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IPO Note – Craftsman Automation Ltd.

13-March-2021



RETAIL RESEARCH

Issue Snapshot:

Issue Open: March 15 – March 17, 2021

Price Band: Rs. 1488 – 1490

*Issue Size: 5,528,161 eq shares
(Fresh Issue of 1,006,711 eq sh + Offer for sale of 4,521,450 eq sh)

Issue Size: Rs. 822.60 – 823.70cr

Reservation for:

QIB	Upto 50% eq sh
Non Institutional	atleast 15% eq sh
Retail	atleast 35% eq sh

Face Value: Rs 5

Book value: Rs. 355.93 (December 31, 2020)

Bid size: - 10 equity shares and in multiples thereof

100% Book built Issue

Capital Structure:

Pre Issue Equity: Rs. 10.06 cr

Post issue Equity: Rs. 10.56 cr

Listing: BSE & NSE

Book Running Lead Manager: Axis Capital, IIFL Securities Limited

Registrar to issue: Link Intime India Private Limited

Shareholding Pattern

Shareholding Pattern	Pre issue %	Post issue %
Promoter and Promoter Group	63.4	59.8
Public & Employee	36.6	40.2
Total	100.0	100.0

Source for this Note: RHP

* = assuming pricing at higher end of band

Background & Operations:

Craftsman Automation Limited ("Craftsman") is a diversified engineering company with vertically integrated manufacturing capabilities, engaged in three business segments, namely powertrain and other products for the automotive segment ("Automotive - Powertrain and Others"), aluminium products for the automotive segment ("Automotive - Aluminium Products"), and industrial and engineering products segment ("Industrial and Engineering"). Craftsman is the largest player involved in the machining of cylinder blocks and cylinder heads in the intermediate, medium and heavy commercial vehicles segment as well as in the construction equipment industry in India. They are among the top 3-4 component players with respect to machining of cylinder block for the tractor segment in India. They are present across the entire value chain in the Automotive-Aluminium Products segment, providing diverse products and solutions. Their strong in-house engineering and design capabilities help them offer comprehensive solutions and products to their long standing domestic and international customers in each of the segments in which they operate.

Company's comprehensive solutions include design, process engineering and manufacturing including foundry, heat treatment, fabrication, machining and assembly facilities. Their core competence in machining and assembly of industrial and engineering products has helped them to first establish themselves as a significant player in the Automotive - Powertrain and Others segment. Their key products in this segment are highly engineered and include engine parts such as cylinder blocks and cylinder heads, camshafts, transmission parts, gear box housings, turbo chargers and bearing caps. The end users for their products include OEMs producing commercial vehicles, special utility vehicle, tractors and off-highway vehicles. Additionally, they also provide machining services within their Automotive - Powertrain and Others segment. Over the years, they have been instrumental in import substitution for critical powertrain parts.

Craftsman has leveraged their long-term presence in developing aluminium products for precision components to also establish and grow the Automotive - Aluminium Products segment. Within their Automotive - Aluminium Products segment, they are equipped with an array of processes including the high pressure die casting, low pressure die casting and gravity die casting machines to manufacture components, machining tools for machining and assembly lines. Their key products are highly engineered and include crank case and cylinder blocks for two wheelers, engine and structural parts for passenger vehicles and gear box housing for heavy commercial vehicle.

Within the Industrial and Engineering segment, Craftsman has utilized their in-house engineering and design capabilities and developed a diverse product portfolio across 2 sub-segments, namely, (i) the storage solutions sub-segment under which they have the complete solution for conventional/automated storage; and (ii) the high end precision products sub-segment under which they manufacture aluminium products for power transmission, high-end precision products and undertake sub-assembly, material handling equipment such as hoists, crane kits and industrial gears, manufacture gear and gear boxes, marine engines and accessories, special purpose machines ("SPM"), which includes metal cutting and non-metal applications such as washing and leak testing solutions and tool room, mould base and sheet metal. In their storage solutions business, Craftsman provides diverse products and solutions such as pallets, racking, shelving, vertical storage solutions to several sectors such as FMCG, Ecommerce, food and beverages, logistics, pharmaceutical and electronics.

Craftsman has long term relationships with several marquee domestic and global original equipment manufacturers ("OEMs") and component manufacturers across its three business segments. Within its Automotive -Powertrain and Others segment, its key customers include Daimler India, Tata Motors, Tata Cummins, Mahindra & Mahindra, Simpson & Co. Limited, TAFE Motors and Tractors, Escorts, Ashok Leyland, Perkins, Mitsubishi Heavy Industries, John Deere and JCB India. Within its Automotive - Aluminium Products segment, its key customers include Daimler India, TVS Motors, Royal Enfield,

Craftsman Automation Ltd.

Perkins and Mahindra & Mahindra. Key customers within its industrial and engineering segment include Siemens and Mitsubishi Heavy Industries.

Craftsman commenced operations in 1986 in Coimbatore, in the State of Tamil Nadu, India. It owns and operates 12 strategically located manufacturing facilities across seven cities in India, with a total built up area of over 1.5 million sq. ft., close to some of its key customers to enable meeting its customers' just-in-time delivery schedules, allow economies of scale and logistical advantages for its customers, and to insulate them from local supply or other disruptions.

Craftsman intends to leverage their strong product development, designing, engineering and manufacturing capabilities, to create opportunities in increasing their market share in the storage solutions business.

The share of its three business segments within its revenue from operations has remained relatively stable during this period, with the Automotive - Powertrain and Others, Automotive - Aluminium Products and Industrial and Engineering segments accounting for 51.21%, 21.10% and 27.69% of its revenue from operations in the nine months ended December 31, 2020.

Objects of Issue:

The Offer consists of the Fresh Issue and the Offer for Sale.

Offer for Sale

The proceeds from the Offer for Sale (net of Offer related expenses of the Selling Shareholders) shall be received by the Selling Shareholders and Craftsman shall not receive any proceeds from the Offer for Sale.

Fresh Issue

Craftsman proposes to utilise the Net Proceeds towards funding the following objects:

- Repayment or pre-payment, in full or part, of certain borrowings of Craftsman – Rs.1200 mn.
- General corporate purposes.

In addition to the aforementioned Objects, Craftsman expects to receive the benefits of listing of the Equity Shares on the Stock Exchanges.

Competitive Strengths:

Diversified engineering company with a focus on providing comprehensive solutions and manufacturing high quality, intricate and critical products, components and parts: Craftsman is a diversified engineering company engaged in: (a) Automotive – Powertrain and Others, (b) Automotive – Aluminium Products, and (c) Industrial and Engineering segments. They are the largest player involved in the machining of cylinder blocks and cylinder heads in the intermediate, medium and heavy commercial vehicles segment as well as the construction equipment industry and are also among the top 3-4 players in machining of cylinder blocks for tractor segment in India. They are present across the entire value chain in the Automotive- Aluminium Products segment, providing diverse products and solutions. They offer comprehensive one-stop solutions to its customers including design, process engineering and manufacturing including foundry, heat treatment, fabrication, machining and assembly facilities. They are diversified across end-user industries and cater to commercial vehicles, two wheelers, tractor and other segments. Craftsman's diversification of revenue across multiple customers allow them to prevent any possible customer concentration in any of their business segments. With their track record and wide product portfolio, they have been able to retain its existing customers and have also been able to attract new customers.

Strong in-house process & product design capabilities with the ability to interchange capacity and product mix: Craftsman is present across various levels of the component value chain, providing products and services that range from product design, prototyping, tool development, manufacturing, assembly and production of integrated components, reducing or minimizing their use of, or reliance on, externally sourced components. Their diversified presence across various levels of the component value chain and design capability is unique across the competitive landscape. They place a strong focus on research and development, with an emphasis on continuous improvement in product performance, cost and reliability, to enhance their product range. Their manufacturing automation teams integrate robots and gantry systems, thereby assuring consistent quality and dependability. They have utilized their in-house engineering and design capabilities to develop a diverse product portfolio including material handling equipment.

Long term and well established relationships with marquee domestic and global OEMs: Craftsman has strong and well established relationships with several marquee domestic and global OEMs as well as component manufacturers, including certain of their key customers, to which they have been supplying their products and solutions for over 10 years, such as Tata Motors and Tata Cummins. They have significant presence and customer relationships in each of their business segments and are considered as a strategic and preferred supplier by many of their OEM customers. They are also the single source supplier in certain product categories, for some of their key customers. They have a consistent track record of adding new customers to their portfolio and spreading across geographies. Their diversified engineering, comprehensive solutions and high quality, intricate and critical products, components and parts, process and

product design capabilities have been critical in sourcing new customers and their ability to retain such customers and generate revenue from new customers. Their track record of having established and maintained long term relationships with multiple such customers illustrates their commitment to successfully serve and meet the requirements of the customers, through the supply of quality products and solutions. They have the ability to develop various products and solutions, to meet their designs and specifications, as well as to cross sell multiple products to and thereby increase their wallet share with their customers.

Extensive manufacturing footprint, with strategically located manufacturing facilities: They have their owned and operating 12 strategically located manufacturing facilities across seven cities in India, with a total built up area of over 1.5 million sq. ft. They have facilities, which are equipped with advanced machinery and located close to their key customers to enable meeting customers' just-in-time delivery schedules, allow economies of scale and logistical advantages for its customers, and to insulate them from local supply or other disruptions. Craftsman in-house engineering and design capabilities allow it to offer comprehensive solutions including design, process engineering and manufacturing including foundry, heat treatment, fabrication, machining and assembly to its long standing domestic and international customers. They have upgraded and continue to modernize, their manufacturing facilities, infrastructure, machines, equipment and technology to allow them to offer a diverse product suite, reduce operating costs and drive productivity. They have recently set up a new unit in Pune with high-end fully automated equipment from Italian and Swiss manufacturers. This facility, which commenced operations in 2019, enables them to service the storage solutions market, catering to customers across India.

Experienced management team supported by motivated and skilled work force: The company benefited significantly from their strong management and technical teams, which include individuals with specialized training and/or substantial experience. In particular, their Promoter, Chairman and Managing Director, Srinivasan Ravi, is a mechanical engineer and a first-generation entrepreneur with over 34 years of relevant industry experience, and strong relationships with several key industry players. In addition, they have an experienced Board of Directors, comprising Whole-time Directors and Independent Directors, each with several years of relevant experience. Their senior management has extensive experience including in operations, business development, quality assurance, customer relationships, finance and human resource management. Company's Promoter's vision, strategic guidance, industry relationships and entrepreneurial ability and their senior management's execution skills are supported by a large motivated and skilled workforce.

Robust financial performance in challenging business environment.

Our robust financial performance positions us for future growth and diversification. Our total income was Rs.10,299.08 million, Rs. 15,010.57 million, Rs. 18,316.43 million and Rs. 15,228.62 million for the nine months ended December 31, 2020 and Fiscals 2020, 2019 and 2018 while our profit after tax was Rs. 506.60 million, Rs. 410.73 million, Rs. 973.67 million and Rs. 315.34 million for the same period.

Business Strategy:

Leverage vertically integrated manufacturing and engineering capabilities, to tap the growing opportunities for aluminium usage in the Automotive – Aluminium Products and Industrial and Engineering segments: Company's vertically integrated manufacturing and engineering capabilities enable them to capitalize on the growing opportunities and emerging trends in their industry, particularly in the Automotive – Aluminium Products segment, where their focus is on multi utility vehicles, commercial vehicles and two wheelers, and in their Industrial and Engineering segment, where their focus is on manufacturing certain critical power transmission components, including, among others, castings for gas insulated switchgear. In order to comply with government norms, the automobile manufacturers are, amongst other things, exploring various possibilities of light-weighting their vehicles by using non-ferrous metals like aluminium to reduce carbon emission. As the company has an entire range of aluminium casting and product capabilities, they are poised to offer various aluminium cast components in lieu of iron components. They have already successfully developed aluminium cast components for an OEM. They have also developed an integral aluminium welding technology, which would enable them to offer comprehensive solutions to manufacture structural parts for their Automotive - Powertrain and Others and Automotive – Aluminium Products segments.

Increase wallet share and acquire new business by leveraging existing OEM relationships and adding new customers: The company intend to strengthen their relationships with their existing customers and explore opportunities to grow along the value chain by expanding the array of their existing products and solutions that they supply to their customers across geographies, and to win new customer contracts by developing products and solutions aligned with their needs. They have been able to discern emerging trends and proactively identify new segments of business over the past few years, enabling them to capitalize on an early mover advantage in certain segments, and also to harness synergies through knowledge sharing between their cross-functional teams and horizontal and vertical integration across their operations. Their engineering expertise and domain knowledge have enabled them to foray into certain niche areas with high margin, high growth potential, including high-quality, intricate, complex and critical components required by their customers.

Growing opportunities in storage solutions: As a part of the growth strategy, Craftsman seeks to pursue emerging opportunities, including storage solutions and material handling, which are growing market opportunities. They see opportunities in increasing their market share in the storage solutions business, where they intend to leverage their strong product development, designing, engineering and manufacturing capabilities along with their strong relationships with their existing customers. Craftsman commenced the storage solutions business in 2012 and has rolled out storage solutions for their customers in the FMCG, E-commerce, food and beverages, third party logistics, pharmaceutical and electronics sectors. The company expects the storage business to continue its growth trajectory and become an independent business segment over the next few years. Using their design and engineering capabilities, they have developed a vertical storage system with tray extractor arrangements operated by a console, marketed under the brand name "V-Store". With increasing space

constraints in urban areas, V-Store, which improves the storage ratio and has substantial applications across various industries, holds potential in the near future.

Continue to reduce operating costs and improve operational efficiencies: Offering quality products at attractive prices is a key aspect of maintaining and expanding their relationships with their customers. They intend to continue enhancing their operational efficiencies, to increase economies of scale, better absorb their fixed costs, reduce the other operating costs and strengthen their competitive position. They would focus on improving capacity utilization at their production facilities, through increase in their overall production volumes. They intend to leverage their large size and scale to produce greater volumes of products from each of the plants and spread fixed costs, which relate primarily to the machinery and equipment required to produce components and to fixed labour costs, more widely to reduce production costs on a per unit basis, allowing them to reduce unit sales price and increase competitiveness.

Industry:

Automobile segments (domestic sales volumes):

Automobile segments	Sales volume, FY20 (million units)	CAGR FY15- 20 (%)	FY21E (y-o-y growth %)	Sales volume, FY24P (million units)	CAGR FY20- FY24P (%)
Commercial vehicles	0.72	3.2%	(26)-(28) %	0.90	5-7%
Passenger vehicles	2.77	1.3%	(11)-(13) %	3.45	5-7%
Two-wheelers	17.42	1.7%	(15)-(17) %	18.8	1-3%
Tractors	0.71	5.2%	18-20%	0.86	4-6%
Off-highway vehicles	0.06	10.9%	(21)-(23) %	0.05^	-

Note: ^Projected domestic sales as on FY 22.

Source: The Society of Indian Automobile Manufacturers (SIAM), CRISIL Research.

Review of the Indian Automobile Industry:

Commercial vehicles

Between fiscals 2015 and fiscal 2020, domestic CV sales logged 3.2% CAGR. In fact, over fiscals 2015-2019, the CAGR was 13% due to a sharp 16% CAGR in medium and heavy commercial vehicles (M&HCV) segment and 14% in light commercial vehicle (LCV). Over the last five years, sales of buses, on the other hand, saw a tepid 3.1% CAGR. Sales volume in the past have been volatile due to various factors such as government policies, lower industrial production, fall in agricultural output, declining share of road in goods transportation that increased transporters' cost of operations and profitability.

M&HCV volume declined during economic slowdowns of fiscals 2009 and 2014, after which there was a gradual recovery, in line with economic growth. In fiscal 2017, CV sales saw a 7% on-year rise over April-October. However, after demonetization (November 2016), cash crunch in the economy negatively impacted industrial output and slowed sales growth. However, in fiscal 2018, commercial vehicle sales witnessed strong recovery and grew a healthy 20%. The growth continued in fiscal 2019 supported by a sharp rise in LCV sales and continued growth in M&HCVs. In fiscal 2020, the industry witnessed a sharp decline on a high base due to inventory adjustment on account of BS-VI transition.

Bus segment

During fiscal 2015-2020, bus segment recorded a slow growth pace of 1%. The growth was led by the MHCVC segment which grew at 2% CAGR while LCV sales remained flat. Demand for buses in fiscal 2020 was impacted due to safety regulations (emergency exit doors, fire detection and suppression, escape hatches and emergency lighting) that led to an increase in cost of ownership of ~Rs. 50,000. This after a price hike of ~Rs. 15,000 due to mandatory installation of vehicle tracking system and panic buttons in January 2019. After the price rise, demand for buses in fiscal 2020, was also hit by weakening private consumption hampering demand from tourist bus operators and intercity travel operators. Weak corporate hiring and production cuts in manufacturing has also impacted demand for corporate staff buses. However, schools and route permit buses have shown some resilience in FY20. Demand from state transport undertakings (STU) ramped up in H2FY20 as STUs look to replace much of their older fleet before the BS-VI price rise.

Passenger vehicles

The passenger vehicle industry registered 1.3% CAGR over fiscal 2015-2020. In fiscal 2020, the industry saw a decline of 18% on account of inventory adjustment due to BS-VI norms and decline in consumer sentiment. Insurance regulation that came into effect in September 2018 led to higher cost of ownership coupled with lower private consumption, which, led to a sluggish growth of 3% in fiscal 2019.

Key OEMs in domestic PV market

Maruti maintains its leadership position with 51% market share, followed by Hyundai (18%), Mahindra (7%), Tata Motors (5%) and Honda and Toyota (4% each), Kia and Renault (3% each) followed by other players.

Two-wheelers

Over fiscals 2015-2020, the two-wheeler industry registered 1.7% CAGR. Lower CAGR growth is due to 18% decline of the industry in FY20 due to weak rural sentiments, which accounts for majority of motorcycle demand and high inventory levels with the dealers, which were rationalized due to transition from BS IV to BS VI.

Domestic sales of two-wheeler recorded a flattish growth in Q2 FY21 after de-growing by 74% in Q1 FY21 due to lockdown followed by supply constraints.

Key OEMs in domestic two-wheeler market

Hero leads two-wheeler industry with 51% market share, followed by Honda (27%), TVS (14%), Bajaj (12%) and Suzuki and Royal Enfield (4% each).

Exports

Two-wheeler exports from India grew 7% in fiscal 2020 over a high base of 16% growth in fiscal 2019 due to strong demand from African markets, primarily Nigeria and Uganda. The efforts of original equipment manufacturers (OEMs) to diversify into more promising geographies aided exports.

Most of the export markets such as African nations are crude oil-driven and commodity-linked economies. With crude oil prices hitting multi-decade low in fiscal 2021, demand from these markets remains a key monitorable.

Key OEMs in two-wheeler exports

Share of motorcycle in exports from India is at 89%, scooters occupy remaining share (11%) with mopeds occupying minimal share as on fiscal 2020. Bajaj leads exports of two-wheeler from India with a share of 53%, followed by TVS at 19%, Honda at 9%, Yamaha at 8%, Hero at 5% and Suzuki at 3%.

Tractors

Tractor sales are highly dependent on agriculture incomes, which is dependent on the monsoons. Hence, fluctuation in sales is higher than other automobile segments.

Over fiscals 2015-2020, domestic tractor sales logged 5.2% CAGR. In fiscals 2015 and 2016, weak monsoon restricted tractor demand.

The sales revived in fiscals 2017 and 2018, rising 19% and 22% on-year, respectively, on the back of a normal monsoon with good spatial and temporal distribution. In fiscal 2019, the pace tapered to 10% and in fiscal 2020, the sales de-grew 10% on a very high base of fiscal 2019.

The government announces food grain procurement prices, also known as minimum support price (MSP), to protect farmers from price volatility in the market. This ensures steady income for them. The government has consistently raised the MSP for major crops such as wheat, rice, sugarcane and cotton from fiscal 2007. This, too, supported the tractor segment.

Key OEMs in domestic tractor sales

Tractor industry is dominated by players like Mahindra with 41% market share, followed by TAFE at 17%, ITL and Escorts by 12%, John Deere by 10%, followed by other players.

Exports

Tractor exports recorded a flat growth from fiscal 2015 till fiscal 2020 mainly due to a decline of 17% in fiscal 2020 due to strict emission norms in North America and also due to political tension in some African countries. Demand from Europe also declined on the back of global economic slowdown.

Asia, North America and Africa together contribute major proportion of exports sales from India. Tractors are mainly exported to countries like USA, Asian countries like Malaysia, Nepal, Sri Lanka, Bangladesh, etc.

Key OEMs in tractor exports

Players have been focusing on exports due to insulate themselves from the cyclic domestic market demand. ITL (International Tractors Ltd.) occupies major proportion in exports pie at 24%, followed by John Deere at 21%, TAFE by 17%, Mahindra by 13% and New Holland India by 12%.

Off-highway vehicles

Volume sales for the construction equipment (CE) industry surged from fiscal 2017 onwards because of an upsurge in the renting of backhoes and excavators. Typically, ~85% of purchased backhoes are given out on rent, while this figure stands at ~50% for excavators.

An uptick in execution of road projects has also been a key contributor to growth in the EME industry, with the National Highways Authority of India (NHAI) construction touching an all-time high in fiscal 2020. By the time the nationwide lockdown was announced, highway construction under the NHAI in fiscal 2020 was already at 3,979 km, 18% higher than the 3,380 km constructed in fiscal 2019. A

shift in focus to swifter execution has paid off for NHAI, recording the highest-ever construction in the past decade, at 10.9 km per day, in line with CRISIL Research's estimate of 10-11 km per day. The roads sector is a major contributor to total EME volumes in India.

Decline in demand in FY20 is reflected in loans disbursed by equipment finance companies. 85-90% of the equipment are financed in the industry with institutional and cash purchase accounting for the rest.

Government policies:

The government has formulated various schemes and policies to support the expansion of the electric vehicle (EV) ecosystem in India. They are:

- Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME)
- Phased Manufacturing Programme (PMP)
- Charging Infrastructure for Electrical Vehicles - Guidelines and Standards

Automotive Components Industry in India:

The Indian auto components industry clocked a CAGR of 6% in production over fiscals 2015 to 2020, led by growth in replacement and exports demand. Domestic demand is forecast to log a CAGR of 6-8%, driven by demand from OEM at 7-9%, whereas exports are set to grow at 3-5% over fiscals 2020 to 2024.

Demand for automotive components (domestic consumption)

CRISIL Research projects domestic auto component consumption to decline by 9-11% in fiscal 2021 on account of subdued demand across all automobile asset classes amid continued weakness in the economy and lower demand from the replacement market owing to less movement of vehicles. However, higher component intensity due to the BS-VI norm is expected to aid average realisations. In long term, CRISIL Research expects the domestic consumption to grow at a pace of 5-7% CAGR between fiscals 2020-2024. In fiscal 2021, imports are expected to decline by 10-12% owing to subdued demand from OEMs and the aftermarket. Besides, domestic auto component manufacturers have also been operating at below-normal utilization levels owing to weak demand. Imports declined by 33% on-year during the first quarter. Going ahead, with improving domestic production, demand for imports is expected to pick up on a sequential basis. In the long term, i.e. between fiscals 2020 and 2024, CRISIL Research expects domestic auto component production to log a CAGR of 6-8% to ~₹ 4,225 billion. OEM demand is expected to clock a CAGR of 7-9% between fiscals 2020 and 2024 to reach ~₹ 2,772 billion, on the back of healthy growth in the OEM segment on a low base of fiscal 2020 and 2021 due to BS-VI norms and the Covid-19 pandemic, respectively.

Replacement demand

As for the replacement market, demand weakened for the first time in over a decade owing to lower movement of vehicles on the back of imposed nation-wide lockdowns, followed by state-wide lockdowns until August 2020. The auto component replacement market is projected to grow at a steady rate of 3-5% CAGR between fiscals 2020 and 2024. Replacement demand is expected to be lower as compared to the growth logged between fiscal 2015-2020 due to increased durability of components (better quality), better road infrastructure and increase in service intervals leading to lower preventive maintenance is resulting in a slower growth rate in the long term. Demand in the replacement market will grow due to increase in the utilization rate of CVs and increase in penetration of cab aggregator services in the overall stock of passenger vehicles.

Review And Outlook On The Aluminium Die Casting Market In India:

Review of aluminium casting market in India

40% of the metal castings in the automobiles industry use aluminium, with a majority of cast components made for the two-wheeler and passenger vehicle segments. Some of the casting components used in the vehicles are cylinder blocks and cylinder heads, transmission housing, pistons, crank covers, clutch parts, axles, chassis parts, gear box and wheel parts. Demand for aluminium castings, which are used as part of alloy wheels, has picked up due to an increase in penetration of alloy wheels in two-wheelers and passenger vehicles.

Non-ferrous/ aluminium casting forms nearly 70% of the overall casting market in value terms. Two-wheelers account for ~70% of the aluminium die casting market, followed by passenger vehicles with 25% share and commercial vehicles with a 4-5% share in value terms. Original equipment manufacturers account for 75-80% of the offtake. Exports account for 15-20%, with the aftermarket comprising the remainder. Size of the aluminium casting industry was about Rs 169 billion in fiscal 2020. Demand for aluminium die casted products stood at 0.44 million metric tonnes in fiscal 2020.

Key players

The aluminium die casting industry has a large number of players. Major organised players include Rockman Industries, Sunbeam Auto Private, Aicon Castalloy, Sundaram Clayton, Endurance Technologies and Craftsman Automation Limited.

Review And Outlook Of India's Powertrain Market:

Powertrain and transmission market to accelerate up to fiscal 2024 The power train market is expected to clock 12-14% CAGR during fiscals 2020 to 2024. Fiscal 2021, though, is expected to be affected by a drop in domestic demand as well as subdued exports owing to disruptions in the economies caused by the Covid-19 pandemic globally.

Power and transmission

In automobiles, a powertrain generates power and transmits it to the wheels. It can be broadly classified into four components – (i) engine and engine parts, (ii) transmission, (iii) driveshaft, and (iv) rear axle. The engine burns the fuel to produce mechanical power. It comprises several critical components, including cylinder block, cylinder head, and crankshaft, pistons, camshaft, and engine valves.

Cylinder block

Cylinder block is the supporting structure of the engine on which all engine parts are mounted. It houses the cylinder, which gives engine its power. The cylinder block for commercial vehicles (CVs), off-road vehicles, sports/multi-utility vehicles (SUVs / MPVs), and tractors uses cast iron. In fact, cast iron accounts for 55-60% of the manufacturing cost, which weighs on the revenue of companies. The market size of the cylinder block for CVs, construction vehicles, MPV/SUVs, and tractors was Rs 27.9 billion in fiscal 2020, which is expected to reach ~Rs 40.6 billion by fiscal 2024.

Cylinder head

Cylinder head covers the cylinder and helps the head gasket seal the cylinders in order to build enough compression for the engine operation. Similar to a cylinder block, cylinder heads are also manufactured by the process of casting using ferro alloys.

The current market size of cylinder head for CVs, construction vehicles, SUVs, and tractors is Rs 14 billion, which is expected to reach ~Rs 18.2 billion by fiscal 2024.

Transmission

Transmission is commonly known as the gearbox, which transmits power to the wheels through the drive shaft and rear axle. Auto-component companies are engaged in casting, forging and machining of engine parts, transmission parts housing, drive shaft, rear axle housing, etc.

Transmission is a set of gears within a casing that allows controlled application of the power using different gear ratios. The switching of gears can be done manually by the driver of the vehicle or automatically, depending on the type of transmission used in the vehicle. In India, manual transmission is used for CVs and tractors, while automatic transmission is used for SUVs.

Rear axle

Rear axle lies between the wheels and the differential gear that transmits power from the differential to the wheels. The differential gear and rear axle are enclosed in a single housing that is connected to the drive shaft. Auto-component manufacturers use the process of forging/ castings, post which heat treatment and machining is done for the finished product. The current market size of rear axle for CVs, SUVs and off-road vehicles is Rs 73.8 billion, which is expected to reach ~Rs 90.3 billion by fiscal 2024.

Review And Outlook On Aluminium Castings Used In Power Transmission In India:

Overview

Power transmission is the bulk movement of electrical energy from a generating site, such as a power plant, to an electrical substation. The transmission segment plays a key role in transmitting power continuously to various distribution entities across the country. Further, the transmission sector needs concomitant capacity additions, in line with the generation capacity addition to enable seamless flow of power.

A reliable transmission system is important for the proper and efficient transfer of power from generating stations to load centres. A transmission and distribution (T&D) system comprises transmission lines, substations, switching stations, transformers and distribution lines. To ensure reliable supply of power and optimal utilisation of generating capacity, a T&D system is organised in a grid, which interconnects various generating stations and load centres. This ensures uninterrupted power supply to a load centre, even if there is a failure at the local generating station or a maintenance shutdown. In addition, power can be transmitted through an alternate route if a particular section of the transmission line is unavailable.

Transmission system components

The transmission system can be divided into transmission line component and substation component. Both components account for almost 50% of the total cost of setting up the system. The transmission line component comprises transmission line towers and conductors. The main cost elements of the substation component are transformers and switchgears.

Transformers

Transformer helps in changing the voltage level, while transmitting electrical energy over long distances, to avoid energy loss during transmission and make the required power available to consumers. Step-up transformers are used to increase the voltage, while decreasing the current during transmission, and step-down transformers are used to decrease the voltage while increasing the current, whereas distribution transformers are used to transmit power to the end consumer.

Switchgear

Switchgear refers to the combination of electrical equipment such as fuses, low- and high-tension circuit breakers, miniature circuit breakers, control panels, and switchboards. However, the main equipment includes fuse switch units and low- and high-tension circuit breakers.

The basic function of switchgear is protection, which is an interruption of short circuit and overload fault current, while maintaining service to unaffected circuits. Switchgear also provides isolation of circuits from power supplies. Switchgear is also used to enhance system availability by allowing more than one source to feed a load.

Circuit breaker is one of the most important components of switchgear, whose function is current interruption. The circuit breaker is designed to 'trip' in the event of an overload or any type of fault or abnormality in the system. The circuit breaker 'senses' the fault through a protection relay and triggers before damage can occur.

Various types of circuit breakers used are oil, air, gas, hybrid, and vacuum. Each type performs essentially the same function, with the key difference being their operating mechanism. For example, an oil circuit breaker uses oil as a dielectric or insulating medium for arc extinction, while an air-based circuit breaker uses compressed air to break the arc.

Review And Outlook On Material Handling Equipment (Cranes And Hoists) In India:

Material handling equipment (MHE) are machines that enable movement and storage of materials within a facility or site. Based on the weight of the materials carried, MHE can be classified as:

- Unit load – Handle materials packed into a compact unit for movement and storage ease (for e.g., forklifts, cranes used to store units of materials)
- Transport loose bulk materials such as iron ore, coal and cereals

MHE include equipment such as feeders, conveyor belts, screens, crushers and gears, etc., used for sorting, moving or positioning materials.

Industry structure – cranes (and hoists)

A crane is a large machine used to move, lift and lower objects through a projected arm. Cranes are generally equipped with chain hoists, wires, ropes, beams, etc., for material handling requirement. Industrial cranes, which are used in general material handling and manufacturing, comprise overhead (including electric) and mobile cranes.

Industrial cranes can be used for various purposes and provide cost economies in material handling. Some of the typical uses include: heaping, loading-unloading, shifting, repositioning and erecting material. Other large cranes, such as rough terrain, crawler, and tower cranes, are used in heavy duty work.

A hoist is a critical component of cranes, which enables handling of freely suspended objects. Typically, cranes are installed with a hoist depending upon the load requirements. A few industrial cranes are also installed with two hoists (less than 5%), to enable broader load ranges. Regular hoists that are fitted to industrial cranes are classified into chain hoists, which have lower load range (up to ~3 tonne), and rope hoists, which can handle heavier loads. These hoists comprise more than 80% share of the industrial cranes market.

Review And Outlook On Storage Solutions Market Focusing On Racks, Shelves And Pallets Used In The Warehousing Industry:

The storage solutions industry broadly comprises pallets, racking solutions and shelving solutions.

Shelving solutions are ideal for storage of assorted materials that are handpicked. Palletised racking solutions are ideal wherein huge volumes of standard-type products are produced, stored, retrieved and distributed in and out of manufacturing units or warehouses. Pallet Racks provide for manual as well as automated Storage & Retrieval

On the other hand, slotted angle racking, multi-tier racking systems, etc, are suitable for manual retrieval of assorted materials.

Review And Outlook Of Tool Room And Mould Base Market In India:

A tool room is integral to the manufacturing sector, and, hence, its fortunes are closely linked to the trajectory of the various industries.

The tool room industry is estimated to have grown at 6-7% CAGR between fiscals 2017 and 2019, supported by a 10% CAGR in demand (domestic + exports) from its primary segment, i.e. automotive, and 6% CAGR from consumer appliances. In fiscal 2020, though, demand from the automobile sector dropped ~15% on-year amid slowing economic growth, weak rural demand, price hikes of vehicles because of Bharat Stage-VI upgradation, increase in road tax in certain states, liquidity constraints resulting in lower loan-to-value, as well as the nationwide lockdown in late March. Consequently, the tooling industry's market size fell 8-10% on year, to Rs 150-155 billion. Continued growth in consumer appliances demand of 5-6% even in fiscal 2020 restricted a further decline.

Consequently, the share of the automotive segment in the industry-wise demand pie shrunk from 64% in fiscal 2017 to 61% in fiscal 2020. On the other hand, the consumer appliances industry's share rose from 7% to 9%, with the plastic products industry maintaining its share of 12-14%.

Key Concerns:

- The COVID-19 pandemic has and is expected to have a material adverse effect on future developments and Craftsman's business, financial condition, results of operations and cash flows, which cannot be predicted.
- Uncertainty of sales has seen significant decline in automobile sales even prior to COVID-19 and has not yet recovered.
- Inability to meet obligations under debt financing arrangements would adversely affect Craftsman's business, financial condition, results of operations and cash flows.
- As a result of losses of the group companies incurred in past 3 fiscals would affect Craftsman's reputation or business.
- Craftsman's business would be adversely affected by lose in market share and profit declines, If unable to respond adequately to the increased competition and pricing pressures from existing players and new entrants.
- Loss of key customers or significant reduction in production and sales, or demand for production from significant customers would adversely affect Craftsman's Business.
- No long-term contracts or exclusive arrangements with any of the suppliers, and any major disruption to the timely and adequate supplies of raw materials for any of the segments could adversely affect business, results of operations and financial condition.
- Joint ventures and strategic investments in the past and may continue to undertake joint ventures, strategic investments, alliances as well as inorganic growth through strategic acquisitions, in the future, which may be difficult to integrate and manage. These may expose it to uncertainties and risks, any of which could adversely affect its business, financial conditions and result of operations.
- Risks arising from interest rate fluctuations, which could adversely affect results of operations planned expenditures and cash flows.
- Any adverse events affecting these USA and Japan could have an adverse impact on its results from operations, as they are major importers.
- Credit risk exposure on account of interest free loans given by Company to Subsidiary.
- Winding down Singapore operations would adversely affect business and results of operations.
- The Company has invested in Bhatia Coke & Energy Limited and if such investments may not be recovered than it will cause losses.
- The company may be subject to imposition of notices or penalties under the Companies Act 2013 from the Ministry of Corporates Affairs, Government of India for non-compliance with the requirement to incur prescribed expenditure towards CSR activities in previous Fiscals, which could adversely affect reputation and business.
- The Company would be adversely affected, if unable to accurately forecast demand for products and plan production schedules in advance.
- Any shortfall in supply of raw materials or an increase in raw material cost or other input costs for any of the segment would adversely affect pricing and supply of products and have adverse effect on Business, Result of Operations and Financial Condition.
- Limited Operational flexibility on account f of obligations under some of the major long-term customer agreements.
- Extended credit terms to customers are subject to counterparty credit risk. Any deterioration in such customers' financial position and their ability to pay or inability to extend credit in line with market practice may adversely impact profitability.
- Adverse impact on cash flows, financial condition and results of operations due to Liquidity risks.

- If unable to continue to implement brand building and marketing initiatives, for each of the brands, business and prospects may be adversely affected. Moreover, any deterioration in the reputation and market perception of the brands may have an adverse effect on sales, profitability and the implementation of growth strategy.
- Substantial capital expenditure and working capital requirements and additional capital requirement to meet those requirements, would have an adverse effect on its results of operations and financial condition.
- Failure to comply with conditions of use of manufacturing facilities with care operated on industrial land allotted by Industrial Development Corporations would result in an adverse impact on Business and Financial condition.
- Any downgrade of credit ratings may restrict access to capital and thereby adversely affect business and results of operations.
- Cyclical and seasonal nature of automotive sales and production can adversely affect business.
- Political, Economic or other factors including but not limited to any changes in laws, rules and regulations and legal uncertainties that are beyond control may have adverse impact on Business.

Balance Sheet

Particulars (Rs in milliom)	9MFY21	FY20	FY19	FY18
Assets				
Non-current assets	15684.9	16765.7	17166.8	14022.7
Property, plant and equipment	14130.7	14267.0	14764.5	12447.4
Capital Work in Progress	274.3	888.2	906.1	243.1
Right-of-use assets	847.2	1043.1	977.9	637.6
Intangible assets	78.7	106.3	143.4	149.6
Investments accounted for using equity method	18.8	17.9	18.1	14.0
Financial assets				
<i>Investments</i>	3.0	14.0	23.5	24.8
<i>Security Deposits</i>	201.7	219.3	217.0	180.9
<i>Other financial assets</i>	17.6	105.7	5.9	14.1
Current tax assets (net)	0.0	11.0	0.0	44.4
Other non-current assets	112.9	93.3	110.3	266.7
Current Assets	6778.1	6265.7	6087.2	5971.7
Inventories	3399.2	3256.2	3233.1	3004.6
Financial assets				
<i>Trade receivables</i>	2142.0	1943.2	2100.3	2016.9
<i>Cash and cash equivalents</i>	310.5	597.6	195.0	367.2
<i>Other bank balances</i>	211.2	118.8	70.8	119.6
<i>Security Deposits</i>	6.7	6.9	8.2	5.6
<i>Other financial assets</i>	35.0	19.2	3.3	1.3
Other assets	673.4	323.8	476.5	456.6
Total Assets	22462.9	23031.4	23254.0	19994.3
Equity & Liabilities				
Equity	7716.1	7189.0	6832.6	5966.6
Equity share capital	100.6	100.6	100.6	100.6
Other equity	7615.5	7088.4	6732.0	5866.0
Non-Current Liabilities	6805.7	8144.1	8199.8	5180.1
Financial liabilities				
<i>Borrowings</i>	5350.8	6682.8	6932.0	4303.3
<i>Other financial liabilities</i>	987.7	1083.6	912.5	557.0
Provisions	2.1	6.8	0.0	0.0
Deferred tax liabilities	465.1	370.9	355.3	319.7
Current Liabilities	7941.2	7698.3	8221.6	8847.7
Financial liabilities				
<i>Borrowings</i>	1566.9	2442.7	1350.1	2720.9
Total outstanding due to micro enterprises and small enterprises	133.2	207.6	241.9	49.5
Total outstanding due to creditors other than micro enterprises and small	2883.0	2610.2	3070.2	3577.8

enterprises				
Other financial liabilities	2518.6	1792.0	2647.1	2168.3
Current tax liabilities (net)	69.3	0.0	50.1	0.0
Other current liabilities	741.6	627.4	810.6	290.4
Provisions	28.7	18.3	51.5	40.9
Total Equity & Liabilities	22462.9	23031.4	23254.0	19994.3

(Source:RHP)

Profit & Loss

Particulars (Rs n million)	9MFY21	FY20	FY19	FY18
Revenue from Operations	10227.9	14924.7	18180.1	15115.3
Other Income	71.2	85.9	136.4	113.3
Total Income	10299.1	15010.6	18316.4	15228.6
Total Expenditure	8125.9	12428.9	15159.2	13304.1
Cost of materials consumed	4387.3	5717.0	7104.9	5916.9
Changes in inventories of finished goods and workin- progress	-48.1	150.7	-70.2	-159.2
Excise duty on sale of goods	0.0	0.0	0.0	324.4
Employee benefits expense	1105.9	1709.9	2168.3	1986.3
Other expenses	1908.4	3367.3	4550.6	4110.8
Provision for anticipated losses and expenditure	772.4	1484.0	1405.5	1124.8
PBIDT	2173.2	2581.7	3157.3	1924.5
Share of Profit	0.8	-0.2	4.0	2.5
PBDT	2174.0	2581.5	3161.3	1927.0
Depreciation, amortization and impairment expense	1414.7	1949.9	1761.5	1491.5
PBT	759.3	631.6	1399.8	435.5
Exceptional items	0.0	-57.7	0.0	0.0
Tax (incl. DT & FBT)	252.7	163.2	426.2	120.1
Net Current Tax	321.1	168.4	78.4	0.0
Deferred Tax	-68.4	-5.2	347.8	120.1
PAT	506.6	410.7	973.7	315.3
EPS (Rs.)	25.2	20.4	48.4	15.7
Equity	100.6	100.6	100.6	100.6
Face Value	5.0	5.0	5.0	5.0
OPM (%)	20.6	16.7	16.6	12.0
PATM (%)	5.0	2.8	5.4	2.1

(Source:RHP)

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