

Manufacturing Of Future: Trends Of Metal Cutting & Forming

The Indian metal cutting and forming sector forms a core part of the flourishing Indian manufacturing sector. With digital intervention and the growing demand for customisation in high-speed machining, it will be pivotal to highlight the trends that will foreseeably pick up in the near future. To discuss in detail the trends of the metal cutting and forming industry and how it will boost efficiency, productivity and flexibility in the Indian manufacturing industry, the ET Edge recently hosted the virtual edition of The Economic Times Metal Cutting and Forming Summit 2022. The series focused on discussing the metal cutting sector '2022 & beyond: Analysing the trends in metal cutting & forming industry'.

The event kick-started with an opening note from Rahul Kamat, Editor – B2B Division, Worldwide Media. During the note, he mentions, “Policies, such as Aatmanirbhar Bharat and Make in India, require the sector to diversify its use and utility so that we can reduce imports and make our domestic



systems more efficient. Continuous innovation and diversity in output are necessary for the sector to continue contributing to India's robust growth narrative.”

Understanding The Evolving Landscape
The metal cutting and forming industry has been a vital part of the Indian automotive sector and the industry has been growing rather dynamically. It is now essential for industry players to understand the changes coming in, and how they can adapt quickly to them and monetise to their best benefit

while being green. To discuss this in-depth, the event proceeded to a panel discussion on ‘Landscape and recent developments in the metal cutting & forming industry’.

Moderator, Shatyabrata Das, Senior General Manager, IAC International Automotive India Pvt Ltd, started the discussion by posing a question regarding the readiness of the Indian manufacturing industry to embrace change. Responding to it, Ravi Raghavan, President, IMTMA, said, “We are not in that state where we were, maybe a decade

ago, where export meant that we would send it to smaller countries. Today, we are very confident to sell our products to the advanced countries and very confidently address many of the unique requirements which compete with the best of the class of machines supplied from abroad from the technology perspective.” He continued, “We have certain limitations, and that's why the industry is working to see how we can improve. But I think what has changed over the years is the amount of confidence that we have as an industry

that we will be able to face the global and domestic challenges for our customers.”

Taking on the next question of whether additive manufacturing will supersede traditional manufacturing methods, Navid Talib, President & COO, Hero ECycles (A Hero Motors Company), said, “I don't think additive manufacturing will take the pie from the machining industry as such. Of course, additive manufacturing has a user in the automotive industry. Most additive manufacturing technology is basically

used in making small kaizens and small improvements.”

Sharing his perspective on how the industry can work on reducing import dependency, T K Ramesh, Managing Director, Micromatic Machine Tools, mentioned, “The import-export and the local manufacturing data can be looked at from different perspectives, which is by numbers. A lot of work is happening, and the maturity is beginning to get better and better.” He continued, “The need for locally developed solutions and thereby the investments, whether it's a CNC system or fixturing, tooling, programming or technology development to develop solutions are all being viewed thanks to COVID-19, and various global conflicts.”

Speaking on how the cutting and tooling industry is working in tandem and addressing the challenges posed, Vikas Bharadwaj, Sales Director, Ceratizit India, cited, “I can say on behalf of the whole cutting tool industry that we have been really seeing a good partnership between

the industries in some of the developments that we are doing here. The domestic market for the cutting tool has really been growing in line with the domestic machine tool. Their imports used to be a very high percentage in the past but now, almost every company has set up their manufacturing here. The use of technology transfer has helped us make things competitive and also bring the technology to the doorstep of the machine builders to say how the future is looking at.”

Explaining the impact of the changing global events such as covid-19 and global conflicts, Vivek Nanivadekar,

Executive Director, Fibro India, mentioned, “Manufacturing industry presents exactly three times growth and if we take it the same thing, then for the machine tool industry there is a scope of growing three times, even if we are conservative the growth is definitely two times.” He continued, “We are gearing up and we are not going for incremental growth. We are going for a point of so that kind of an opportunity exists. Apart from whatever happens in China or whatever happens in Ukraine and Russia and Europe, our whole exports are less than 10 per cent. So, it doesn't

make any impact on our domestic growth.”

Building & Growing
The event then proceeded to a fireside chat on the ‘Indian metal cutting & forming: pushing & building capacity to become the global contender’. Moderator Kamat started the discussion by posing a question on the changing paradigm of the metal cutting & forming industry and its impact. Responding to it, Praful Shende, Deputy CEO, Bharat Fritz Werner, said, “If you really look at it, the Indian industry, two-three years before the pandemic had touched 9,500 crores. So, at one time, we were there and

reaching now reaching 10,000 crores will be the first step for the industry.”

The growth of manufacturing here to stay and will continue to happen. The main pillar, of course, the internal consumption itself will increase. He explained, “We are seeing a great push from the government for defence, infrastructure, various PLI schemes, electronics, railways; so, there are various growth drivers that the government has already operated externally. The growth of manufacturing in India is more or less visible; it really depends on how much as an industry we can achieve. And the Indian industry machine tool industry certainly is set to grow in the medium term.”

Addressing The Growth Levers
The Indian metal cutting and forming industry is poised for extreme growth in the next five years. The event highlighted the need for the industry to adapt to the changes, how they can become accustomed to it, the plan of action companies can follow and more.

“The Indian metal cutting and machine tools industry plays an important role in the Indian manufacturing sector. With Aatmanirbhar Bharat and Make in India movement picking its pace in India, the demand for metal components from the end-user sector is only going to grow further. This would be the perfect time for the cutting and tooling industry to bridge the quality gaps, eliminate technology deficit and advance as a player that matches pace with the world.”

Deepak Lamba

President - Times Strategic Solution Limited and CEO - Worldwide Media

“Every strategy was drafted keeping employees, customers and every stakeholder in mind”



L S Umesh, Director & CEO, Ace Manufacturing Systems (AMS)

contributor to the metal cutting & forming sector with sustainability as a focus? Can you detail on a few strategies?

>>>AMS is in business of metal cutting with focus in designing and manufacturing of machining centres for over 28 years now. From the first year of inception, the vision was well defined and articulated by our founders. Every strategy was drafted keeping employees, customers and every stakeholder in mind. This clearly set AMS on the skyward growth path from delivering three machines in the first year to around 2000 machines in 2021. In simple, our strategy was strongly bonded

with our culture values.

AMS will soon be participating at IMTEX 2023. What kind of innovation from AMS can we expect to see at the event?

>>>IMTEX has finally arrived after a long gap of four years. We are very excited to be part of IMTEX 2023. This time AMS will showcase a combination of VMCs and HMCs product range that are suitable for applications across industry segments such as automotive, die & mould, aerospace & defence, the range of products demonstrated shows capabilities of our Indian engineering talent. The showcase highlights are high speed machining,

compact, precise and performance oriented VMCs, competitive ram type HMCs, high productive twin spindle VMC and 5-axes machines for precision components.

What is your company's business outlook for 2023?

>>>There are predictions of global recession in 2023, but same time many institutions and agencies have given a positive rating to India's growth. Our well thought strategic initiatives from product development to market development is in-line with our plan, which will enable us an optimistic growth. We are expecting to grow over 25 per cent in 2023.

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How is your organisation working on becoming a key contributor to the metal cutting with sustainability as a focus? Can you detail on a few strategies?

“Additive manufacturing unlocks new potential to manufacture capabilities”



Vishwas Putige Business Head, AMACE Solutions

How is additive manufacturing making a difference in the industry?

>>>With growing market demands, the need of the hour is to possess the capability to process complex parts in shorter lead time. Additive manufacturing (AM) unlocks new potential to manufacture capabilities such as design freedom without the constraints of traditional manufacturing, faster product development cycles, access to complex geometries and light weighting of parts through topology optimisation.

What market trends do we

envision picking up in additive manufacturing?

>>>In 2022 the global AM market was valued at \$25 billion and is expected to grow at a CAGR of 20 per cent over the next five years. Metal AM system account for 70 per cent of the revenues for overall system sales in the industry, while the adoption of AM has a saturation in the west, the trend has been picking up in India where it's expected to grow at a rate of 35-40 per cent owing to immense government and private sector investments.

What is AMACE solutions doing differently to meet the growing

demand and interests from the industry?

>>>AM has for the longest time been viewed as a rapid prototyping technique and thus limiting its application in the industrial scenario. AMACE solutions, with its STLR 400, has been on a mission to changes this perspective and position AM as a full-fledged production technique. The features on the STLR 400 such as large build volume, dual high-powered lasers and many more smart and patented features point towards making this technology more tuned towards productivity.

“Situation demands business to be more agile and focused to achieve business results”



T P Sridhar Director & CEO, Ace Designers

>>>We have had the right mix of high-volume products and a complete basket of appropriate products for multiple segments. Though we have built a huge ecosystem to address large volume production of standard configurations, equal flexibility has also been built up to address low volume and special requirements. We have always been very strong in providing tooling solutions and some special executions to cater to the changing needs of the customers. The focus of new product introduction had always been to fill up the gaps felt by the customers in different market segments and also the timely introduction of products to satisfy the perceived product configuration and technology needs”

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and vertical series of lathes.

The vision is to be recognised as a global, responsible, sustainable, and most preferred organisation. We are working on initiatives like power, water, waste, material conservation to make our process and products sustainable. Ace Designers, Peenya plant was awarded with CII GBC GreenCo Bronze certification during FY22.

Ace Micromatic will soon be participating at IMTEX 2023. What kind of innovation from Ace can we expect to see at the event?

>>>IMTEX exhibition is being held at BIEC in from 19th to 25th January 2023 after a gap of four years. We are planning to show 12 machines in the exhibition, demonstrating newly developed products to bridge technology gaps in industry and cater to emerging

customer segments. As before our group will have the largest stall in the exhibition.

How do you foresee the year 2023?

>>>The Indian machine tool industry is having a great opportunity both with the domestic requirements and higher-level demand even from the export market. With a fairly high product acceptability in the global markets, we have a huge potential for growth despite the threats that are being posed by the EV, additive manufacturing, etc., especially for the metal cutting machine tools. Since the global pandemic, supply chain disruptions, raw material cost escalation and geopolitical tensions market dynamics are changing very quickly. This situation demands business to be more agile and focused to achieve business results.

“We expect 100 per cent growth on FY2022”



Madhusudan Kestur, Director, AceMicromatic Manufacturing Intelligence Technologies (AmiT)

How is your organisation working on becoming a key contributor to the metal cutting & forming sector with sustainability as a focus? Can you detail on a few strategies?

>>>India's manufacturing sector is poised to become an engine for huge economic growth and job creation. In order to make this growth sustainable, India's manufacturing value chains must lift their productivity. AmiT has been working with customers, in both the

sectors of metal cutting and forming, in their adoption of Industry 4.0 & manufacturing analytics leading to increased manufacturing efficiency and reduction in resource consumption, waste, and environmental impact.

Ace Micromatic will soon be participating at IMTEX 2023. What kind of innovation from Ace can we expect to see at the event?

>>>AmiT is launching an IoT platform that can be leveraged

by our customers to accelerate their Industry 4.0 adoption. This platform would also enable us to serve our customers better, by way of providing value added services in the coming months.

What is your company's business outlook for 2023?

>>>Forecast for 2023 looks very positive. India's focus on establishing national infrastructure will drive tremendous growth in several sectors in manufacturing that we serve. We expect 100 per cent growth on FY2022.