.1**	**3,100.4**	**1,699.2**	**2,361.9**
Growth in sales (%)		113.1	67.4	44.9	-32.9	40.1
Operating Profits Growth (%)		98.3	52.2	57.6	-36.0	24.7
PAT Growth (%)		75.0	65.9	88.0	-45.2	39.0
Operating Profit Margin (%)	12.4	11.5	10.5	11.4	10.9	9.7
Net Profit Margin (%)	5.2	4.3	4.3	5.5	4.5	4.5
(Note: * September Ending, # CY07: Normalized (Excludes profit on Sale of US operations) and annualized)						
(Source: ACMIIL Research, Company)						

Profit and Loss Account						(Rs. in mn)
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07 (15m)**	**CY08E**	**CY09E**
Net Sales	10,856.4	23,138.5	38,731.4	70,157.0	37,684.6	52,782.4
Total Expenditure	9,509.1	20,467.4	34,666.0	62,149.6	33,585.6	47,671.3
Operating Profits	**1,347.3**	**2,671.1**	**4,065.4**	**8,007.5**	**4,099.0**	**5,111.1**
Other Income	73.5	179.8	281.3	4,516.8	263.8	263.9
EBDIT	**1,420.8**	**2,850.9**	**4,346.7**	**12,524.3**	**4,362.7**	**5,375.0**
Depreciation	229.7	365.0	537.1	773.0	977.8	1,002.8
EBIT	1,191.2	2,485.8	3,809.6	11,751.2	3,384.9	4,372.2
Interest	408.5	984.6	1,290.2	1,933.7	991.7	1,045.5
PBT	782.7	1,501.2	2,519.4	9,816.9	2,393.3	3,326.7
Taxes	214.7	506.9	868.6	1,538.0	694.0	964.7
PAT	**568.0**	**994.3**	**1,649.1**	**8,278.9**	**1,699.2**	**2,361.9**
Extraordinary items	0.0	0.0	0.0	5,014.8	0.0	0.0
Profit After Tax	**568.0**	**994.3**	**1,649.1**	**13,293.7**	**1,699.2**	**2,361.9**
Growth in sales (%)		113.1	67.4			40.1
Operating Profits Growth (%)		98.3	52.2			24.7
PAT Growth (%)		75.0	65.9			39.0
Operating Profit Margin (%)	12.4	11.5	10.5	11.4	10.9	9.7
Net Profit Margin (%)	5.2	4.3	4.3	18.9	4.5	4.5
(Note: * September Ending)						
(Source: ACMIIL Research, Company)						

Balance Sheet						(Rs. in mn)
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07 (15m)**	**CY08E**	**CY09E**
Sources of Funds						
Share Capital	389.8	471.1	483.6	511.4	560.9	614.2
Redeemable Non Conv Pref Share		1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
Optionally Conv Warrants			116.5			
Reserves and Surplus	3,034.6	6,451.1	8,031.1	22,238.2	26,907.3	33,228.0
Total Shareholders Funds	3,424.4	7,922.3	9,631.3	23,749.6	28,468.2	34,842.2
Total Loan Funds	7,630.3	11,979.2	16,217.3	12,455.4	9,178.9	8,543.1
Minority Interest	0.0	0.0	151.1	94.6	100.0	100.0
Net Deferred Tax Liability	465.8	598.8	763.1	825.8	1,264.3	1,289.5
Total Capital Employed	**11,520.5**	**20,500.3**	**26,762.8**	**37,125.4**	**39,011.4**	**44,774.8**
Application of Funds						
Gross Block	5,091.4	8,633.4	11,049.1	12,336.6	19,556.3	20,056.3
Less: Accumulated Depreciation	1,573.1	1,980.4	2,499.1	3,246.2	4,224.0	5,226.9
Net Block	3,518.3	6,653.0	8,550.0	9,090.4	15,332.3	14,829.5
Capital Work in Progress	2,349.9	1,176.9	1,546.3	4,219.7	500.0	500.0
Goodwill	167.2	31.7	157.6	69.8	70.0	70.0
Investments	862.0	867.6	835.6	2,092.8	4,328.7	5,858.1
Net Current Assets	4,623.0	11,770.2	15,673.2	21,652.7	18,780.4	23,517.2
Miscellaneous Expenses not w/off	0.0	0.8	0.0	0.0	0.0	0.0
Total Assets	**11,520.5**	**20,500.3**	**26,762.8**	**37,125.4**	**39,011.4**	**44,774.8**
(Note: * September Ending)						
(Source: ACMIIL Research, Company)						

Cash flow Statement						(Rs. in mn)
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07 (15m)**	**CY08E**	**CY09E**
Pre tax profit	**782.7**	**1,501.2**	**2,519.4**	**9,816.9**	**2,393.3**	**3,326.7**
Add						
Depreciation	229.7	365.0	537.1	773.0	977.8	1,002.8
Interest Expense	364.8	815.7	1,309.2	1,821.1	991.7	1,045.5
Profit before working capital changes	**1,243.4**	**2,551.2**	**4,072.5**	**7,954.0**	**4,362.7**	**5,475.0**
Working capital changes	-1,060.0	-6,134.7	-2,230.6	-4,635.0	-1,325.6	-5,711.4
Less Taxes	-341.5	-299.9	-252.5	-2,422.8	-600.0	-800.0
Net Cash flow from operating activities	**-158.1**	**-3,883.5**	**1,589.3**	**7,250.5**	**2,437.2**	**-1,036.4**
Net Cash flow in investment activities	**-2,807.2**	**-2,024.8**	**-2,120.0**	**88.6**	**-5,735.9**	**-2,029.4**
Net Cash flow from financing activities	**3,056.5**	**7,090.0**	**2,925.7**	**-4,674.3**	**-1,611.5**	**2,330.7**
Net increase /(decrease) in cash	91.2	1,181.8	2,395.1	2,664.8	-4,910.2	-735.1
Op. balance of cash and cash equivalents	253.5	344.7	1,526.5	3,921.6	6,586.4	1,676.2
Cl. balance of cash and cash equivalents	**344.7**	**1,526.5**	**3,921.6**	**6,586.4**	**1,676.2**	**941.1**
(Note: * September Ending)						
(Source: ACMIIL Research, Company)						

Ratios						
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07 (15m)**	**CY08E**	**CY09E**
Profitability Ratios						
Operating Profit Margin (%)	12.4	11.5	10.5	11.4	10.9	9.7
EBDIT Margin (%)	13.1	12.3	11.2	17.9	11.6	10.2
EBDIT Margin (%) Normalized	13.1	12.3	11.2	11.6	11.6	10.2
PAT Margin (%)	5.2	4.3	4.3	18.9	4.5	4.5
PAT Margin (%) Normalized	5.2	4.3	4.3	5.5	4.5	4.5
RONW (%)	16.6	12.6	17.1	44.8#	6.0	6.8
ROCE (%)	10.3	12.1	14.2	25.3#	8.7	9.8
Per Share Ratios						
EPS (Rs.)	14.6	21.1	34.1	259.9	30.3	38.5
EPS (Rs.) Normalized and Annualized	14.6	21.1	34.1	60.6	30.3	38.5
CEPS (Rs.)	20.5	28.9	45.2	177.0	47.7	54.8
CEPS (Rs.) Normalized and Annualized	20.5	28.9	45.2	72.7	47.7	54.8
BV Per Share (Rs.)	87.9	168.1	199.1	464.4	507.5	567.2
Valuation Ratios						
P/E (x) @ Rs. 589.5				9.7	19.5	15.3
P/CEPS (x) @ Rs. 589.5				8.1	12.4	10.8
P/BV (x) @ Rs. 589.5				1.3	1.2	1.0
Capital Structure Ratios						
Debt/Equity	2.2	1.5	1.7	0.5	0.3	0.2
Current Ratio	1.7	3.3	2.3	3.1	2.5	2.4
Turnover Ratios						
Inventory Turnover (x)	2.3	2.5	2.8	2.9	3.0	3.0
Debtors turnover ratio (x)	2.5	6.9	5.1	3.0	3.0	3.2
Fixed Asset Turnover (x)	3.1	3.5	4.5	6.2	2.5	3.6
(Note: * September Ending, # Annualized, Normalized: Excludes profit on Sale of US operations, Turnover ratios are annualized for CY07)						
(Source: ACMIIL Research)						

Annexure I

Financials statements without considering impact of export duty.

Profit & Loss Account (Normalized and annualized: CY07)						(Rs. in mn)
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07**	**CY08E**	**CY09E**
Net Sales	10,856.4	23,138.5	38,731.4	56,125.6	39,396.6	56,249.4
Total Expenditure	9,509.1	20,467.4	34,666.0	49,719.6	33,585.6	47,671.3
Operating Profits	**1,347.3**	**2,671.1**	**4,065.4**	**6,406.0**	**5,811.0**	**8,578.0**
Other Income	73.5	179.8	281.3	90.2	275.8	281.2
EBDIT	**1,420.8**	**2,850.9**	**4,346.7**	**6,496.2**	**6,086.8**	**8,859.3**
Depreciation	229.7	365.0	537.1	618.4	977.8	1,002.8
EBIT	1,191.2	2,485.8	3,809.6	5,877.8	5,109.0	7,856.5
Interest	408.5	984.6	1,290.2	1,547.0	991.7	770.5
PBT	782.7	1,501.2	2,519.4	4,330.8	4,117.3	7,086.0
Taxes	214.7	506.9	868.6	1,230.4	1,194.0	2,054.9
Profit After Tax	**568.0**	**994.3**	**1,649.1**	**3,100.4**	**2,923.3**	**5,031.0**
Growth in sales (%)		113.1	67.4	44.9	-29.8	42.8
Operating Profits Growth (%)		98.3	52.2	57.6	-9.3	47.6
PAT Growth (%)		75.0	65.9	88.0	-5.7	72.1
Operating Profit Margin (%)	12.4	11.5	10.5	11.4	14.8	15.3
Net Profit Margin (%)	5.2	4.3	4.3	5.5	7.4	8.9
(Note: * September Ending, # CY07: Normalized (Excludes profit on Sale of US operations) and annualized)						
(Source: ACMIIL Research, Company)						

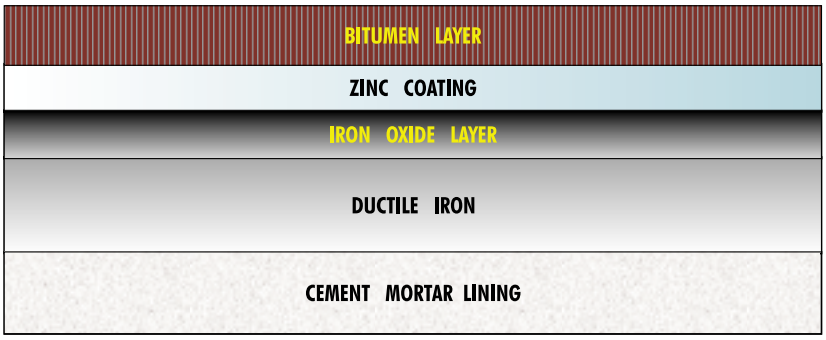
Profit and Loss Account						(Rs. in mn)
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07 (15m)**	**CY08E**	**CY09E**
Net Sales	10,856.4	23,138.5	38,731.4	70,157.0	39,396.6	56,249.4
Total Expenditure	9,509.1	20,467.4	34,666.0	62,149.6	33,585.6	47,671.3
Operating Profits	**1,347.3**	**2,671.1**	**4,065.4**	**8,007.5**	**5,811.0**	**8,578.0**
Other Income	73.5	179.8	281.3	4,516.8	275.8	281.2
EBDIT	**1,420.8**	**2,850.9**	**4,346.7**	**12,524.3**	**6,086.8**	**8,859.3**
Depreciation	229.7	365.0	537.1	773.0	977.8	1,002.8
EBIT	1,191.2	2,485.8	3,809.6	11,751.2	5,109.0	7,856.5
Interest	408.5	984.6	1,290.2	1,933.7	991.7	770.5
PBT	782.7	1,501.2	2,519.4	9,816.9	4,117.3	7,086.0
Taxes	214.7	506.9	868.6	1,538.0	1,194.0	2,054.9
PAT	**568.0**	**994.3**	**1,649.1**	**8,278.9**	**2,923.3**	**5,031.0**
Extraordinary items	0.0	0.0	0.0	5,014.8	0.0	0.0
Profit After Tax	**568.0**	**994.3**	**1,649.1**	**13,293.7**	**2,923.3**	**5,031.0**
Growth in sales (%)		113.1	67.4			42.8
Operating Profits Growth (%)		98.3	52.2			47.6
PAT Growth (%)		75.0	65.9			72.1
Operating Profit Margin (%)	12.4	11.5	10.5	11.4	14.8	15.3
Net Profit Margin (%)	5.2	4.3	4.3	18.9	7.4	8.9
(Note: * September Ending)						
(Source: ACMIIL Research, Company)						

Balance Sheet						(Rs. in mn)
Particulars	FY04 *	FY05 *	FY06 *	CY07 (15m)	CY08E	CY09E
Sources of Funds						
Share Capital	389.8	471.1	483.6	511.4	560.9	614.2
Redeemable Non Conv Pref Share		1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
Optionally Conv Warrants			116.5			
Reserves and Surplus	3,034.6	6,451.1	8,031.1	22,238.2	28,131.3	37,121.1
Total Shareholders Funds	3,424.4	7,922.3	9,631.3	23,749.6	29,692.3	38,735.4
Total Loan Funds	7,630.3	11,979.2	16,217.3	12,455.4	9,178.9	6,043.1
Minority Interest	0.0	0.0	151.1	94.6	100.0	100.0
Net Deferred Tax Liability	465.8	598.8	763.1	825.8	1,264.3	1,289.5
Total Capital Employed	**11,520.5**	**20,500.3**	**26,762.8**	**37,125.4**	**40,235.5**	**46,168.0**
Application of Funds						
Gross Block	5,091.4	8,633.4	11,049.1	12,336.6	19,556.3	20,056.3
Less: Accumulated Depreciation	1,573.1	1,980.4	2,499.1	3,246.2	4,224.0	5,226.9
Net Block	3,518.3	6,653.0	8,550.0	9,090.4	15,332.3	14,829.5
Capital Work in Progress	2,349.9	1,176.9	1,546.3	4,219.7	500.0	500.0
Goodwill	167.2	31.7	157.6	69.8	70.0	70.0
Investments	862.0	867.6	835.6	2,092.8	4,328.7	6,458.1
Net Current Assets	4,623.0	11,770.2	15,673.2	21,652.7	20,004.5	24,310.4
Miscellaneous Expenses not w/off	0.0	0.8	0.0	0.0	0.0	0.0
Total Assets	**11,520.5**	**20,500.3**	**26,762.8**	**37,125.4**	**40,235.5**	**46,168.0**
(Note: * September Ending)						
(Source: ACMIIL Research, Company)						

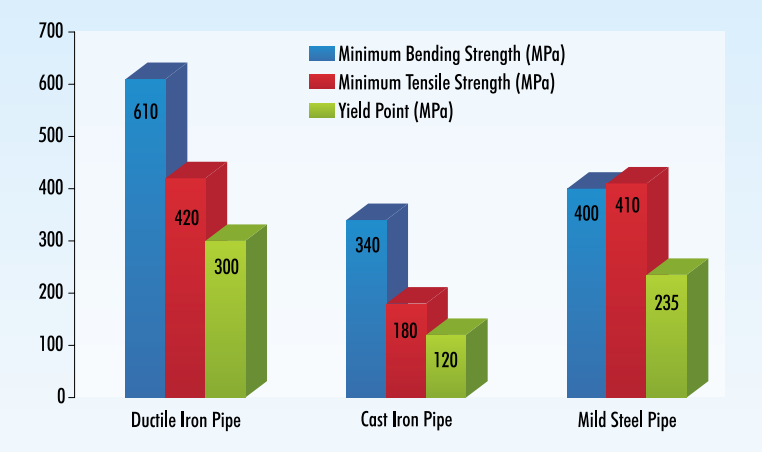
Cash flow Statement						(Rs. in mn)
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07 (15m)**	**CY08E**	**CY09E**
Pre tax profit	**782.7**	**1,501.2**	**2,519.4**	**9,816.9**	**4,117.3**	**7,086.0**
Add						
Depreciation	229.7	365.0	537.1	773.0	977.8	1,002.8
Interest Expense	364.8	815.7	1,309.2	1,821.1	991.7	770.5
Profit before working capital changes	**1,243.4**	**2,551.2**	**4,072.5**	**7,954.0**	**6,086.8**	**8,959.3**
Working capital changes	-1,060.0	-6,134.7	-2,230.6	-4,635.0	-1,766.3	-6,125.4
Less Taxes	-341.5	-299.9	-252.5	-2,422.8	-950.0	-1,750.0
Net Cash flow from operating activities	**-158.1**	**-3,883.5**	**1,589.3**	**7,250.5**	**3,370.4**	**1,083.9**
Net Cash flow in investment activities	**-2,807.2**	**-2,024.8**	**-2,120.0**	**88.6**	**-5,735.9**	**-2,629.4**
Net Cash flow from financing activities	**3,056.5**	**7,090.0**	**2,925.7**	**-4,674.3**	**-1,611.5**	**105.7**
Net increase /(decrease) in cash	91.2	1,181.8	2,395.1	2,664.8	-3,977.0	-1,439.8
Op. balance of cash and cash equivalents	253.5	344.7	1,526.5	3,921.6	6,586.4	2,609.5
Cl. balance of cash and cash equivalents	**344.7**	**1,526.5**	**3,921.6**	**6,586.4**	**2,609.5**	**1,169.6**
(Note: * September Ending)						
(Source: ACMIIL Research, Company)						

Ratios						
Particulars	**FY04 ***	**FY05 ***	**FY06 ***	**CY07 (15m)**	**CY08E**	**CY09E**
Profitability Ratios						
Operating Profit Margin (%)	12.4	11.5	10.5	11.4	14.8	15.3
EBDIT Margin (%)	13.1	12.3	11.2	17.9	15.5	15.8
EBDIT Margin (%) Normalized	13.1	12.3	11.2	11.6	15.5	15.8
PAT Margin (%)	5.2	4.3	4.3	18.9	7.4	8.9
PAT Margin (%) Normalized	5.2	4.3	4.3	5.5	7.4	8.9
RONW (%)	16.6	12.6	17.1	44.8 #	9.8	13.0
ROCE (%)	10.3	12.1	14.2	25.3 #	12.7	17.0
Per Share Ratios						
EPS (Rs.)	14.6	21.1	34.1	259.9	52.1	81.9
EPS (Rs.) Normalized and annualized	14.6	21.1	34.1	60.6	52.1	81.9
CEPS (Rs.)	20.5	28.9	45.2	177.0	69.5	98.2
CEPS (Rs.) Normalized and annualized	20.5	28.9	45.2	72.7	69.5	98.2
BV Per Share (Rs.)	87.9	168.1	199.1	464.4	529.3	630.6
Valuation Ratios						
P/E (x) @ Rs. 589.5				9.7	11.3	7.2
P/CEPS (x) @ Rs. 589.5				8.1	8.5	6.0
P/BV (x) @ Rs. 589.5				1.3	1.1	0.9
Capital Structure Ratios						
Debt/Equity	2.2	1.5	1.7	0.5	0.3	0.2
Current Ratio	1.7	3.3	2.3	3.1	2.6	2.4
Turnover Ratios						
Inventory Turnover (x)	2.3	2.5	2.8	2.9	3.0	3.0
Debtors turnover ratio (x)	2.5	6.9	5.1	3.0	3.0	3.2
Fixed Asset Turnover (x)	3.1	3.5	4.5	6.2	2.6	3.8
(Note: * September Ending, # Annualized, Normalized: Excludes profit on Sale of US operations, Turnover ratios are annualized for CY07)						
(Source: ACMIIL Research)						

Annexure II

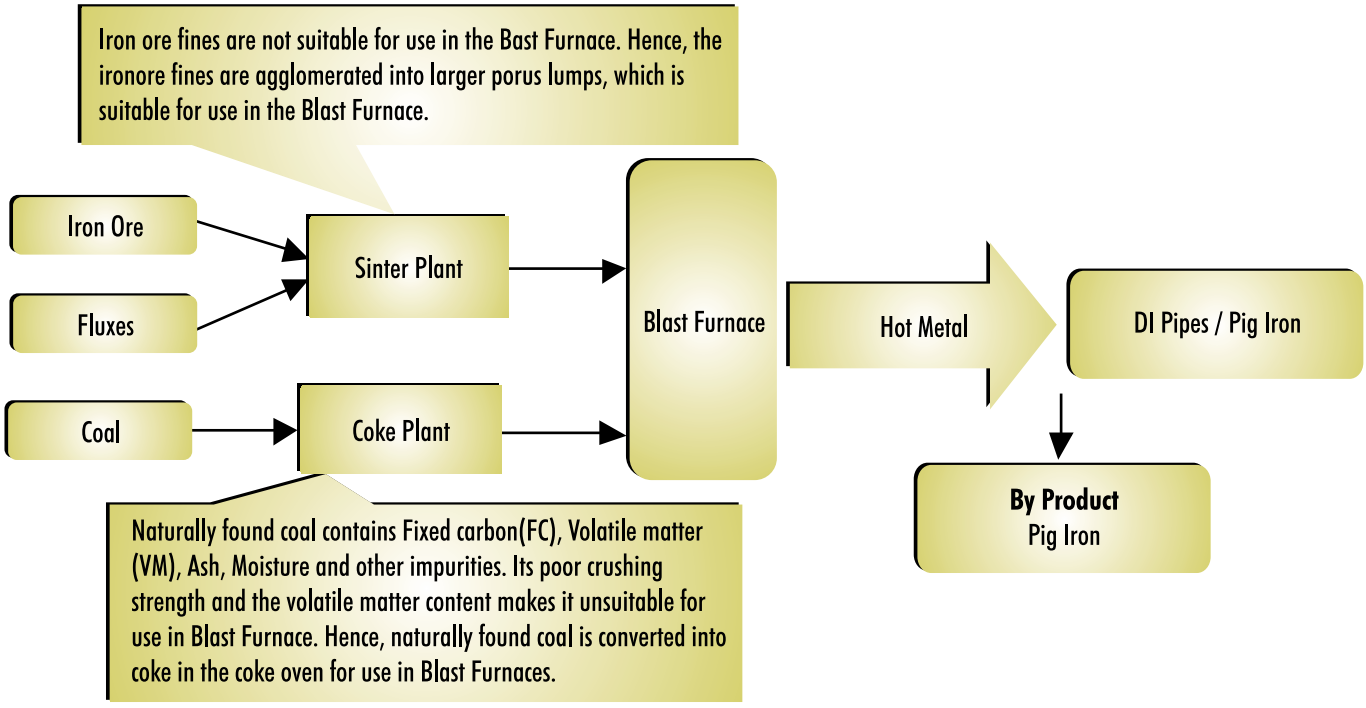


- Better physical and mechanical properties compared to other pipe materials:
  - High tensile and beam strength
  - Withstands severe crushing load
  - Extremely high impact resistance
- More water carrying capacity, as internal diameter is greater than nominal diameter.
- Highly corrosion resistant due to smooth inside cement mortar lining
- The ISO, BS, DIN and IS specifications are identical
- Offers high working pressure and safety against water hammer
- Speedy Laying / Installation procedure.
- Ease in handling – Lightweight and superior mechanical property makes DI pipe easier to handle.



Welding is possible.

Annexure III



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Disclosure of Interest	Jindal Saw Limited
1. Analyst ownership of the stock	NO
2. Broking Relationship with the company covered	NO
3. Investment Banking relationship with the company covered	NO
4. Discretionary Portfolio Management Services	NO

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