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IPO NOTE

Venus Pipes & Tubes

Doubling capacity in the niche stainless steel pipe segment

Venus Pipes & Tubes Limited (Venus) is a Gujarat-based manufacturer & exporter of stainless-steel pipes & tubes, primarily catering to industry-grade requirements with end uses spanning across chemicals, pharmaceuticals, food processing industries and other engineering needs. Global stainless steel (SS) pipes & tubes industry was estimated to be valued at USD32.4 bn in 2019 and is expected to grow at a CAGR of 4% through 2025. India's per capital stainless steel consumption at 2.5 kg in 2019 is significantly lower compared to the world average of 6 kg per capita indicating the opportunities existing in the sector. Indian per capita consumption of steel pipes and tubes is less than half of the global average (21-22 kg) and about one-fifth of the Chinese consumption.

The company's FY21 revenue jumped 74% YoY to INR3,093mn aided by increased volume, higher capacity utilization driven by a robust growth of domestic and export demand. Venus increased its capacity from 6.9ktpa to 10.8ktpa over FY19-21. Increasing capacity utilization has driven a 60% revenue CAGR over the period. The net debt amounts to INR631mn (as on 31.12.2021, including LC of INR 205.1mn) and leverage level at ~0.4x debt/equity is comfortable. Return ratios have improved strongly with strong asset utilization & improved profitability. Venus Pipes is planning to double capacity to meet the rising demand, enrich the product portfolio, enhance operational efficiency through backward integration and aims to raise the required funding through the IPO route.

Strong capacity expansion plans to drive revenues

Currently, the company has a total production capacity of 10.8 ktpa, of which 3.6 ktpa is dedicated to seamless SS pipes & 7.2 ktpa for welded SS pipes. The company plans to expand its seamless capacity to 9.6 ktpa and welded capacity to 14.4 ktpa, in addition to 9.6 ktpa of new capacity towards backward integration to manufacture mother hollow pipes. Total capacity would double from 10.8ktpa to 24ktpa.

Backward integration and enriched product mix to improve margins

Backward integration with in-house production of hollow pipes, acquisition of slitting machine for cutting steel strips/coils as per desired width and enriched product mix with higher diameter pipes would lead to continued improvement in margins.

Export and domestic opportunities to increase with removal of Chinese export rebate

China accounted for 54% of India's total SS pipes & tubes imports in FY21. The cancellation of export rebates on Chinese steel products including welded and seamless steel pipes, as announced by the Chinese Government on 28 April 2021, is expected to erode away the cost advantage enjoyed by Chinese manufacturers, providing impetus to domestic pipes and tubes manufacturers. Domestic manufacturers are also protected with the stipulation that only BIS-certified products can be used for projects in the country.

Capex in chemical and pharmaceuticals industry to drive demand

SS Pipes & tubes are used across the chemical, engineering, pharmaceuticals and food processing Industries, among others. Venus Pipes & Tubes Ltd derives around 33% of its sales from chemicals (19%) and engineering (14%) segment. Approximately 10% of the capital expenditure for a chemical plant is in the form of SS pipes & tubes. The Atmanirbhar Bharat Initiative and other PLI schemes are set to boost these sectors, thus driving the demand for SS pipes & tubes in the country.

IPO Issue Details

Offer Details	Fresh Issue of INR 1,600-1,800mn (5.07 mn) equity shares
Face Value (INR/share)	INR 10
Listing on	BSE and NSE
Lead Managers	SMC Capitals Ltd
Registrar	KFIN Technologies Private Ltd

Source: Company, Antique

Utilization from proceeds of offer

The proposed issue size is INR 1,600 -1,800mn, wherein the company will utilize INR 250mn for long term working capital requirements, while INR 1,060mn will be deployed for

- Capacity expansion at Dhaneti plant from current 10.8 ktpa to 24 ktpa.
- Increasing in-house capability of manufacturing pipes of higher diameter (from current 6 mm - 219.3 mm welded pipes and 6 mm - 114.3 mm seamless pipes up to 1,219.2 mm welded pipes and up to 168.3 mm seamless pipes). This will be achieved through installation of LSAW (A358) plant and pilger plant respectively.
- Acquisition of slitting machine for cutting steel strips/coils as per desired width (currently outsourced).
- Installation of effluent treatment plant to meet pollution norms.
- Setting up acid regeneration plant, to reduce raw acid usage & enhancement of productivity due to reduction of down-time for dumping and cleaning of sludge-filled pickling tanks.
- Backward integration through installation of a piercing plant (capacity of 9.6 ktpa) to enable in-house production of hollow pipes, the basic raw material for seamless pipes (currently procured from open market).

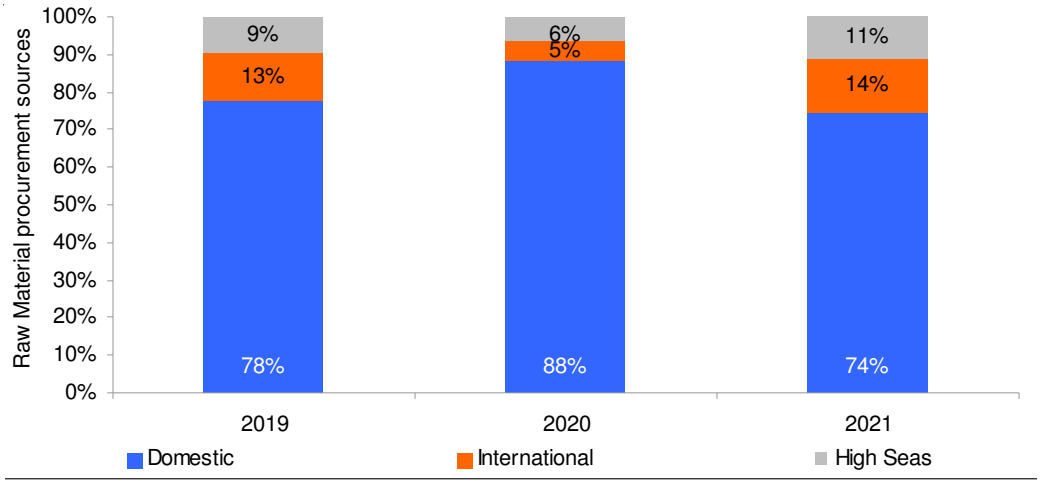
The balance funds available would be used for general corporate purpose & issue expenses.

Company Overview

Venus Pipes & Tubes is a stainless steel pipes & tubes manufacturer & exporter in India, having over 6 years of experience in manufacturing of stainless steel tubular products in two broad categories - (i) seamless tubes/pipes, and (ii) welded tubes/pipes. These products have applications in sectors such as chemicals, engineering, fertilizers, pharmaceuticals, power, food processing, paper and oil & gas. They sell their products in the domestic market through traders' stockists, authorized distributors & certain marketing representatives. They started exporting in 2017. They have a single manufacturing plant with a total cumulative production capacity of 10.8 ktpa, located at Dhaneti (Kutch, Gujarat), in close proximity, around 55 kms and 75 kms from the ports of Kandla and Mundra, respectively.

They procure basic raw material (stainless steel coils & hollow pipes) basis market availability, pricing & quality through 3 main channels: (i) domestic suppliers such as steel manufacturers, stockists & traders, (ii) international suppliers from China, Indonesia, Malaysia & Singapore, and (iii) high sea purchases.

Raw material primarily from domestic sources



Source: Company, Antique

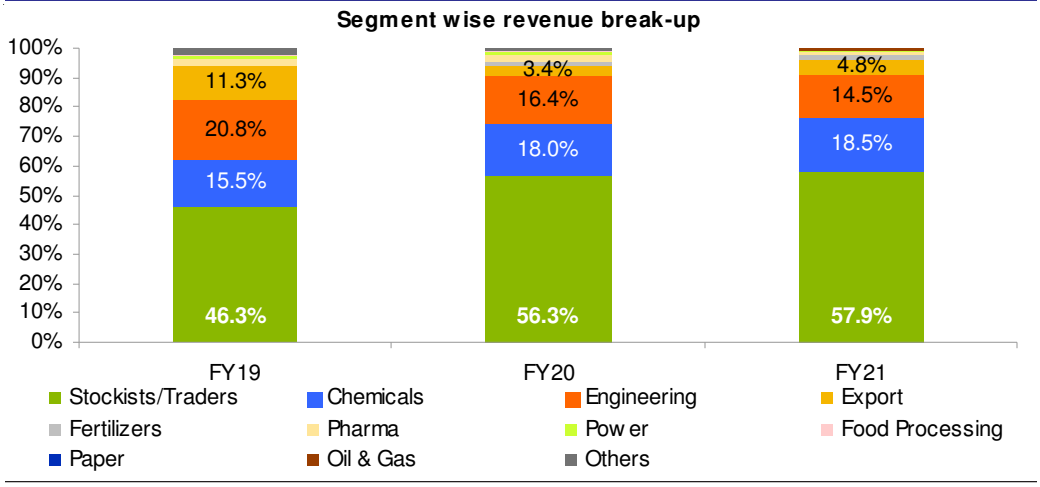
Manufacturing Process - Welded Pipes and Tubes

Detailed process of manufacturing of welded pipes/tubes is mentioned in Appendix - 1

Manufacturing Process - Seamless Pipes and Tubes

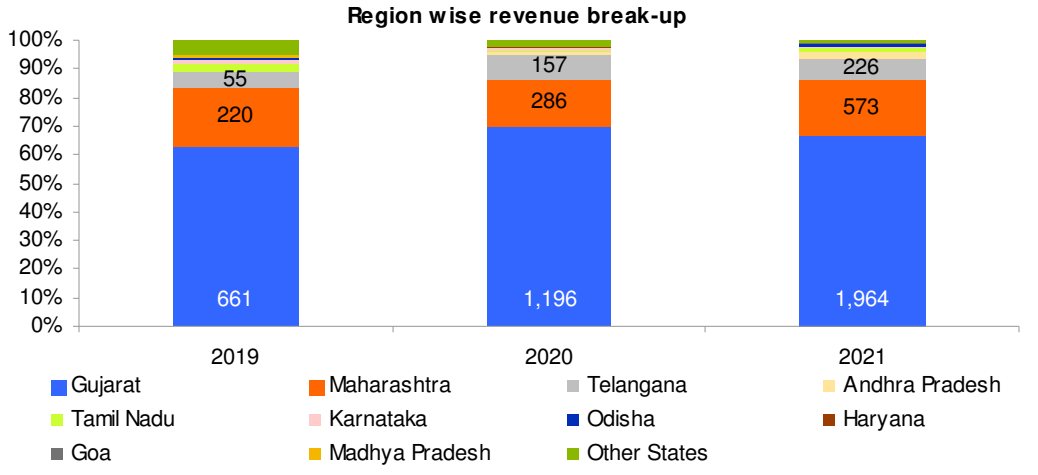
They manufacture seamless tubes/pipes through 2 methods: (i) cold finish pilgering and (ii) cold drawing. Further details regarding the manufacturing process is mentioned in Appendix - 2

Strong demand from chemical & engineering sectors



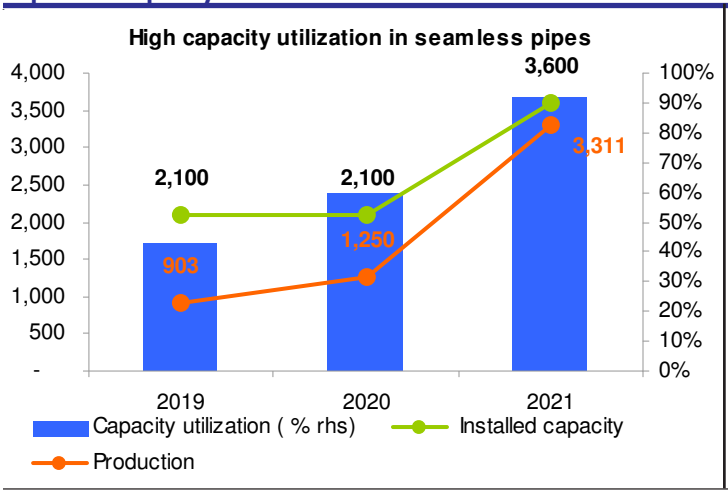
Source: Company, Antique

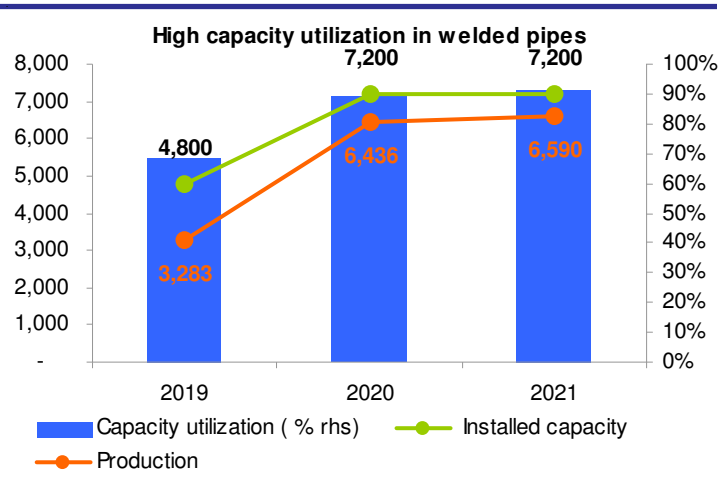
Key markets are Gujarat & Maharashtra



Source: Company, Antique

Improved Capacity utilization YoY





Source: Company, Antique

Product Description of Venus Pipes & Tubes Ltd

Reference Product	Nature of Tubes	Outside Diameter Range	Usage	Standards	Grades	Application
Stainless Steel High Precision and Heat Exchange Tubers	Seamless/ Welded	6 mm to 101.6 mm.	Used in different kind of Heat Exchangers and pressure vessels. The tubes manufactured in this product range are both seamless and welded.	ASTM, ASME, DIN EN (GERMAN), NF (AFNOR), JIS (JAPAN)	304/L/H/LN, 316/L/H/LN/Ti, 309, 310/L/H/S, 317/L/H, 321/H, 347/H, 405, 409/L, 410, 430/Ti, 436, 439, 1.4301, 1.4306, 1.4571, 1.4541, 1.4401, 1.4404 UNS S31500, UNS S31803, UNS S2205, UNS S32750, UNS S32760	The applications for these tubes are in various industries like Heat Exchangers, Pressure Vessels, Chemical and Fertilizer, Marine Equipments, Refinery and Petrochemical, Process Industry, Dairy / Pharmaceutical Industry, Nuclear Power Generation, Automotive, Aerospaceetc.
Stainless Steel Hydraulic & Instrumentation Tubes	Seamless	6 mm to 76 mm.	Used in very high pressure applications. The tubes manufactured in this product range are seamless.	ASTM, ASME, DIN EN (GERMAN), NF (AFNOR), JIS (JAPAN)	304/L/H/LN, 316/L/H/LN/Ti, 309, 310/L/H/S, 317/L/H, 321/H, 347/H, 405, 409/L, 410, 430/Ti, 436, 439, 1.4301, 1.4306, 1.4571, 1.4541, 1.4401, 1.4404, UNS S31500, UNS S31803, UNS S2205, UNS S32750 and UNS S32760	The applications for these tubes are in various industries like Nuclear & Thermal Power generation, Oil and Gas, Process Industries, Chemical and Fertilizer, Nuclear Power, Food & Beverage Processing, Automotive, Aerospace, Medical Pharmaceutical etc.
Stainless Steel Seamless Pipes	Seamless	1/8" NB to 4" NB.	Used by industries having high pressure application.	ASTM, ASME, DIN EN (GERMAN), NF (AFNOR), JIS (JAPAN)	304/L/H/LN, 316/L/H/LN/Ti, 309, 310/L/H/S, 317/L/H, 321/H, 347/H, UNS S31500, UNS S31803, UNS S2205, UNS S32750, UNS S32760	The applications for these tubes are in various industries like Onshore and Offshore Oil and Gas Production, Exploration and Transport (OCTG - Oil Country Tubular Goods), Chemical & Petrochemical, Energy and Power Generation, Mechanical and Plant Engineering, Marine Equipment's, Pulp & Paper, Pharmaceutical Industry, etc.
Stainless Steel Welded Pipes	Welded	1/8" NB to 8" NB	Used by industries having low pressure applications.	ASTM, ASME, DIN EN (GERMAN), NF (AFNOR), JIS (JAPAN)	304/L/H/LN, 316/L/H/LN/Ti, 309, 310/L/H/S, 317/L/H, 321/H, 347/H, UNS S31500, UNS S31803, UNS S2205, UNS S32750, UNS S32760	The applications for these tubes are in various industries like Chemical & Petrochemical, Gas Industry, Power Generation, Mechanical and Plant Engineering, Marine Equipment's, Pulp & Paper, Pharmaceutical Industry, etc.
Stainless Steel Box Pipes	Welded	15 x15 mm to 100x100 mm	Used mostly in structural applications	ASTM, ASTME, EN	304/L, 316/L	Engineering

Source: Company, Antique

Stainless-Steel Pipes & Tubes Sector Overview

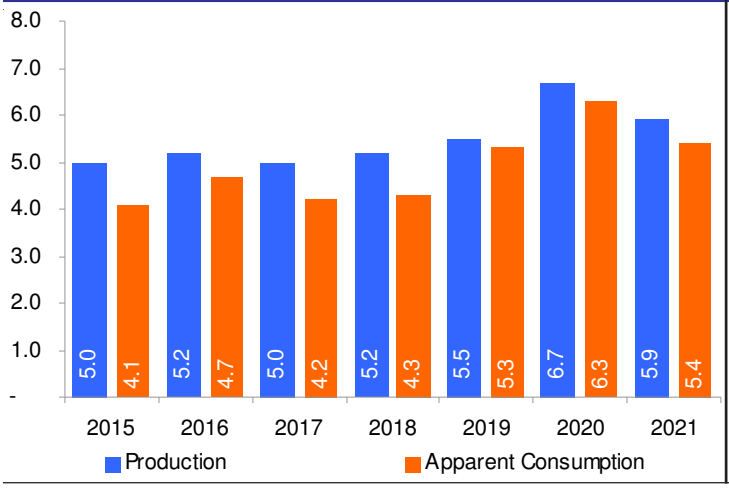
High recyclability, resistance to corrosion and low maintenance properties continue to drive the demand for stainless steel globally as a viable alternative for sustainable future, with several industries shifting to stainless steel pipes & tubes. Globally, 10% of steel produced is estimated to be converted to tubes. Higher demand for oil & gas and chemical & petrochemical industry - two of the largest consumers of steel pipes and tubes - is driving the demand across the world.

Globally, the SS pipes & tubes industry was estimated to be valued at nearly USD32.4 bn in 2019, contributing 23% share in global pipes & tubes industry, and is expected to grow at a CAGR of 4% through 2025 with total market size estimated to cross USD 40 bn.

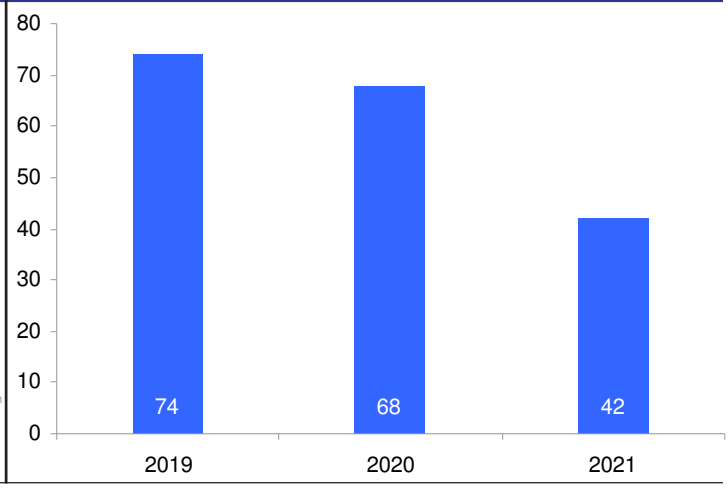
On the domestic front, India accounted for 5.3% share in the global crude steel production & was also the second largest consumer of finished steel. Presence of vast primary steel manufacturing infrastructure has contributed to growth of secondary and finished steel products such as SS pipes & tubes. India has emerged as one of the major producers in this segment, after Europe and China. India's current manufacturing capacity of steel pipes & tubes stands at around 21.5 MTPA - split into 16.3 MTPA of welded, 1.5 MTPA of seamless and 3.7 MTPA of casted capacities respectively.

Domestic Industry Size

Indian steel pipe production impacted in 2021 due to covid (MT)



Monthly import of steel pipes in India declining ('000 tonnes)



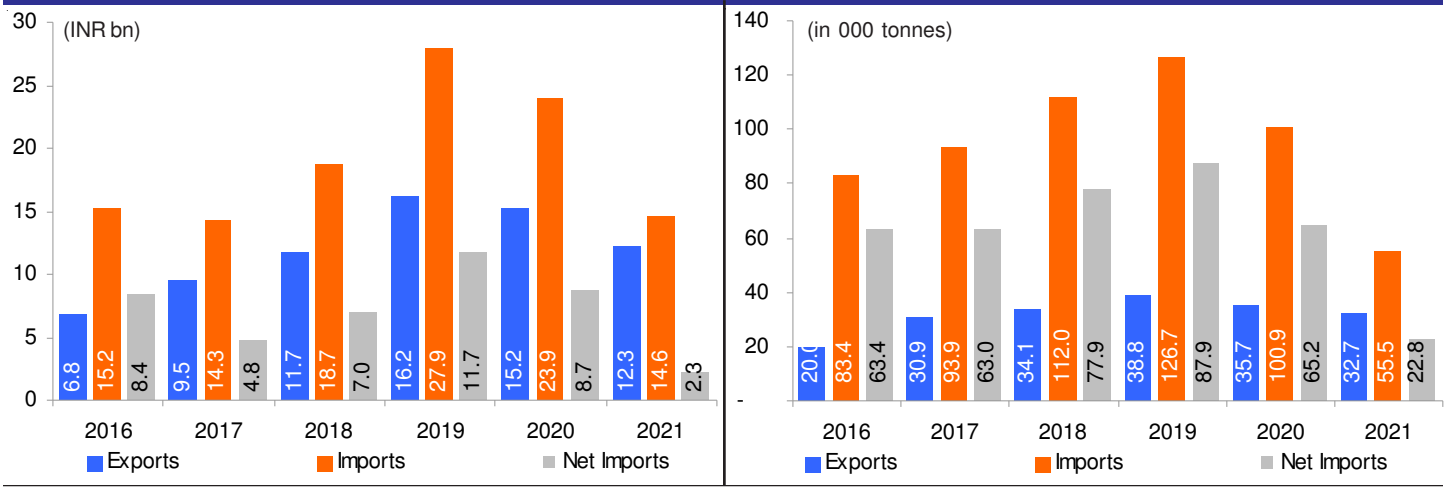
Source: Company, Antique

Stainless steel pipes and tubes account for 8% share in the overall steel consumption basket, implying consumption in the range of 6.7 - 8 MT in the past 5 years. With nearly 10 kg per capita consumption, steel pipes and tubes consumption in India is less than half of the global average (21-22 kg PCC) and about one-fifth of the Chinese (55-60 kg PCC), indicating huge opportunities for growing penetration of steel pipes & tubes in the Indian market.

Export & Import of SS Pipes & Tubes

India has continued to remain a net importer of SS pipes and tubes during the years 2016-2021 where the import value observed uneven growth in response to domestic demand scenario. SS pipes & tubes import value declined at 1% CAGR during FY2016-21 to settle at INR 14.6 bn in FY21 while import volume declined at 8% CAGR to settle at 55.5 kt in FY21 impacted by covid.

India's Foreign Trade in SS Pipes & Tubes impacted due to COVID19, expected to rebound



Source: Company, Antique

China accounted for 54% of India's total SS pipes & tubes imports in FY21. The cancellation of export rebates son steel products including ERW (Electric resistance welded) & seamless steel pipes, as announced by the Chinese Government on 28 April 2021, is expected to erode away the cost advantage enjoyed by Chinese manufacturers, providing impetus to domestic pipes and tubes manufacturers.

Demand Drivers

Stainless steel pipes & tubes are one of the most important in the steel industry and they find wide application in oil & gas, capital goods, power and several other sectors. In the industrial sector, it is used in the manufacture of heat exchangers, condensers and similar equipment used in chemical plants, fertilizer plants, pharmaceuticals, sugar, dairy & dairy products, water desalination and automotive industry.

Major Players

Ratnamani Metals & Tubes Limited, Jindal SAW, Maharashtra Seamless Limited, Man Industries and Welspun Corp are a few major players in the Indian steel pipe & tube segment. Ratnamani and Jindal SAW have an established SS pipes & tubes business, placing them as market leaders in the segment.

Notable Players in Indian Steel Pipe & Tube Industry

Company	By Variety-Type				By Raw Material Type		
	ERW	SAW	Seamless	DI	Carbon Steel	Mild Steel	S S
Ratnamani Metals & Tubes Limited	✓	✓	✓	×	✓	×	✓
Jindal SAW Limited	×	✓	✓	✓	✓	×	✓
Maharashtra Seamless Limited	✓	×	✓	×	✓	✓	×
Welspun Corp	✓	✓	×	×	×	✓	×
Man Industries Limited	×	✓	×	×	✓	✓	×

Source: Company, Antique

Peer Valuation

	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
Company	FY19	FY20	FY21	FY19	FY20	FY21	FY19	FY20	FY21	FY19	FY20	FY21
Ratnamani Metals	42.5	34.9	38.9	25.9	25.1	25.7	7.1	6.3	5.4	16.6	18.0	13.9
Jindal Saw	3.4	5.2	9.1	5.7	5.5	6.0	0.5	0.4	0.4	13.5	8.2	4.6

Source: Company, Antique

Financial comparison

	Ratnamani Metals			Jindal Saw			Venus Pipes		
INR mn	FY19	FY20	FY21	FY19	FY20	FY21	FY19	FY20	FY21
Revenues	27,549	25,857	22,981	1,21,170	1,16,270	1,06,636	1,188	1,778	3,093
EBITDA	4,065	4,265	3,998	14,751	15,110	12,425	83	116	348
EBITDA margin (%)	14.8	16.5	17.4	12.2	13.0	11.7	7.0	6.5	11.2
PAT	2,529	3,075	2,760	8,502	5,548	3,188	38	41	236

Source: Company, Antique

Growth Strategy

Increasing existing capacity

The company is proposing to expand existing manufacturing capacity for welded pipes/ tubes and seamless pipes/tubes for manufacturing higher diameter welded pipes/tubes (up to 1219.2 mm) and seamless pipes/tubes (up to 168.3 mm), to gain competitive advantage over its competitors.

Leveraging on Government Schemes

Recently announced Production Linked Incentives (PLI) Schemes by the Government of India is expected to boost domestic production in the pharmaceuticals, food processing and automobiles sectors translating into a better order book for the company. Policy initiatives such as Atmanirbhar Bharat and the recently announced Domestically Manufactured Iron & Steel Products Policy (DMISP, 2020) would give push to domestic manufacturing and strengthen the supply side dynamics along with supporting a favourable demand scenario from the various end user industries. On the back of gradual improvement in industrial demand, domestic SS pipes and tube industry is expected to grow from about 1MTPA currently to 1.45MTPA by 2025, growing at a CAGR 7.7%.

Backward Integration and Cost Optimization

The company's FY21 revenue jumped 74% YoY to INR3,093mn aided by increased volume, higher capacity utilization driven by a robust growth of domestic and export demand. Venus increased its capacity from 6.9ktpa to 10.8ktpa over FY19-21. Increasing capacity utilization has driven 60% revenue CAGR over the period with strong traction in the seamless pipe segment. Considering the revenue generating potential of this segment, the company plans to set up in-house piercing line for manufacturing of hollow pipes (the raw material for seamless pipes & tubes). It will significantly improve operating margins through cost optimization.

Increase export

The company commenced exports in 2017. To increase share in the international market, in addition to selling products through stockists/traders, they have appointed sole distributors in Italy and Kuwait and a marketing representative for servicing the European market. The announcement by the Chinese Government on April 28, 2021 with respect to cancellation of the export rebates on several steel products including welded and seamless steel pipes with effect from May 1, 2021 is expected to benefit domestic pipes and tubes manufacturers in India.

Operational efficiency through technology enhancements

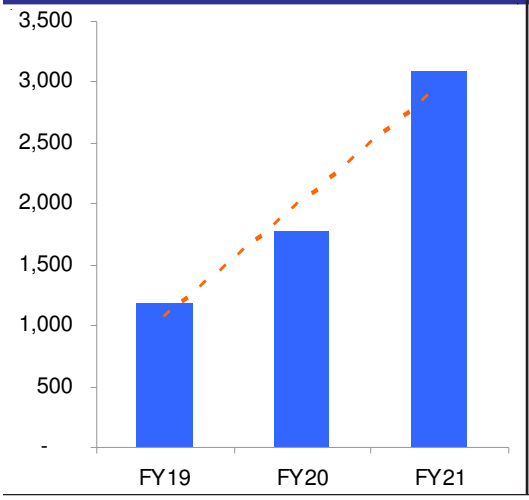
The company proposes to install an Acid Regeneration Plant (ARP) to reduce the consumption of acids in the pickling and passivation process, adding up to environmental & economic advantages. The company also intends to introduce Enterprise Resource Planning (ERP) system for efficient control over manufacturing process.

Financial Summary

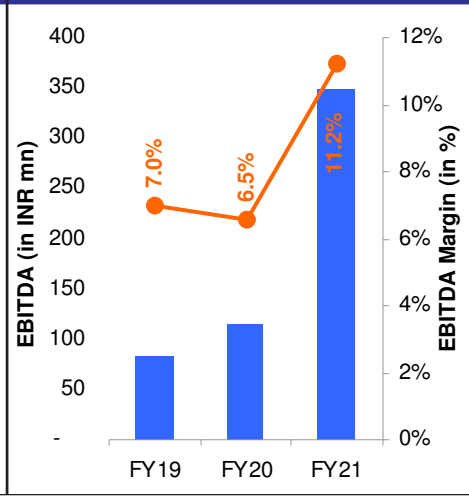
The company increased its capacity from 6.9kt to 10.8kt over FY19-21. Increasing capacity utilization has led to revenue CAGR of 60% over the period. Cost of raw materials amounts to 80-85% of the overall cost of production & the company books raw material upon order receipt, to minimize raw material fluctuation effects and to effectively pass on the price effect to customers.

Currently the company manufactures on a made-to-order basis. Hence it does not carry long term orders. Thus, the revenue continues to be driven by end-user demand. The pro-infrastructure and pro-manufacturing stance of the Government of India is indicative of positive growth in demand of SS pipes & tubes.

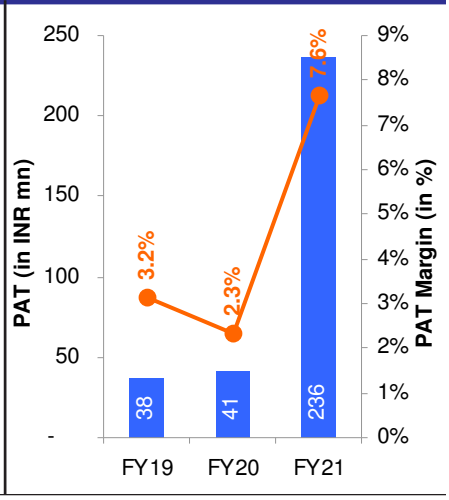
Revenue jumps in FY21



EBITDA improving YoY



PAT rising YoY



Source: Company, Antique

Financial Snapshot

Particulars	FY21	FY20	FY19
Total Income (in INR mn)	3120.31	1793.22	1205.06
EBITDA (excluding other Income) (in INR mn)	347.76	116.36	82.94
EBITDA Margin (%)	11.24	6.54	6.98
PAT (in INR mn)	236.32	41.28	37.50
PAT Margin (%)	7.57	2.30	3.11

Source: Company, Antique

Debt Profile

The gross debt amounts to INR705.1mn (as on 31.12.2021, including LC of INR 205.1mn) and net debt at INR631.9mn translating into 0.4x debt/equity. The return ratios have jumped sharply due to strong asset utilization & improved profitability. With the continued expansion & diversification of product portfolio, the utilization would decline over the short term due to frequent change in production plans to accommodate orders. Backward integration would contribute to better margin spreads from higher realizations, but the enlarged asset base would yield lower cumulative asset returns.

Promoter & Management Profile

Pre-issue, promoter and promoter groups hold 64.3% of the equity capital in Venus

Name	Age	Profile
Mr. Megharam Sagramji Choudhary 	39 years	• Promoter & whole time Director of the company • Over 15 years of experience in SS welded pipes & tubes industry • Responsible for sales & marketing, customer relationship management, procurement & also looks after the HR activities of the company
Mr. Dhruv Mahendrakumar Patel 	35 years	• Promoter & whole time Director of the company, associated since 2015 • Over 6 years of experience in steel industry • Looks after production, streamlining of processes & productivity
Mr. Jayantiram Motiram Choudhary 	38 years	• Promoter, Chairman & non-executive Director of the company • Over 10 years of experience in steel industry & over 4 years' experience as a Director of Accuracy Shipping Limited
Mr. Arun Ajaykumar Kothari 	44 years	• Promoter, Managing Director & CFO of the company • Qualified Chartered Accountant since 1998 • Manages Accounting & Financial operations of the company

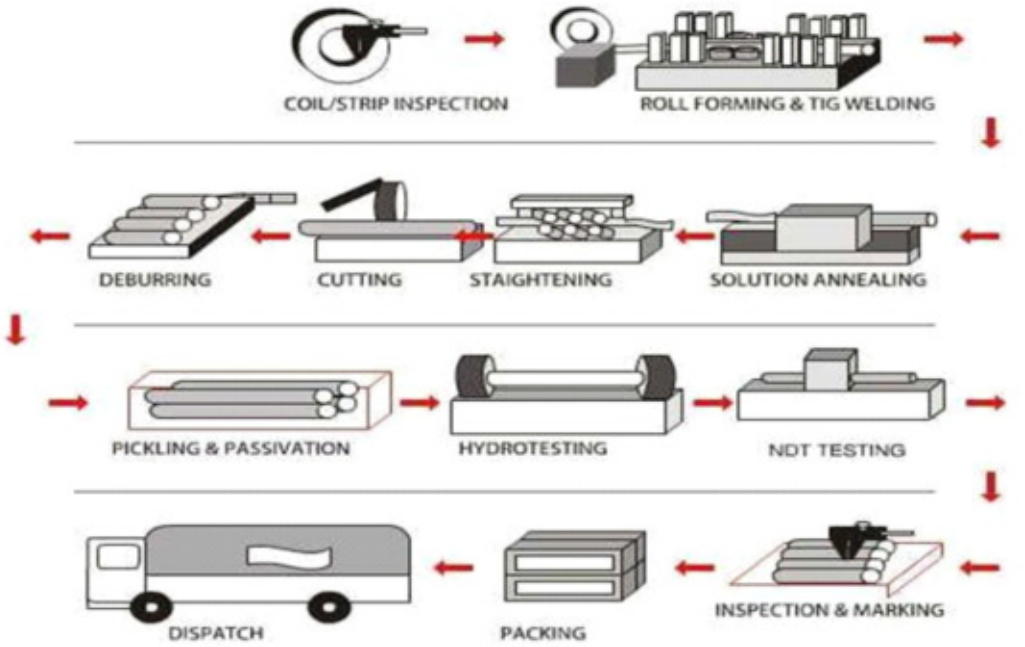
Source: Company, Antique

Venus Key Management Personnel

Name	Designation	Profile
Mr. Pawan Kumar Jain	Company Secretary	• A qualified company secretary • Three years of experience in finance, accounting & secretarial work • Responsible for coordination of meetings of the board & other secretarial work
Mr. Shishir C Sinha	President (Marketing)	• Holds Bachelors' degree in Arts from Magadh University • Thirty years of experience in stainless steel/pipe industry • Previously worked as Senior VP (Marketing) for Prakash Steelage Ltd.
Mr. Kunal Bubna	President (Finance & Accounts)	• Fellow member of ICAI and ICSI • Fourteen years of experience in accounting & secretarial work
Mr. Bharat Kumar Prajapati	Head - Production	• Diploma in Mechanical Engineering from the Technical Examination Board, Gujarat • Twenty years of experience in pipe industry • Previously worked with Tubacex Prakash India Private Limited

Source: Company, Antique

APPENDIX - 1: Manufacturing Process of Welded Pipes & Tubes



Source: Company, Antique

Step	Reference	Process Description
Step 1	**Coil/Strip Inspection**	On receipt of the raw material, a sample testing typically called the coil/strip inspection is carried out as per ordered specifications. In case the raw material passes the test the same is segregated basis its quality and standards and thereafter utilized for manufacturing the final product as per customer specification.
Step 2	**Roll Forming and TIG Welding**	Subsequent to the coil/strip inspection, the following two process are carried on the coil/strip: *Roll Forming:* In this process, incremental bending to a continuous fed strip of metal is carried out by using a set of precisely placed rollers (which are mounted in sets on a consecutive stand). The process begins with a large coil of sheet metal that can be from 50 mm to 700 mm wide with a thickness of 1mm to 8 mm. *TIG Welding:* The Tungsten Inert Gas (**"TIG"**) is an inert gas welding process used to join metals by creating a weld in a roll formed shape by way of heat being generated by an electric arc between the metals to be joined and an infusible tungsten-based electrode, located in the welding torch. The arc area is shrouded in an inert or reducing gas shield to protect the weld pool and the tungsten electrode. The filler metal as a rod (if required) is applied automatically by the welder into the weld pool and as the rolled form exits the rollers, and before it is cut, it is automatically welded.
Step 3	**Solution Annealing**	Solution annealing, a common heat-treatment process for different families of metals (including stainless steel) is carried out for the purposes of dissolving any precipitates present in the material and transforming the material into a single phase structure. This process is commonly used for the purposes of removing internal stress, restoring ductility, softening the metal for cold working and enhancing electrical conductivity, which can improve machinability and properties of stainless steel.
Step 4	**Cutting and Straightening**	Pipes are cut in desired specifications using a straightening machine/hydraulic press for the purposes of applying pressure points and straightening any unwanted bent areas, including deformations occurring during the heat treatment process.
Step 5	**Deburring**	A secondary process of deburring is undertaken for the purposes of enhancing the final product quality by removing raised edges and unwanted pieces of material, known as burrs, left by the initial machining processes including shearing, bending, cutting, piercing, and compressing materials. The process polishes the edges and the surface of the work piece for achieving a completely smooth finish.

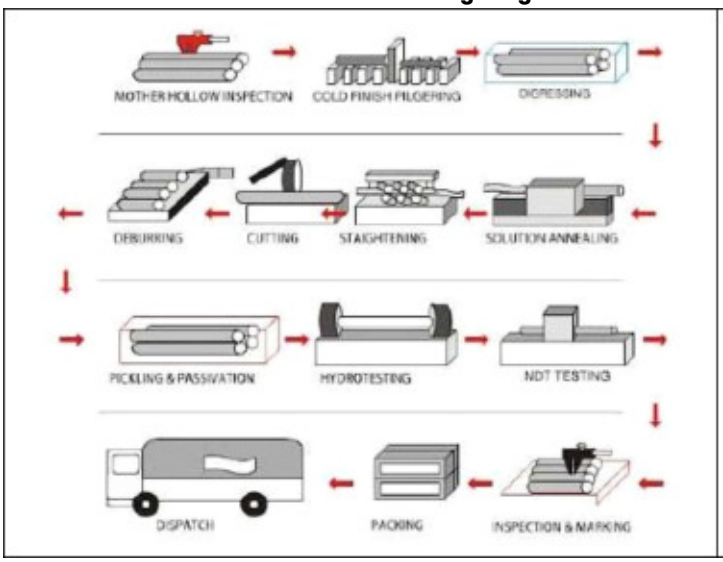
APPENDIX - 1: Manufacturing Process of Welded Pipes & Tubes *(continued...)*

Step	Reference	Process Description
Step 6	**Pickling and Passivation**	*Pickling:* A series of surface treatment processes, known as pickling, are carried out on the inner and outer surface of the pipes using a combination of acids with a small addition of a corrosion inhibitor or active agent, for the purposes of removing oxides scales and grease from the surface of the pipe by chemical action in order to obtain a clean and shiny metal surface. *Passivation:* A non-electrolytic finishing process known as Passivation is carried out for the purposes of improving the corrosion and rust resistance properties of stainless steel manufacturing subsequent to manufacturing. Corrosion resistance is critical for metal used in a variety of applications where contamination may have a destructive impact during production or during a product's end use. Though raw stainless steel begins with a high level of corrosion resistance, surface contamination from grease and oil, debris, and chemicals are usually present on parts and components after machining. The Passivation process clears away these contaminants and enhances the corrosion resistance of stainless steel.
Step 7	**Hydrotesting**	A pressure test known as the Hydrostatic (HYDRO) test is carried out for testing the products for their strength and leaks. The procedure involves filling the test product with a liquid (water) and pressurising it to a specified pressure (as per applicable product standards), subsequent to which the pressure is held for a specific amount of time to visually inspect the system for any leaks.
Step 8	**NDT Testing**	A testing/analysis technique, namely Non-destructive testing (NDT) is applied for the purposes of evaluating the properties of the materials, components, structures or systems for identification of characteristic differences/welding defects/discontinuities.
Step 9	**Inspection and Marking**	A physical inspection of the products is carried out and subsequently product markings are applied on each pipe/tube by way of stenciling/inkjet. Further, additional markings are applied as per the customer purchase orders and specifications. Subsequent to the markings, a tag is applied to the lot of tubes/pipes and the materials inspected are hard stamped/electro-etched, as applicable on pipes/tubes or on tag of the bundle.
Step 10	**Packing**	On receipt of the final product from the quality department, the packaging department verifies the tag and matches the same with the size and quantity of the product to be packed. Thereafter, the product is packed in a wooden box/hessian cloth/plastic wrapping based on packaging instructions and a copy of the packing list is kept inside the packaging.
Step 11	**Dispatch**	The details of the products are then entered in the dispatch register as per the applicable delivery schedule and thereafter the products are loaded into transportation for delivery.

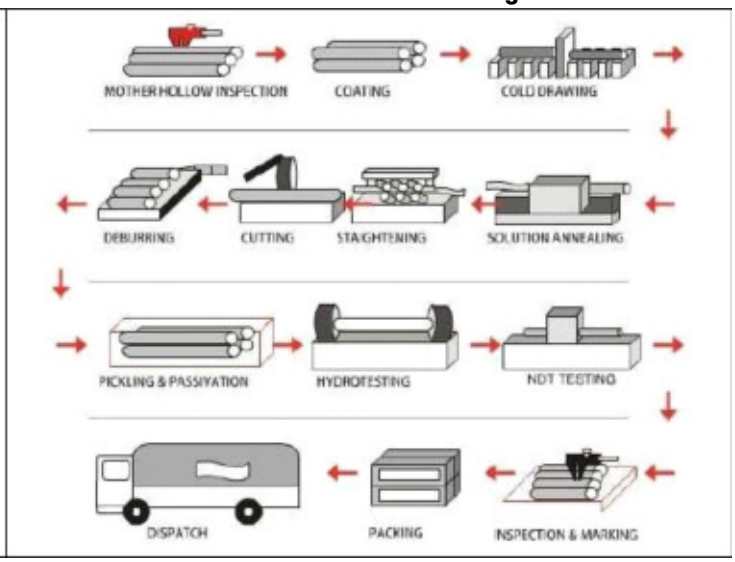
Source: Company, Antique

APPENDIX - 2: Manufacturing Process of Seamless Pipes & Tubes

Method 1 - Cold Finish Pilgering



Method 2 - Cold Drawing



Source: Company, Antique

APPENDIX - 2: Manufacturing Process of Seamless Pipes & Tubes *(continued...)*

Step	Reference	Applicable Method	Process Description
Step 1	**Mother Hollow Inspection**		A hollow pipe is the raw material used for the production of seamless pipes and tubes. Prior to processing, a basic inspection is done for the purposes of approving the usage of the hollow pipe in the production process, in which the same is inspected for its mechanical and chemical properties. Further, it is also visually checked for any surface defects, and if found acceptable, is sent for further processing.
Step 2	**Cold Finish Pilgering**	**Method 1**	It is a longitudinal cold-rolling process for reduction of the diameter and wall thickness of metal tube in one process step. Depending on the material, the cold pilger process achieves cross-section reductions of more than 90 percent in a single working cycle.
	Coating	**Method 2**	An oxalate coating operation is carried out by dipping the hollow pipe in oxalate at a prescribed temperature/time (as per applicable product standards) This operation is carried out for formation of a lubrication film on the hollow pipe for the purposes of easing the cold drawing process.
Step 3	**Degreasing**	**Method 1**	The pilgered tubes/pipes undergo degreasing and cleaning for the purposes of removing oil, grease and other foreign particles from such tubes/pipes.
	Cold Drawing	**Method 2**	The cold drawing process is carried out for the purposes of reducing the cross-sectional diameter and thickness of the tubes/pipes (as required) and increasing the tensile strength of the product by drawing through successively smaller dies.
Step 4	**Solution Annealing**		Solution annealing, a common heat-treatment process for different families of metals (including stainless steel) is carried out for the purposes of dissolving any precipitates present in the material and transforming the material into a single phase structure. This process is commonly used for the purposes of removing internal stress, restoring ductility, softening the metal for cold working and enhancing electrical conductivity, which can improve machinability and properties of stainless steel.
Step 5	**Cutting and Straightening**		Pipes are cut in desired specifications using a straightening machine/hydraulic press for the purposes of applying pressure points and straightening any unwanted bent areas, including deformations occurring during the heat treatment process.
Step 6	**Deburring**		A secondary process of deburring is undertaken for the purposes of enhancing the final product quality by removing raised edges and unwanted pieces of material, known as burrs, left by the initial machining processes including shearing, bending, cutting, piercing, and compressing materials. The process polishes the edges and the surface of the work piece for achieving a completely smooth finish.
Step 7	**Pickling and Passivation**		*Pickling:* A series of surface treatment processes, known as pickling, are carried out on the inner and outer surface of the pipes using a combination of acids with a small addition of a corrosion inhibitor or active agent, for the purposes of removing oxides scales and grease from the surface of the pipe by chemical action in order to obtain a clean and shiny metal surface. *Passivation:* A non-electrolytic finishing process known as Passivation is carried out for the purposes of improving the corrosion and rust resistance properties of stainless steel manufacturing subsequent to manufacturing. Corrosion resistance is critical for metal used in a variety of applications where contamination may have a destructive impact during production or during a product's end use. Though raw stainless steel begins with a high level of corrosion resistance, surface contamination from grease and oil, debris, and chemicals are usually present on parts and components after machining. The Passivation process clears away these contaminants and enhances the corrosion resistance of stainless steel.
Step 8	**Hydrotesting**		A pressure test known as the Hydrostatic (HYDRO) test is carried out for testing the products for their strength and leaks. The procedure involves filling the test product with a liquid (water) and pressurising it to a specified pressure (as per applicable product standards), subsequent to which the pressure is held for a specific amount of time to visually inspect the system for any leaks.
Step 9	**NDT Testing**		A testing/analysis technique, namely Non-destructive testing (NDT) is applied for the purposes of evaluating the properties of the materials, components, structures or systems for identification of characteristic differences/welding defects/discontinuities.
Step 10	**Inspection and Marking**		A physical inspection of the products is carried out and subsequently product markings are applied on each pipe/tube by way of stenciling/inkjet. Further, additional markings are applied as per the customer purchase orders and specifications. Subsequent to the markings, a tag is applied to the lot of tubes/pipes and the materials inspected are hard stamped/electro-etched, as applicable on pipes/tubes or on tag of the bundle.
Step 11	**Packing**		On receipt of the final product from the quality department, the packaging department verifies the tag and matches the same with the size and quantity of the product to be packed. Thereafter, the product is packed in a wooden box/hessian cloth/plastic wrapping based on packaging instructions and a copy of the packing list is kept inside the packaging.
Step 12	**Dispatch**		The details of the products are then entered in the dispatch register as per the applicable delivery schedule and thereafter the products are loaded into transportation for delivery.

Source: Company, Antique

Financials

Profit and loss account (INRm)

Year ended 31 Mar	FY19	FY20	FY21
Revenues	**1,188**	**1,778**	**3,093**
Expenses	1,105	1,662	2,746
EBITDA	**83**	**116**	**348**
Depreciation & amortisation	20	21	10
EBIT	**63**	**95**	**338**
Other income	18	15	27
Interest expense	31	46	56
Profit before tax	**49**	**65**	**310**
Tax	12	24	73
Profit after tax	**38**	**41**	**236**
Adj. PAT after minority int.	**38**	**41**	**236**
EPS (INR)	**1.8**	**2.0**	**11.6**

Balance sheet (INRm)

Year ended 31 Mar	FY19	FY20	FY21
Share Capital	87	87	87
Reserves & Surplus	34	75	312
Networth	**122**	**163**	**399**
Debt	294	426	375
Deferred tax/ other liabilities	2	9	4
Capital Employed	**418**	**598**	**779**
Gross Fixed Assets	98	123	196
Net Assets	**98**	**123**	**196**
Capital work in progress	-	32	-
Current Assets Loans & Advances			
Inventory	362	443	442
Debtors	216	307	451
Cash & Bank	18	54	45
Loans & advances and others	98	113	242
Current Liabilities & Provisions			
Creditors	373	472	595
Provisions	1	2	2
Net Current Assets	**320**	**443**	**583**
Application of Funds	**418**	**598**	**779**

Per share data

Year ended 31 Mar	FY19	FY20	FY21
No. of shares (Mn)	9	9	9
BVPS (INR)	6.0	8.0	19.7
CEPS (INR)	6.6	7.1	28.2
DPS (INR)	-	-	-

Source: Company, Antique

Cash flow statement (INRm)

Year ended 31 Mar	FY19	FY20	FY21
PBT	**49**	**65**	**310**
Depreciation	20	21	10
Interest	31	46	56
(Inc)/ Dec in working capital	(97)	(88)	(148)
Tax paid	(12)	(24)	(73)
CF from operating activities	**(8)**	**20**	**153**
Capex	(1)	(57)	(41)
CF from investing activities	**(1)**	**(57)**	**(41)**
Inc/ (Dec) in debt	100	132	(51)
Dividends & Interest paid	(31)	(46)	(56)
Others	(48)	(14)	(14)
CF from financing activities	**21**	**73**	**(121)**
Net cash flow	**12**	**36**	**(9)**
Add: Opening balance	6	18	54
Closing balance	**18**	**54**	**45**

Growth indicators (%)

Year ended 31 Mar	FY19	FY20	FY21
Revenue	74.0	49.7	74.0
EBITDA	16.5	40.3	198.8
PAT	73.2	10.1	472.3
EPS	73.2	10.1	472.3

Valuation (x)

Year ended 31 Mar	FY19	FY20	FY21
P/E (x)	178.6	162.2	28.3
P/BV (x)	55.0	41.2	16.8
EV/EBITDA (x)	84.1	60.8	20.2
EV/Sales (x)	5.9	4.0	2.3
Dividend Yield (%)	-	-	-

Financial ratios

Year ended 31 Mar	FY19	FY20	FY21
RoE	32.4	29.0	84.1
RoCE	13.7	13.0	40.8
Debt/Equity (x)	2.3	2.3	0.8
EBIT/Interest (x)	2.0	2.1	6.1

Margins (%)

Year ended 31 Mar	FY19	FY20	FY21
EBITDA	7.0	6.5	11.2
EBIT	5.3	5.4	10.9
PAT	3.2	2.3	7.6

Source: Company Antique

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