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SHAPING THE FUTURE

Vidyashankar,
Vice Chairman and Managing Director,
M M Forgings

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Vidyashankar,
Vice Chairman and Managing Director,
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SHAPING THE FUTURE

M M Forgings is a prominent player in both the domestic and export markets backed by strong engineering excellence. It has now entered into EV space.

- By S Bose

Chennai-based M M Forgings Limited (MMFL), one of the oldest forging producers in the country is an example of its ability to stay evergreen through manufacturing competence. Two generations of the family have carefully knitted the business to make MMFL a respected forging company in the country. And the credit goes to Vidyashankar Krishnan, vice chairman, and managing director a visionary who played a major role in shaping the company. MMFL today is the third largest player in the country.

The Indian forging industry has evolved from being a labor-intensive industry to a capital-intensive manufacturing sector. MMFL has always adopted the changing market scenario with intensive research for innovative products and invested in capacity expansion and value addition. With its presence pan India and near to the customers, MMFL is a one-stop shop for the closed die forgings needs of both domestic and international customers.

The company began its journey as Madras Motor Limited in 1946 as an importer of Royal Enfield Motorcycles from the UK. Witnessed a boom in the automotive industry in India and all over the world in '60' and '70s across the world, then founding managing director S E Krishnan, father of Vidyashankar forayed into the forging business and set up its unit in 1974 at Singampunari near Madurai with a capacity of 780 mtpa. By the mid-eighties, their forging business expanded steadily and their capacity reached 3000 mtpa. The family's dealership business of Royal Enfield later wound up and the promoter's stake in Enfield India limited diluted to focus on the forging vertical in 1990. Subsequently, in 1991 the company launched a second forging plant at Viralimalai, Tamil Nadu with a capacity of 3000 mtpa.

The company rechristened their name from Madras Motors to MM Forgings Limited in the year 1993 as it went for stock exchange listing to raise funds in 1994. MMFL's major capacity addition at their Viralimalai plant to 12000 mtpa was



M M Forgings has a strong reputation in the segment for quality metallurgical integrity

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funded from their initial public offering. The goodwill of the company has helped the IPO to be oversubscribed by 17 times.

A good student young Vidyashankar joined the company in 1990 as a trainee after he completed his engineering from IIT Madras. "It was the time when many of my friends left the country for higher study to build a better career. But I bucked the trend and took the challenge to grow my family business. So I joined my father," he remembers.

He was learning the nitty-gritty of the forging industry. Later he was given the responsibility to plan and commissioned the major expansion at the Viralimalai plant in 1994-95. He also led the technical and production teams to put the production activities towards targeted high growth. "It was a tremendous learning for me that probably defined what I am today," Vidyashankar recalls sitting at his office at Guindy in Chennai.

During the commissioning plant, he shifted to Viralimalai with his wife Sumita. "It was a tough time. Shankar would leave at 7 in the morning worked relentlessly at the site and returned only after 12 at night. I have hardly seen him. It continued for one year," says Sumita. She is a qualified Chartered Accountant now on the board of the company and brings her experience in the fields of accounts, finance, education, and training. Admiring his wife's commitment and support for his success, Vidyashankar says, "She is very courageous and has equal dedication towards family and work."

Vidyashankar came back to Chennai when his father fell seriously ill. He then started managing the entire operation of the company under his father's guidance. In 1999 his father passed away and Vidyashankar took over as managing director of MMFL at the age of 34 years. He is presently the vice chairman & managing director while his US-based younger brother Venkatramanan K is the joint managing director is responsible for the exports of the company.

Now 57, Vidyashankar works hard with passion and a single-minded determination to be the best in the industry. The fresh capital was infused. The zeal for growth has seen a single plant in 1974 grow into a giant company with a capacity to produce 110,000 mtpa from its 10 manufacturing facilities. The revenue of the company has grown multiple times after he took over the management control in 1999 from Rs. 50 crore to Rs.1200 crore today. "We work closely with customers' needs, and offer consistent quality and seamless supply," says Vidyashankar. The company is employing over 4000 people. Bharat Forge and Ramkrishna Forgings are the



Vidyashankar with his Core Team

two other largest players in the segment.

The forging industry is the backbone of the manufacturing industry such as automotive, power, construction, mining, railways, etc. of which 85 percent is used in the automotive sector. Indian forging is traditionally well recognized globally for its technical capability and varied product range. Forging is a manufacturing process involving the shaping of metal through hammering, pressing, and rolling. These compressive forces are delivered with a hammer or die.



As part of the future growth plan, MMFL has entered into EV parts manufacturing in a joint venture. Vidyashankar thinks in the next 7-10 years the opportunity in the EV space will go up multiple folds and his company want to be part of this growth journey with its engineering excellence in auto sector.

MMFL acquired 88 per cent equity shareholding in Abhinava Rizel Private Limited (Abhinava Rizel) in September last year on a fully diluted basis. Abhinava Rizel has been

developing EV motor and power train technologies since 2017. Further, MMFL will provide the necessary financing to establish the manufacturing facility and other product development initiatives. On an aggregate basis, MMFL expects to invest Rs.200 crores in this initiative. More importantly, MMFL's involvement will also provide significant technical and managerial expertise to accelerate Abhinava Rizel in its growth path.

It has eight patents filed and an additional 10 patents



Sumita Vidyashankar a Director in the company

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- Sumita

under filing in respect of EV motor and powertrain technologies. Abhinava RizeL's motors are based on proprietary hybrid topology radial flux architecture between SynRM (Synchronous Reluctance Motors) and PMSM (Permanent Magnet Synchronous Motors), combining the best of both technologies. Together with this combined capability, and well-developed thermal management techniques, thermal efficiencies achieved are around 25 percent higher over conventional traction motors. This enables significantly reduced use of magnets, copper, aluminum, steel, etc., with zero compromises in performance.

Abhinava RizeL is currently partnering with automotive manufacturers in India and the investment by MMFL will be utilized to establish its initial manufacturing facility in

Oragadam, Tamil Nadu. More importantly, MMFL's significant technical and managerial expertise will launch Abhinava RizeL on its path of accelerated growth.

Commenting on the investment, Vidyashankar says, "MMFL is the supplier of choice for leading global automotive companies across the spectrum of vehicle configurations, especially in the passenger and commercial transportation automotive segments. These relationships have grown over time and MMFL has secured the preferred supplier status through a combination of innovation, joint development, cost competitiveness, and above all high integrity in delivery and service. Given the growing presence of EVs across the overall automotive market, MMFL is seeking attractive investment and partnering opportunities to pivot itself and become a significant industry participant in this emerging sector."

According to Krishnakumar Raman, president - Operations, MMFL, "Abhinava RizeL has the complete capability to rapidly customize and tailor its motors for a wide spectrum of customer requirements ranging from 48V to 800V and 2kW to 250kW of power. This capability covers the requirements of two-wheeler, three-wheeler, four-wheeler, and commercial vehicle market segments. The motors are currently under intensive testing at external test centers."

Earlier, the company formed a wholly-owned subsidiary Suvarchas Vidyut to produce electrical and electronic components and sub-assemblies for industrial and automotive applications.

The forging market size is approximately Rs.50000 crore, growing at 10-12 percent yearly. Based on the installed capacity, the forging units may be classified as very large (capacity above 75,000 MT), large (capacity above 30,000 to 75,000 MT), medium (capacity above 12,500 to 30,000 MT), small (capacity above 5,000 to 12,500 MT) and very small (capacity up to 5,000 MT). Only 8-10 percent of the total number of units is huge and large. The rest are small and medium-sized units.

"The OEMs want to deal with large organized players for product and supply stability," explains Vidyashankar. MMFL has a strong reputation forging for quality and metallurgical integrity in the domestic and as well as export markets. It manufactures steel forgings in raw, semi-machined, and fully machined stages in various grades of carbon, alloy, and stainless steel. It has a wide variety of production lines spread across its manufacturing locations. The company is a leading manufacturer of closed-die hot forgings. The forging lines are equipped with state-of-the-art billet temperature control mechanisms.

The mechanical forging presses of 1600T to 8000T capacity forms the backbone of MMFL manufacturing capability. The company produces a wide variety of components in the

Vidyashankar with wife Sumita and Daughter Sandhya



weight range of 100 grams to 120 kilograms for commercial vehicles, passenger cars, off-highway, high-pressure valves for oil and natural gas, and agricultural and engineering equipment. Front axle beams, knuckles, universal joint cross, steering arm, upper arm shaft, connecting rod, sprocket, flang housing, rail forging, and crankshaft are among some of the products rolls out from the company manufacturing units after meeting the stringent quality parameters.

“Our basic strength is engineering. The process engineering with competitive pricing defines our success,” says Krishnakumar Raman, president of operations. 75 percent of MMFL production goes to commercial vehicle manufacturers, 13 percent to passenger vehicles, and the balance goes to non-auto segments like agricultural, mining, etc.

Ashok Leyland, Daimler, Escorts, FUSO, Hero, ISUZU, Tata Motors, Maruti Suzuki, Mahindra, Volvo, Renault, Mitsubishi Electric, TAFE, SML ISUZU SONALIKA are among some coveted customers of MMFL. 50 percent company’s revenue comes from export to the US, Canada, all EU countries, South America, Singapore, and Indonesia.

“Today the new business opportunity in the export market is a challenge due to the short supply of semiconductor chips for automakers and stiff hike in ocean freight charges. But

The holiday is mandatory for the family every summer. “During holidays, he keeps away from official emails and phone calls. He is a wonderful husband and loving father,” Sumita informs with delight.

things are improving gradually. At the moment our focus is more on the Indian market which is poised to witness a robust turnaround,” explains Ramnath Nagarajan, president, of marketing. The domestic commercial vehicle production, which peaked in FY19 at 444,000 units, has tapered to 234,000 units in FY20, 161,000 in FY21, and 241,000 in FY22. In FY23 its production is expected to grow by at least 400,000 units.

OEMs in Europe will continue to depend on Indian forging because it is hazardous and labor-intensive. The labor cost in India is 10 times cheaper than in developed countries.

Talking about EVs, Nagarajan says there will be a rapid transformation from IC engines to EVs in passenger cars. But for commercial vehicles, it is not so simple. He believes it is



State-of-the-art machining unit of the company at Trichy

expected to take more than a decade now. “M M Forgings are known for quality and innovation in the segment. It has the ability to meet even stringent parameters of the customers,” says a car manufacturer.

All plants are equipped with an independent design and development team with advanced software for die design. We are a one-stop shop for forgings need says Vidyashankar. The exclusive R&D center is for focuses on improvement activities

and customization. The company spends one percent of its revenue on R&D.

The mainstay of MMFL is its 4 forging plants in Tamilnadu and 6 machining units in UP, Uttarakhand, and Tamilnadu. MMFL also invested in 2 MW of solar and 22 MW of wind power generation in Tamil Nadu. “Our total power consumption is about 50 MW, part of it is adjusted against our own renewable generation.” Says R Venkatakrishnan, CFO.



Trichy at Tamil Nadu is the flagship plant of the company. "We produce 60 percent of our forgings from the two units in Trichy. Both the units forging and heavy forging have the capacity to produce 70000 mtpa."

the rest is from their Madurai and Chennai units. Forging machining is a precision manufacturing method that involves cleaning up a metal part to the precise dimensions after the forging process. After a component comes out of the forging operation, it is rough and loosely formed. It needs specific dimensions and shapes by scraping, grinding, and milling turning it suitable for specific applications.


This state-of-the-art modern machining plant operates with micron-level accuracy from the best equipment sourced from across the world. The machine shop is capable to handle from 100 grams to 120 kg to make it a finishing component. Today demand for ready components is the need of the hour so MMFL has been gradually increasing machining capacity as part of value addition and forward integration.

The company is adding another machine shop at Trichy adjacent to its existing unit for the crankshaft. "We have already purchased the land and the unit is expected to start by the third quarter of this fiscal," says Raman. The approximate investment would be Rs.100 crore. It will produce 1.8 lakh pieces of Crankshaft per annum for CV and will generate employment opportunities for 250 people. "We have changed ourselves from being a simple forging manufacturer to a component supplier. We are a one-stop solution for our customers," claims Vidyashankar.

All units of the company focus on a safe working atmosphere, constantly evolving systems for recognition and reward, consistent communication, and imparting skills and training.

Vidyashankar is a great motivator for the entire M M Forgings team. He is religious. He prefers to spend his free time with his wife and daughter. Their daughter is now doing her masters in Robotic at Carnegie Mellon University in the USA.

The holiday is mandatory for the family every summer. "During holidays, he keeps away from official emails and phone calls. He is a wonderful husband and loving father," Sumita informs with delight.

Vidyashankar built the company with a solid foundation and has been growing significantly. But he humbly says, "The best yet to come." 

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Trichy also has a machine shop that started in 2012. The machine shop produces components only for the automotive sector. 70 percent of machining requirements come from its own forging production adjacent to the machining unit and