



We focus on technological upgradation & operational excellence

- Amar Patil

Head Foundry Unit

Mahindra and Mahindra (Auto sector)

Amar Patil is heading the Foundry Unit of Mahindra and Mahindra (Auto sector). He had done B-Tech, MBA-Finance.

Other qualification includes Total productive Maintenance" Affiliated to "The association for overseas scholarship" – JAPAN.

MOST applicator course - "Maynard Operation Sequence Technique-USA."

Lean practitioner – Motorola University

He holds a Key role in Turnaround of Foundry unit into Profit making center. Under the leadership of Amar patil. Mahindra AD foundry has been recognized as a "Best Foundry of the Year" in 2016 by IIF.

Production background and has good grounding in Industrial engineering Strong knowledge of TPM and various Lean tools, currently heading Jishu Hozen pillar as a JH Chairman for Kandivli plant. At foundry, various industry benchmarks under quality, safety, productivity and cost has been created.

He is credited with commissioning of High Pressure molding line as well as many capacity enhancement projects. He has presented several papers at National as well as International forums. He has won Numerous awards won at national level e.g IMTMA, Mfg. Today, CII, TPM club of India.

Incubation of Innovation culture has yielded with 5 nos. patent.

Active contribution in Indian Foundry fraternity to share knowledge and good practices.

Speaking to Sushma Upadhyay, of Metalworld, he talks about the present and future status of the foundry industry Excerpts.

How do you see the present status of world foundry industry?

Castings are being produced from thousands of years; only casting technology and manufacturing process has changed over a period to cater competitive demand under various sector. Over a period, every single country has seen GDP growth.

The Global foundry production exhibited a substantial growth in the year 2015 as against year 2000. In 2000, production of castings was about 64.75 million tons & by 2015 it has reached the level of 104.1 million tons. Though the average growth rate world wise is 4%, Foundry Industry in China and India grew by 21% and 16.34% respectively. Production in China grew from 10.95 million tons in Year 2000 to 45.60 million tons in Year 2015 and in India it grew from 3.12 million tons in Year 2000 to 10.77 million tons in Year 2015.

The world's top two casting producer countries China and USA has witnessed negative growth in Year 2015 over Year 2014 China's total casting production decreased by 1.3% from 46.2 million tons to 45.6 million tons. While USA production dropped by 0.8%

from 10.47 million tons to 10.38 million tons. However, India ranked at 3rd position in global foundry production has seen a growth of 7.5% from 10.02 million tons to 10.77 million tons.

Foundry Industry plays major role in driving GDP growth of a nation by supporting Automotive industry at large. Average 32% of total Foundry Production is accounted by automobile Industries. The world Automobile Car Industry has seen phenomenal growth of 55% from 41.21 million in Year 2000 to 78.59 million in Year 2017.

How do you see future prospects of foundry industry?

Earlier days we used to identify business challenges thru traditional approach however currently we live in VUCA world which is Volatile, Uncertain, Complex and Ambiguous. Manufacturing industry has lost in translation between evolutionary, revolutionary and disruptive key trends that all need to be managed at the same pace. Agility plays a major role to decide the winner.

Foundry Industry will see tectonic shift with high demands for low weight castings, high quality standard at behest of customer. Cost competitiveness and stringent Regulatory pressure will push awareness for Electric vehicles in near future.

Consolidation will play a major role in near future to gain a competitive advantage

over cost optimization thru economies of scale. We have seen similar steps in this direction. Despite increase in global casting production, the total number of casting producers have come down from 48200 in the year 2000 to 47000 currently. This clearly indicates that the Foundry Industry is becoming more efficient & competent.

With china leading the race in production where do you see Indian Foundry industry in coming years on global map?

Domestic demand for Foundry Industry in current fiscal has witnessed stagnancy in view of demonetization and

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implementation of GST. However, with conducive economic policies where the thrust is laid on Infrastructure development, Road construction, Coal production, Power generation and Housing for all by 2020 has given an opportunity for increased domestic castings demand

thereby growth for Indian Foundry Industry.

Taxes for MSMEs upto turnover of Rs. 50 Cr has been reduced from 30 to 25 per cent. This is a welcome step for MSMEs and especially the foundry industry as 83 per cent units fall under MSME category.

Indian Foundry Industry has witnessed export of USD 2.7 billion out of total turnover of USD 18 billion in 2016. which caters to only 4% of the global market. We can scale up the exports further. If we can achieve 6-7%, we will be almost doubling the capacity. So, there is huge potential for exports. Foundry Industry should see beneficial impact in years to comewith conducive economic policies and GST.

According to you what are the major concerning areas in the foundry industry which needs to be tackle for growth of foundry industry across globe and India specifically?

Asian foundries have experienced decline in operating profitability. They are now at comparable levels with the European and USA foundries. Castings import from china may not be an economical option in long run considering high labor cost.

Indian Foundry Industry needs to followlean manufacturing approach by focusing on waste elimination to overcome margin pressure. Over and above it, technological upgradation is must to meet





Tell us about various activities of the Foundry industry and how it is providing assistance for the industry to grow?

There are many activities undertaken by IIF are in the areas of Skill development, Environmental awareness and actions to optimize the resources with waste elimination focus. NCTS is playing a major role in knowledge upgradation programs, cross learnings of best practices from different foundries and many more.

the global quality standard especially for the Automotive Industry. Access to skilled & qualified manpower is also a major challenge to achieve efficiency and efficacy in the foundry industry.

There must be shift from large variety of casting product mix to limited product mix to gain competitive advantage thru economies of scale.

Meeting environmental regulations and utilizing an opportunity to recycle and reuse foundry waste is a challenge which can be achieved with right balance between technology and internal operational excellence.

Consistent quality of the supplied raw material is another challenge to meet higher quality requirement of the product.

Foundry Industry needs to demonstrate high degree of discipline to ensure robust and consistent process across all casting manufacturing areas with First Time Right and Everything Right Approach.

Since a career in the foundry industry is not typically sought out by aspiring youth, attracting new talent has become a challenge. So, the perception on the foundry industry must be changed to a more lucrative & rewarding career option for which the industry needs to be profitable to pay higher wages.

Also, there are encouraging steps by cluster level initiatives like zero land fill with Sand reclamation plants, setting up new institute as well as partnering with local institute to develop knowledgeable and skilled workforce.

Many recommendations from Foundry fraternity to govt. policy makers in the areas of Abolition of duties on various raw materials, Increased benefits under MEIS schemes, Revision of duty drawback, Indigenization of castings for Defense/ Power and Railways. Clearance for sand mining, Technology upgradation schemes etc. in view of ease of doing the business as well as to achieve sustainable growth.

According to you what are the measures being taken to increase the efficiency and reduce cost in the plant?

We at Mahindra have our aspiration to become top 10 global automotive brand. Our core purpose is to challenge conventional thinking and innovatively use all our resources to drive positive change in the lives of our stake holders and communities across the world to enable them to Rise with strong three pillar approach of Accepting no limits, Alternative thinking and driving positive change.

We strongly believe in delivering a product which First Time Right, everything right and differentiated customer experience. Our Crusade 2.0 approach acts as a guiding principle to deliver our Promise.

“The Mahindra Way” a System which guides our business on a structured approach in achieving an excellence in everything we do.

We focus on right balance between technological upgradation and internal operational excellence thru various tools and techniques like Total Productive Maintenance (TPM), Value Stream mapping (VSM), Maynard Operation Sequence Technique (MOST) any many more to improve our efficiency and efficacy as well in terms of Production, Quality, Cost, Delivery, Safety, Morale and Environment.

Specific initiatives like lean approach with frugal mind set in utilizing all our resources at optimal level and focus towards elimination of waste in our process drives us towards becoming cost competitive.

OEE approach drives us in understanding many losses under Availability, Performance and Quality as well. Kaizen approach gives immense benefit in reducing the losses and eliminating the waste.

We believe Man is vital resources among all other “M” i.e. Man, Machine, Material, Method, Measurement and Mother Nature. We have strong work culture of total employee participation where employee participate in many activities like Kaizen and DWM to turn operational excellence in reality. Many initiatives are undertaken to improve skill and will of people.

Innovation is needed for individuals to move from their existing paradigm to create sustained and exponential growth. we at Mahindra foundry has adopted Innovation as a culture. Many initiatives like Digitalization, IOT and Real Time Data monitoring especially for Energy and Quality data monitoring and analysis. Low cost automation in many areas has given immense benefits to improve our performance further.