

THE MACHINIST

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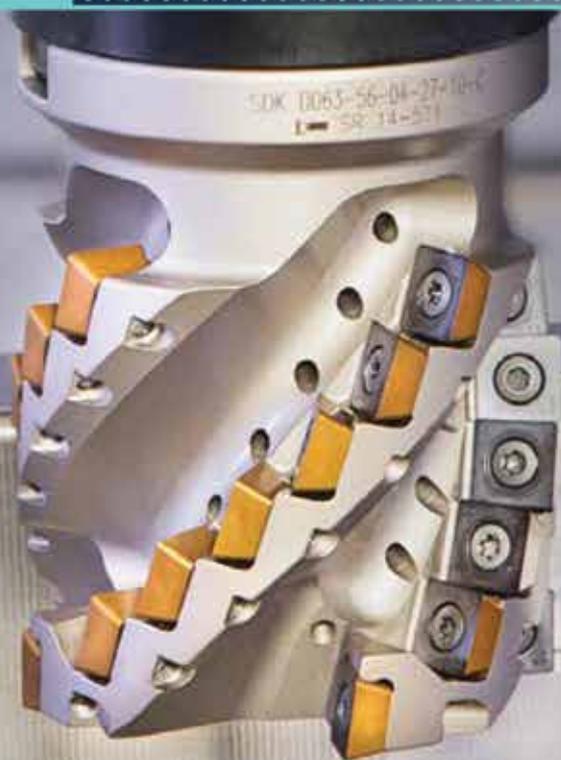
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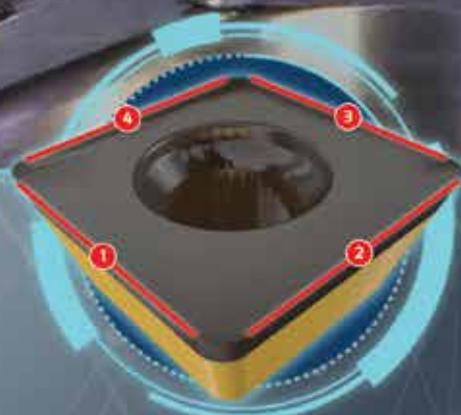
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noun

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A GOOD START!

One of the first key initiatives taken by the Modi Government at the beginning of its second term is setting up of two cabinet committees — one dealing with investment and growth, and another on employment and skill development. This is a clear indication that the government is looking to step up growth and to create jobs. The intent is clear, and hopefully it will be followed up with strong and effective action on ground. With the economy reeling under pressure on every front, it is very important to get back the confidence of foreign investors. It is equally necessary to push for policies and reforms that could boost domestic consumption across segments.

“THE GOVERNMENT MUST NOW WORK TOWARDS ACHIEVING THE SET TARGET OF 100 MILLION JOBS AND 25 PERCENT CONTRIBUTION TO GDP FROM MANUFACTURING BY 2022 UNDER THE ‘MAKE IN INDIA’ INITIATIVE.”

With a stronger mandate from the people of the country, the Government must now work towards achieving the set target of 100 million jobs and 25 percent contribution to GDP from manufacturing by 2022 under the ‘Make in India’ initiative. It’s going to be an uphill task, but it is critical to scale it with one eye on time and another on efficacy. The mood of the industry is certainly upbeat, and it is raring to go. This is something which we gauged during the grand awards night of ‘The Machinist Super Shopfloor Awards 2019’ in Bengaluru recently. And I have a strong feeling that the next five years (and beyond) will belong to the Indian manufacturing industry. Let’s work towards that!

Editor & Chief Community Officer

THE MACHINIST
ULTIMATE GUIDE TO PROFITABLE MANUFACTURING
Volume 14 Issue 6 June 2019



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YOUR GLOBAL CRAFTSMAN STUDIO

BHEL develops Regenerative System for locos to make them energy efficient

IN A MAJOR TECHNOLOGICAL leap towards modernisation of Indian Railways' existing fleet of conventional DC Traction Motor driven Electric Locomotives, Bharat Heavy Electricals Limited (BHEL) has successfully developed a Regenerative System for retro-fitment in these locos to make them energy efficient.

Following this, Indian Railways has placed an order on BHEL

for 25 nos. Broad Gauge 5000 HP AC Electric Locomotives of type WAG-7 with regenerative feature.

The system has the unique feature of utilising the kinetic energy of the train while in braking mode, which is re-converted into electrical energy and is fed back to the electric grid through OHE lines. Earlier this energy was getting wasted in Dynamic Braking Resistors (DBRs) of locomotives as heat.

The Blue Moon lunar lander unveiled



BLUE ORIGIN'S FOUNDER Jeff Bezos recently unveiled Blue Moon, its large lunar lander capable of delivering multiple metric tons of payload to the lunar surface based on configuration and mission. The cargo variant can carry 3.6 metric tons to the surface. The organisation has also designed a variant of the lander that can stretch to be capable of carrying a 6.5-metric-ton, human-rated ascent stage. Blue also announced it can meet the current Administration's goal of putting Americans on the Moon by 2024 with the Blue Moon lunar lander.

The Blue Moon lunar lander will be powered by the BE-7 engine, a new addition to Blue Origin's family of engines. The BE-7's 40 kN (10,000 lbf) thrust is designed for large lunar payload transport. The engine's propellants are a highly-efficient combination of liquid oxygen and liquid hydrogen. The BE-7 will have its first hotfire this summer. The engine will be available for sale to other companies for use in in-space and lander applications.

Maruti Suzuki inaugurates CoE at ITI in Gujarat for Skill India

MARUTI SUZUKI INDIA LIMITED has recently inaugurated a state-of-the-art Center of Excellence (CoE) at ITI, Becharaji in Gujarat. Set up in collaboration with Government of Gujarat, the CoE, will be used to train and improve the level of technical education of



ITI students in the state and effectively contribute to Skill India initiative.

Mehsana region, has seen intense activity in the automobile sector in recent years, especially after setting up of Suzuki Motor Gujarat plant at nearby Hansalpur. Several automobile component makers, including Maruti Suzuki vendors, have set up their manufacturing facilities in the region, increasing employment opportunities for youth with relevant skills.

ADB provides \$ 750 million loan for Railways Track Electrification to IRFC

THE ASIAN DEVELOPMENT BANK (ADB) has signed an agreement to provide \$750 million equivalent in Indian Rupees in long-term financing—the largest single non-sovereign loan ever committed by ADB—to Indian Railway Finance Corporation (IRFC) to fund the Railways Track Electrification Project, as part of a broad modernization program that will help India's railway sector transition to electric power and away from dependence on fossil fuels.



Concurrently with the loan agreement signing, risk participation agreements

were signed with private risk participants for the project. IRFC, an entity owned by the Government of India, will use the proceeds from the loan to install electric traction equipment along approximately 3,378 kilometers of existing railway lines, which will enable the migration of passenger and freight traffic from diesel to electric traction. The electrification assets will be leased to Indian Railways, the country's national railway system, under a long-term lease agreement.

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DRDO successfully test fires AKASH – MK -1S

DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION (DRDO) has successfully test fired AKASH-MK-1S missile from ITR, Chandipur, Odhisa. Akash Mk1S is an upgrade of existing AKASH missile with indigenous Seeker. AKASH Mk1S is a surface to air missile which can neutralize advanced aerial targets. The Akash weapon system has combination of both command guidance and active terminal seeker guidance. Seeker and guidance performance have been consistently established in both the missions. All the mission objectives have been met.



Ashok Leyland bags order for 400 Minibuses from Senegal

ASHOK LEYLAND has received an order from Senegal. This order comes from Senbus Industries, a company assembling urban buses in Dakar. Ashok Leyland has signed a contract for supplying 400 units of Ashok Leyland Eagle 916 Minibuses valuing Euro 10.06Mn. This order comes after the successful operation of 475 buses to Senegal's Dakar Dem Dikk. The Eagle 916 bus is a strong and sturdy platform, which has been developed exclusively for Africa. Featuring superior technology of inline pump with Euro III emission norms, maneuverability and fuel-efficiency, Eagle takes comfort, safety and profitability to the next level. Extensive on road product trials have been carried out with various customers in Africa.

This project will provide mobility solutions to the country by expanding reach and covering the remote areas through AFTU, a leading private bus association of operator groups that run buses extensively across Senegal.

NSIC signs MOU with Ministry of MSME

THE NATIONAL SMALL INDUSTRIES CORPORATION LIMITED (NSIC) signed a Memorandum of Understanding (MOU) with Ministry of Micro, Small and Medium Enterprises (MSME) for the year 2019-20. The MOU was signed by Ram Mohan Mishra, AS & DC (MSME) and CMD (NSIC) with Dr. Arun Kumar Panda, Secretary, MSME, in the presence of Alka Nangia Arora, Joint Secretary, SME, Mercy Epao, Director (SME), P. Udaya Kumar, Director -P&M (NSIC) and A.K. Mittal, Director-Finance (NSIC).

The MOU envisages provision of enhanced services by NSIC under its marketing, financial, technology and other support services schemes for MSMEs in the country. The Corporation projects to increase Revenue from Operation by 22% from Rs. 2540 crore in the year 2018-19 to 3100 crore in the year 2019-20. NSIC also projects growth of 32% in Profitability during the year 2019-20. The Corporation also plans to enhance its activities in the areas of imparting entrepreneurship and skill development training by targeting 45% growth in the number of trainees.

Schwing Stetter India partners with Rubble Master

SCHWING STETTER INDIA (SSI), one of India's leading concreting equipment manufacturers recently signed a strategic partnership with global leader Rubble Master HMM GmbH, to enter the mobile compact crushing business. The partnership follows both the companies' recent participation in Bauma 2019, Munich. This is the re-entry of Rubble Master in the Indian market with a new cooperation partner, SSI.

Schwing Stetter India will be the exclusive distributor to sell and service the complete range of Rubble Master HMM GmbH products from Austria in India through its 29 sales and spares offices, nine service centers and a strong 400 service personnel. With this product, Schwing Stetter India will be able to provide solutions for the customer for aggregate crushing and recycling applications.

Bosch India reports double-digit PAT growth

BOSCH LIMITED ended its fiscal year 2018-19 with a total revenue from operations of Rs.12,258 crores (1.49 billion euros), thus registering an increase of 4.9 percent compared to the previous fiscal year. "Bosch India remains focused on achieving a sustainable and profitable growth. Through targeted investments, infrastructural developments within the organization and adaptation of technology we look to secure our business in challenging times for the automotive industry in the country," said Soumitra Bhattacharya, Managing Director, Bosch Ltd.

The Profit Before Tax (PBT) grew by 14.7 percent to RS. 2,341 crores, or 19.1 percent of total revenue from operations. The profit growth was mainly due to improved operational efficiency, investment income as well as one time exceptional expense in previous year. The Net Profit after Tax (PAT) increased by 16.6 percent to 1,598 crores in fiscal 2018-19. There were major investments made last year, summing up to approx. Rs.597 crores in 2018-19. Bosch Limited had an average employee strength of 9,400 in 2018.

In the quarter ending on March 31, 2019, Bosch Limited posted a total revenue from operations of Rs.2,749 crores, thus registering a decrease of 12.9 percent compared to the same quarter of the previous fiscal year.

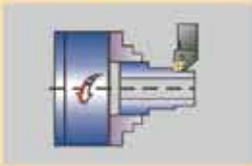
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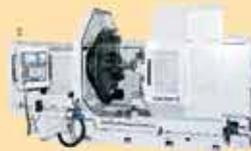
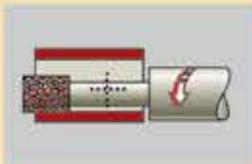


FIG-200 SPL CNC
BIG BORE GRINDER

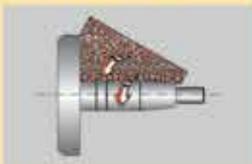


FIG-300 CNC
FOUR STATION TURRET



FIGE-150 CNC
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CNC Cylindrical Grinding



AWH-1500 CNC
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AWH-2000 CNC
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SGR-60
ROTARY GRINDER



SG-63
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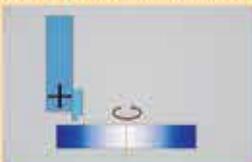


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• MARK YOUR DIARY •

A list of key events happening between July 2019 to September 2020, both nationally and internationally.

| | | |
|--|--|--|
| <p>JULY 4-6, 2019</p> <p>Automotive Engineering Show India 2019 (Chennai) Chennai, India www.automotive-engineering-show.in</p> | <p>AUGUST 30 -SEPTEMBER 1, 2019</p> <p>AgriTech India 2019 Bangalore, India www.agritechindia.com</p> | <p>SEPTEMBER 16-21, 2019</p> <p>EMO Hannover 2019 Hannover, Germany www.emo-hannover.de</p> |
| <p>SEPTEMBER 20-22, 2019</p> <p>TechIndia Mumbai, India www.techindiaexpo.com</p> | <p>SEPTEMBER 25-28, 2019</p> <p>Automation Expo 2019 Mumbai, India www.automationindiaexpo.com</p> | <p>OCTOBER 7-10, 2019</p> <p>Motek Stuttgart, Germany www.motek-messe.de/en/</p> |
| <p>DECEMBER 10-14, 2019</p> <p>Excon Bengaluru, India www.excon.in</p> | <p>JANUARY 23-28, 2020</p> <p>IMTEX Forming 2020 Bengaluru, India //imtex.in/imtex2020/</p> | <p>FEBRUARY 26-28, 2020</p> <p>Asiamold Guangzhou, China asiamold-china.cn.messefrankfurt.com</p> |
| <p>MARCH 31 -APRIL 4, 2020</p> <p>SIMTOS Seoul, South Korea www.simtos.org</p> | <p>APRIL 22-25, 2020</p> <p>Die & Mould India Mumbai, India https://www.diemouldindia.org/</p> | <p>SEPTEMBER 14-19, 2020</p> <p>IMTS Chicago, USA www.imts.com</p> |

**OUR INHOUSE
UPCOMING
EVENTS**

THE ECONOMIC TIMES
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UFI elects V. Anbu as President for 2020-21



The UFI Board of Directors has formally elected Anbu Varathan, Director General & CEO of Indian Machine Tool Manufacturers' Association (IMTMA) and Bangalore International Exhibition Centre (BIEC) as its President for 2020 - 2021. The decision was made at the board meeting, which marked the start of the annual UFI European Conference in Birmingham (UK). This decision becomes effective at the conclusion of the 86th UFI Global Congress, which runs from 6-9 November 2019 in Bangkok (Thailand).

The UFI presidential trio for the 2019-20 term will comprise of: Anbu Varathan (Indian Machine Tool Manufacturers' Association - IMTMA, India) Incoming President, Mary Larkin (Diversified Communications, Portland, USA) President 2019-20, and Craig Newman (Johannesburg Expo Centre, South Africa) Outgoing President.

Speaking about his appointment Anbu Varathan said, "I am indeed delighted to take up this new role. UFI is the apex international body for exhibitions and I am extremely thankful to the UFI fraternity to have reposed their faith and trust in me. Indian exhibition industry and BIEC will get wider recognition and further enhance their positioning in the global map."

Ashok Leyland appoints Gopal Mahadevan as a Whole -Time Director

Ashok Leyland, flagship of the Hinduja Group, today announced the appointment of Gopal Mahadevan as a whole time director for a period of five years from May 24, 2019 to May 23, 2024. The appointment is subject to the approval of the shareholders at the forthcoming Annual General Meeting scheduled on 25th May 2019. Currently, Mahadevan is the President - Finance & CFO of Ashok Leyland since July 2013 and a member of the board of several companies in the Hinduja Group.

Mahadevan is a Chartered Accountant and a Company Secretary with over 28 years' experience in Finance function across a spectrum of industries. With his extensive experience in manufacturing, internet services, financial services and project companies, he has been leading Ashok Leyland with efficacy.

He has numerous accolades to his credit including those of the Best CFO (Capital Goods & Engineering Industry) by CNBC TV18 in the year 2012, Best CFO (Capital Goods & Engineering Industry) by the Institute of Chartered Accountants of India in 2011 and Best CFO by YES Bank Business Today in 2010 for CSR / Green Initiatives.

Julian Thomson named as Director of Design of Jaguar



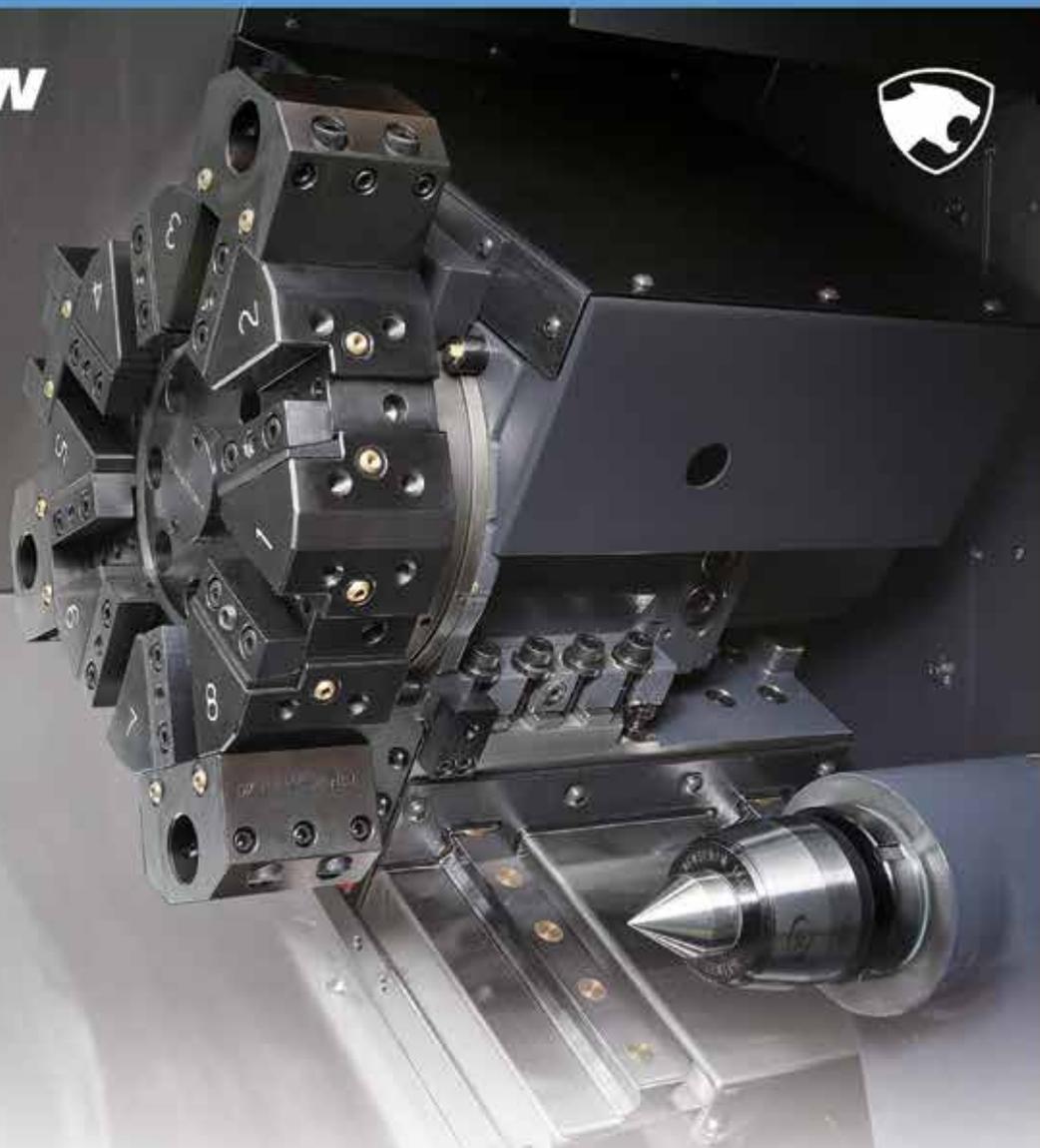
Jaguar has announced that Ian Callum, Director of Design, is to leave his position at the company after two decades heading up Jaguar Design. Julian Thomson, currently Creative Design Director, has been appointed to the role of Director of Design, effective 01 July.

Since joining Jaguar in 1999, Ian has built a world-class creative design team, established a new design philosophy and revived the range with award-winning designs. These include F-TYPE – Jaguar's first two-seater sports car since the iconic E-type – the XE, XF and XJ saloons, and the marque's first SUVs – F-PACE, E-PACE and most recently the all-electric I-PACE, which in April was crowned 2019 World Car of the Year, World Car Design of the Year and World Green Car.

As Creative Design Director, Julian Thomson has been responsible for establishing the future strategic design direction for the brand. Since joining Jaguar in 2000, he has overseen the development of the design concepts for the entire current product range. Julian began his career at Ford in Dunton, England, before moving to Lotus, where he became Head of Design, then Chief of Exteriors at Volkswagen Group's Concept Design Centre.

Julian Thomson said: "I'm honoured to take up the position of Director of Design, Jaguar. It will be a great privilege to lead such a talented team, and continue to build on our success. Automotive design has always been fast moving, but today it is changing at a rate faster than ever before. I'm passionate about ensuring Jaguar Design leads that change, and the cars that will drive our future."

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Mercedes-Benz Cars appoints new sales management in China, USA & Russia



Nicholas Speeks



Dietmar Exler



Jan Madeja



Holger Suffel

Mercedes-Benz Cars has appointed new sales management in China, USA & Russia. Nicholas Speeks (60), previously Head of sales in China, will be responsible for sales of Mercedes-Benz Cars in the NAFTA region (USA, Canada, Mexico) & becomes CEO of Mercedes-Benz USA LLC. on September 1, 2019. Speeks has many years of experience in the sales departments of passenger cars and commercial vehicles and has been working for the company in Japan, Dubai, Vietnam and Germany. Speeks follows Dietmar Exler (51), who leaves the company at his own request.

Jan Madeja (51) will take over as Head of Beijing Mercedes-Benz Sales Service Co., Ltd in China on September 1, 2019. He has been in the company for over 20 years. After various positions in Finance and Controlling, he took over as Head of Mercedes-Benz in Poland in 2007. Since 2012, he has been CEO of Mercedes-Benz Russia and Head of Mercedes-Benz Cars Sales in Russia.

Madeja's successor in Russia will be Holger Suffel (59), starting September 1, 2019. Suffel started at the former Daimler-Benz AG in 1981 & held various management positions within the company in Product Marketing, Aftersales & Sales of Mercedes-Benz commercial vehicles, Mercedes-Benz Vans and the Daimler subsidiary EvoBus. Most recently, he was in charge of Global Services & Parts Operations at Daimler AG.

Britta Seeger, member of the Board of Management of Daimler AG, responsible for Mercedes-Benz Cars Sales: "With Jan Madeja, Nicholas Speeks and Holger Suffel we have found excellent managers and proven sales experts with many years of experience for our markets China, USA and Russia. I wish them every success with their new tasks. My special thanks goes to Dietmar Exler who leaves our company at his own request. Under his leadership, Mercedes-Benz has been able to maintain its market leadership in the premium segment every year since 2016", continues Seeger.

SKF India announces new appointments

The Board of SKF India Ltd has approved the appointment of Gopal Subramanyam and Anu Wakhlu as independent directors and Werner Hoffmann and Aldo Cedrone as non-independent directors. Subramanyam who will also be the Chairman of the Company is the former CEO of L&T-Komatsu and has over four decades of experience in the manufacturing sector, including various leadership roles with the L&T Group. Wakhlu is the Co-founder and Chairperson of Pragati Leadership, a leading consulting company focused on organizational transformation and leadership development across many sectors and is a certified coach and an acclaimed author.

Werner Hoffmann and Aldo Cedrone work within the SKF Group as CFO Asia and Global Operations Director respectively and further reinforce the SKF Group's support and commitment to SKF India's growth and profitability.

MV Rajasekar appointed as Director (Mining & Construction) BEML

MV Rajasekar has assumed charge as Director (Mining & Construction) and member of the board of BEML LIMITED, (a premier Public Sector undertaking under Ministry of Defence) on Saturday 1st June 2019. Prior to assuming charge, he was Executive Director and Marketing Head of Mining & Construction Business, BEML. He succeeded Shri B R Viswanatha who retired from services on account of superannuation.

Rajasekar is graduate in Metallurgical Engineering from VNIT, Nagpur and holds a post graduate degree (M. Tech) in Welding Engineering from IIT Chennai and done his MS in Technology Management from Germany.

Rajasekar has over 31 years of varied experience, spread across several functions like R&D, Production, Planning, Outsourcing and Marketing in the Mining & Construction, Defence and Rail & Metro segments.

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MODI 2.0: WHAT DOES THE INDUSTRY EXPECT?

With the new government in place, the manufacturing industry has set of expectations from it. Let's see what are these expectations.



"I think Government is committed to 'Make in India'. Now the same government coming in, we can see 'Make in India 2.0'. There will be two basic elements to this. One is to unleash basic building blocks of manufacturing like quality, cost, technology, policy initiatives, building capabilities towards manufacturing, etc. The other is drivers of demand for our products, which will happen through brand building and through increase in market shares. So these are two important areas and India has to work hard on them. India's manufacturing ratio to GDP is only 15% whereas for countries like Korea, Japan, etc., it varies between 25–30%. So India's contribution towards manufacturing has to grow.

The manufacturing industry is also very good job creator. It's got a multiplier effect. One job in manufacturing leads to 2.5 jobs in other areas – upstream & downstream. On this backdrop, Make in India 2.0 is something that I am personally looking forward to."

Kamal Bali, President & Managing Director, Volvo Group India



"On behalf of CNH Industrial, a multinational with three manufacturing sites in the country, it is our hope that this new Government will work with the Industry as a partner to ensure that operations run efficiently in the country and that our customers are put in the position where they are able to gain maximum output with our equipment. To achieve on these points, there must be several actions. Firstly, we will require clarity and ease when it comes to investment policies in order to guarantee a reliable and stable environment for our current and future manufacturing projects. Next, we have the topic of policy, where the private sector needs to be shielded from the impact of specific regulatory changes rather than bear the burden of implementing them without a deep assessment of cost-benefit and industrial lead time. We invest significantly in advanced technologies and we also urge other stakeholders to join us in efforts to reduce pollution. In agriculture, which is a key industry for us as we locally manufacture New Holland tractors and Case IH harvesters, there are major topics which need to be addressed. Stubble burning is one of them and must be put on the agenda at national and local levels as it is a serious concern for the future health of soil and crops. Great attention must also be given to land reform which is essential in order to boost agricultural efficiency further as well as infrastructure, another sector in which we operate through our brand CASE, with construction equipment that we also manufacture locally. While we acknowledge the complexities of land reform, improving upon it would massively impact productivity."

Raunak Varma, India Country Manager, CNH Industrial

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“In my opinion, Make in India did not take off as expected. But I personally feel, the government should take some concrete steps to make ‘Make in India 2.0’ happen. And I hope that happens with Modi 2.0.”

Aravind Melligeri, Chairman & CEO, Aequus



“The new government’s strong mandate spells stability for the country and ensures a continuity in the reforms they were driving in their previous regime, where they focused on upgrading infrastructure and driving electrification across both rural and urban areas. There was also a strong push on LEDification in the country with the government encouraging the use of LED’s across homes and public spaces. This resulted in big power savings for the entire country as more and more people adopted LED lighting. The government also worked closely with various states to develop the 100 smart cities in the country and a lot of great work has been done in that regard as well, including connected street lighting that has enabled these cities to become more energy efficient and safer.

Therefore, we foresee that the new government will continue to drive these key initiatives further. We hope they will keep up the momentum they have built up in the previous years and drive access to reliable power supply and 100% rural electrification throughout the country. We also expect a thrust in the development of smart cities and adoption of solar street lighting in the country, which is a sustainable solution for public street lighting. We are confident that a stable government will further boost the Indian economy.”

Sumit Padmakar Joshi, CEO, Signify Innovations, India Ltd.



“We congratulate the government for winning the second term. With a stable government we expect a speedy implementation of infrastructure projects, smooth transition to BSVI along with stringent norms to scrap old polluting vehicles. Additionally, we expect more boost for agriculture sector and creating a better ease of doing business environment to enhance further goods movement in India.”

Udit Sheth, Vice Chairman, Setco Automotive Limited

“An aspirational India has reposed great faith in Mr Modi’s leadership. The ASSOCHAM will extend full support to his government to meet these aspirations by achieving higher economic growth through enhanced investment in manufacturing, rural and urban infrastructure, agriculture and social sectors, including health and education. A strong and stable government would bring in more foreign investment even as the domestic firms are witnessing renewed confidence. We are in for a virtuous cycle where consumption and investment drive each other. With inflation expected to stay benign, and growth set to move higher with the help of lower interest rates, we would soon be in a sweet spot, thanks to a decisive leadership.”

B K Goenka, President, ASSOCHAM

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"I believe that a stable government at the centre will further boost the growth in the Automotive Industry. We hope that the new government demonstrates concrete action to push investments, increase growth and generate employment. Furthermore, we are expecting the upcoming government will make the GST NIL on the helmets and even the input credit should be granted to the helmet manufacturers, leading to low cost of ISI Mark helmets for the consumers and millions of lives can be saved."

Rajeev Kapur, Managing Director, Steelbird Helmets



"With the historic win of NDA government and its promise to invest 100 trillion in infrastructure across the next five years, we are confident of growth momentum in Construction and Infrastructure segment. Continuity in the sector related reforms and policies will help take the agenda forward resulting in the growth of the economy.

CASE India will expand its product portfolio further to take advantage of this growth opportunity, work on improved skill of operators and as well as adding the latest technology in their products."

Ajay Aneja, Brand Leader, CASE India

"The Indian start-up sector have already been ignited in the past five years with favourable policies around taxation, investments, ease of doing business, incubation, foreign capital, cross border, startup lobby groups, industry associations. The foundation of the ecosystem is already in place with India being the third largest hub for start-ups globally. Active government involvement is the need of the hour to resolve challenges such as unemployment, and funding for the growth of the industry and the economy at large. For start-ups to flourish it is imperative to create an environment that is conducive to physical, offline small businesses and hardware product firms operating locally. The new government should continue with initiatives such as Make in India and Digital India to aid the growth of the start-up industry and also work towards a digital economy by installing proportionate methods to tackle policy challenges".

Juergen Hase, CEO, Unlimit



"A clear mandate to a single party by the people of India will provide continuity to policies and development agenda. I think all the unfulfilled dreams of the government will now get delivered."

Hemant Kanoria, Chairman, Srei Infrastructure Finance Limited

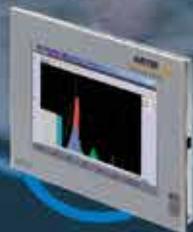


"The industry has witnessed low to no growth in the last three years. Indeed, TV, AC, and Microwaves decline in 2018. Revival of growth, therefore, is the biggest ask that industry has from Government. On the other hand, cost of compliance has gone up significantly and while CEAMA is committed to 'zero defect zero effect', government must acknowledge that India is now at par or better than the developed world on energy efficiency and there is no compelling need to raise the bar immediately. On E-waste, too, we remain committed but believe a government must reopen dialogue with industry on targets, fair distribution of target,

formalisation of the informal sector."

Kamal Nandi, President, CEAMA and Business Head & EVP, Godrej Appliances

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CHANGING THE MINDSET

The Machinist Super Shopfloor Awards witnessed an interesting conversation on role of women in the manufacturing. Here are excerpts of the discussion.



tion, Cummins Group in India, Jyotsna Sharma, Chief Financial Officer, Bridgestone India Pvt. Ltd., Manisha Kannur, Executive Director (Strategic Business Planning) Ace Designers, Nirmala Behera Udgata, Executive Director & Head of HR, RSB Group and Dr. Sujatha Narayan who is the Managing Director at Faiveley Transport, India participated in this interesting conversa-

tion. This panel discussion was moderated by Niranjan Mudholkar, Editor, The Machinist.

The interesting discussion started with the basic question of what made these ladies enter in the industry. Answering this question, Dr. Narayan said, "In my



When you have a leader job, it does not matter what industry it is. When you run a company entirely, it is about three things – having intelligence, ability and thinking to define the strategy for the company. You need to ensure that your strategies are getting executed and to take care of the people

Dr. Sujatha Narayan who is the Managing Director at Faiveley Transport, India

Since couple of months, The Machinist has started an initiative of bringing case studies on women in manufacturing into limelight. The initiative, which began as a regular feature in the magazine was extended further during The Machinist Super Shopfloor Awards 2019 by organising a panel discussion called "In Conversation with Women Leaders". Bhavana Bindra, Vice President - Distribu-



"You need not to be an engineer for knowing engines. With this logic, we move people in the company across functions. In my opinion, as long as you have values and the attitude, you can learn things that you need to. Additionally, you need to have conviction to do so."

Bhavana Bindra, Vice President - Distribution, Cummins Group in India

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“Your upbringing plays a major role in defining choices that you will make in your life including career.”

Jyotsna Sharma, Chief Financial Officer,
Bridgestone India Pvt. Ltd.

case, whatever was the right choice of the career I took it. And I am glad that the management then did not think about my gender and opened doors of opportunities.” She further added, “When you are at the leadership position, it does not matter what industry it is. When you run a company entirely, it is about three things – having intelligence, ability and thinking to define the strategy for the company. You need to ensure that your strategies are getting executed and to take care of the people.”

Giving her perspective, Sharma explained, “Your upbringing plays a major role in defining choices that you will make in your life including career. I grew up in Pune, which is an industrial town and Leela Poonawala has always been my idol.”

Sharma continued by saying, “Motivation, seeds of thoughts and encouragement matter as children grow up. Your gender doesn’t matter. What really matters is what one wants to do as a career. And accordingly, you build up yourself.”

Narrating her experience at Cummins Bindra said, “When I came to this company, what I realised was this company was not used to having women around. It was very regional focused and we have come a long way ever since. At that point, women workforce accounted for 7% now it is 30%.”



“Being in leadership position, we should inspire more women to join and recognise their successes. This recognition will help them grow.”

Nirmala Behera Udgata, Executive Director & Head of HR,
RSB Group

Bindra further added that “You need not be an engineer for knowing engines. With this logic, we move people in the company across functions. In my opinion, as long as you have values and the attitude, you can learn things that you need to. Additionally, you need to have conviction to do so.”

With regards to the change in mindset, she said, “Everybody wants to make change but they don’t know where do begin. So, we should help them in this regard.”

Nirmala Behera Udgata who heads Human Resources at RSB Group narrated her experience of joining her family business, “When I joined RSB, it never occurred to me that I am a woman and I am joining a male-dominated industry. Slowly and steadily, I realised that there were very less number of women at the shopfloor. Hence, I started talking to my managers and plant heads, I realised that such situation was due to their mindset. They were of the opinion that women will not be able to tackle the pressure at the manufacturing level. However, in last 3-4 years, the women empowerment drive and forums such as The Machinist Super Shopfloor Awards is showing the results and the mindset is changing gradually.”



“As a woman rises in her career and reaches leadership position, the biggest challenge then is self-limitation. That’s where I feel self-empowerment is important.”

Manisha Kannur, Executive Director
(Strategic Business Planning) Ace Designers

Explaining role of a woman leader, she said, “Being in leadership position, we should inspire more women to join and recognise their successes. This recognition will help them grow.”

CHALLENGES

Throwing light on challenges, Kannur said, “When we talk about women in manufacturing, there are multiple challenges. Safety tops this list. However, the bigger challenge with women in our country is that they are very self-imposed. Guilt is one of the major challenges. When woman has young children, leaving them back at home and not being available for them when they want is really hard for women. But this stage remains only for 4-5 years of their career that can otherwise span between 38-40 years. As a woman rises in her career and reaches leadership position, the biggest challenge then is self-limitation. That’s where I feel self-empowerment is important. You should take things in your hand and should not wait for someone else to make things convenient for you. We as a community have to work on building this self-assurance. To do this, one of the things that really helps is having a great mentor.”

The panel discussion ended on the note that going ahead, women will not only enter the field but be successful in the manufacturing sector. 



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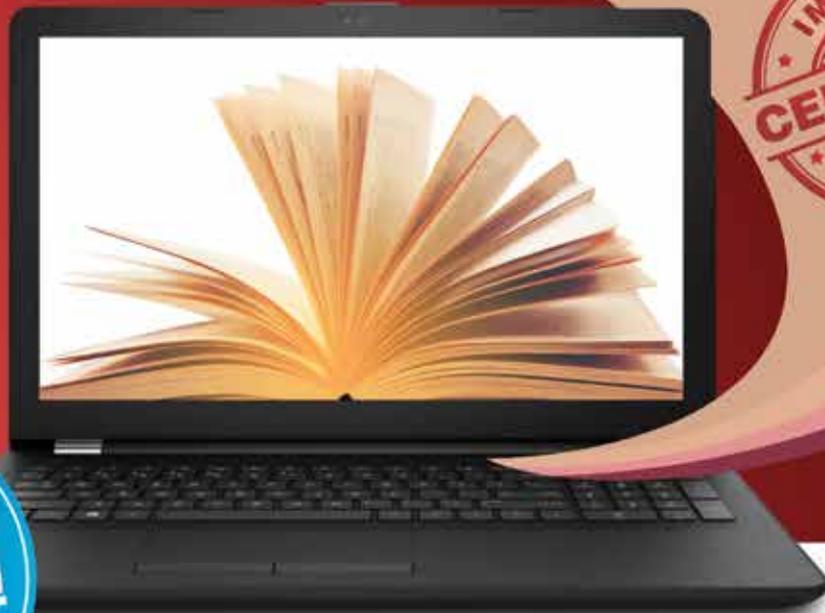
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By Dr. Pranjal Kumar Phukan

FLIGHT TO TOMORROW!

The aerospace and defence industry can reap major benefits through the adoption of Additive Layer Manufacturing technology.



“The biggest advantage for aerospace R&D comes in the form of a cheaper single unit or low-volume production, enabled by elimination of tooling requirements. Additive Manufacturing technology is bound to alter the way R&D processes are run at present.”

Additive Manufacturing (AM) consists of various technologies that fabricate 3D objects by adding layer-upon-layer of desired material such as plastic, metal and concrete etc. The limitless potential and cutting-edge technology aspect of AM has created a lot of excitement and garnered global attention in recent years.

If harnessed well, the AM technique offers great benefits such as adding material precisely where needed and to the extent needed. This results in cost cutting in production, transportation, on-site manufacturing or

recycling etc. AM or 3-D printing as it is often called in common parlance, found an early acceptance in the aerospace and defence industry. The technology made inroads into the industry as far back as the 1980s when companies in the industry started hobnobbing with the technology. At present, the AM applications in this industry include the following.

- Creation of concept models and prototypes
- Production of limited and complex aerospace parts
- Printing of parts for replacement.

The parts manufactured through AM vary from armrests to engine components at present, and the day is not far when aircraft wings would be manufactured using this technique. The reason why the aerospace industry jumped onto the AM bandwagon early is that it sees Additive Layer Manufacturing (ALM) as a potential solution to many challenges faced by it. There has been a great deal of evolution in the technology since it first appeared on the scene 30 years ago.

The biggest potential offered by ALM is in getting rid of the dilemma between scale and potential. It brings down the capital infusion required. A single printer has the capability of producing varying complex parts at the same time. This eliminates the dependence on huge factories and assembly lines. Production of multiple products with the same printer also ensures better return on capital invested.

The aerospace and defence industry can reap the following key benefits through the adoption of ALM.

FASTER GO-TO MARKET TIME

ALM enables faster building of prototypes and the review and testing of concept designs. There is no requirement to produce manufacturing tools and design directly leads to production of the finished product. Thus, engineers can create and validate multiple prototypes, get customer feedback and reduce the risk of product failure upon launch. The biggest advantage for aerospace R&D comes in the form of a cheaper single



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unit or low-volume production, enabled by elimination of tooling requirements. AM technology is bound to alter the way R&D processes are run at present.

ABILITY TO CREATE COMPLEX DESIGNS

ALM is a software designed manufacturing and allows for precision usage of material. This results in creation of parts that are extremely complex in design without incurring any cost overheads compared to the production of a simple part like a seat armrest.

OPTIMIZE PERFORMANCE

It is usually not possible to produce the topologically optimized concepts due to the complex shapes involved. The limitations of traditional manufacturing processes such as milling, casting, forging, welding, polishing etc. made it extremely difficult to experiment with such geometrically vivid designs.

On the contrary, ALM provides much greater flexibility as far as geometries are concerned and offers a lot more space for innovation and design experiments.



The value of 3D printing is bound to increase in manufacturing supply chains. It will lead to the creation of digital supply chains that will redefine the whole business models and will become embedded seamlessly in the contemporary supply chains.

Designers can focus on getting maximum performance without being constrained by the manufacturing challenges. It becomes possible to build complex components using different types of plastics and metals like steel and aluminium.

DESIGN CONSOLIDATION AND SUPERIOR RELIABILITY

In a conventional process, various smaller components must be assembled together to create an intricate design. However, ALM can help produce highly complex designs as a single piece or involving very few components. This reduces the assembly time and costs and makes it easier to modify the design if needed. Such consolidation of components can be instrumental in improving the reliability as well as the life-span of aircraft parts.

LIGHTER AND MORE FUEL-EFFICIENT

DESIGNS

It is a fact that ALM results in weight reduction of aerospace components since it prints optimized geometries, topologically optimized structures that do away with the unnecessary consumption of material.

According to research, if just one kilogram of weight is reduced from each aircraft of a fleet comprising of 600 + commercial jets, there would be a saving of 90,000 litres of fuel and cutting down of CO2 emissions by 230 tonnes. In 2013, American Airlines' spent 35 percent of their money on fuel bills. Weight is a great consideration for airlines and lighter aircraft can also benefit the fliers. As discussed, lighter aircraft weight would bring down fuel consumption and CO2 footprint, and this constant saving would then be offered to the fliers in the form of reduced airfares. The AM process has been evolving rapidly and there are certain trends that have emerged out of this growth.

AUTOMATION

AM simplifies the production process and leads to greater streamlining of R&D. Augmented by robotics, industrial automation will lead to a faster and easy to monitor post-production system. Improved simulation will then become capable of predicting design failures before they actually happen.

INTEGRATION

The value of 3D printing is bound to increase in manufacturing supply chains. It will lead to the creation of digital supply chains that will redefine the whole business models and will become embedded seamlessly in the contemporary supply chains.

COLLABORATION

The collaboration between the 3D printing industry and its customers would create a framework that integrates the 3D printing technology with a customer's understanding of the market, and it will lead to great innovations and technological disruptions.

CONCLUSION

Evolution of AM has emphasized on building of superior, faster, bigger and more potent machines that leverage the wide range of new materials. The impetus to global adoption of this technology will come from the understanding of how 3-D printing can be integrated into businesses. The need is to figure out what all can be done by the technology and how to make it more specialized in catering to the industry demands. 

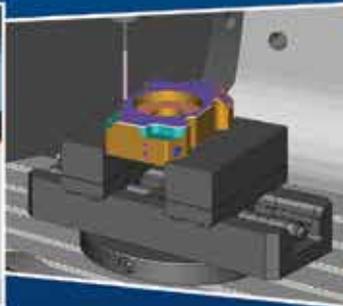
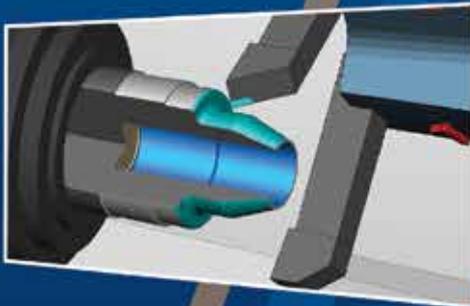
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MOMENTUM IS BACK!

Consumer goods led the upturn in May, with rates of expansion in output, total sales, new export orders and employment surpassing those seen in the intermediate as well as capital goods categories.



“When we look at the survey’s over 14-year history, the sector is growing at a below-trend rate. Shortening the horizon to the last two years, May’s increases in output, total order books and exports all outperformed.”

Pollyanna De Lima, Author of the report

Economic growth in India’s manufacturing industry moved up a notch in May as companies responded to strengthening demand conditions by lifting output, quantities of purchases and employment to greater extents. Business sentiment also ticked higher. Price pressures remained relatively muted, with goods producers leaving selling prices unchanged on the back of a mild rise in overall cost burdens. At 52.7 in May (April: 51.8), the Nikkei India Manufacturing Purchasing Managers’ Index® (PMI®) pointed to the strongest improvement in the health of the sector for three months. Moreover, the

current growth sequence was stretched to 22 months.

Consumer goods led the upturn in May, with rates of expansion in output, total sales, new export orders and employment surpassing those seen in the intermediate as well as capital goods categories. The latter returned to growth territory, following a deterioration in business conditions in April. Aggregate manufacturing output increased at the quickest pace in three months, with survey participants linking growth to new client wins, robust sales and improved technology. Strengthening demand and successful marketing reportedly underpinned sales growth in May. The latest rise in factory orders was the nineteenth in as many months and quicker than that seen in April. External sales continued to contribute to total order flows, with exports expanding at the joint-quickest pace in six months. Indian goods producers were confident of a rise in output in the year ahead, with sentiment improving from April. Expectations of pro-business public policies, marketing initiatives, projects in the pipeline and favourable economic conditions were among the reasons boosting optimism.

An upbeat mood among goods producers, coupled with a solid increase in new work, underpinned further job creation in the sector. Employment has risen in each month since April 2018, with the latest expansion the most marked since February. Companies purchased additional raw materials and semi-finished items during May, but input holdings were broadly unchanged amid higher production volumes. At the same time, stocks of finished goods decreased in line with stronger demand. Although input cost inflation in India’s manufacturing industry ticked higher during May, the rate of increase was negligible in the context of historical survey data. Concurrently, factory gate charges were broadly unchanged. May data pointed to a general lack of pressure on the capacity of both manufacturers and their suppliers. Goods producers recorded broadly unchanged outstanding business lev-

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els, while vendors' delivery times shortened marginally. Commenting on the Indian Manufacturing PMI survey data, Pollyanna De Lima, Principal Economist at IHS Markit and author of the report, said: "A revival in new order growth promoted a faster upturn in manufacturing production, as Indian firms sought to replenish inventories utilised in May to fulfil strengthening demand. "To assist with higher output needs, and benefit from relatively muted cost inflation, companies stepped up hiring and input purchasing. Goods producers were also able to charge competitive prices due

to negligible increases in their cost burdens, meaning not only higher sales in the domestic market, but also greater overseas demand. "The results show welcoming accelerations in expansion rates across a number of key metrics. When we look at the survey's over 14-year history, the sector is growing at a below-trend rate. Shortening the horizon to the last two years, May's increases in output, total order books and exports all outperformed." 

Sources: Nikkei, IHS Markit

General Motors to expand its truck assembly plant in the USA

General Motors Co. is making a new round of upgrades to its Fort Wayne Assembly plant to further increase production of the all-new Chevrolet Silverado 1500 and GMC Sierra 1500 pickups – especially crew cab models.

"We are building Chevrolet and GMC crew cab pickups at record volume and mix levels to meet customer demand and the \$24 million investment will allow us to build even more," said Mary Barra, GM chairman and CEO. "The team here at Fort Wayne has done an outstanding job helping us satisfy customers throughout this launch. Our product ramp-up was very smooth and the quality has been exceptional. Crew cab sales have been very strong, and we are expanding customer choice with new models, more cab choices and innovative new powertrains."

Combined sales of the Chevrolet Silverado 1500 and GMC Sierra 1500 crew cab pickups, which launched in the second half of 2018, were up 20 percent in the first quarter of 2019 versus a year ago. GM is projecting another significant increase for the second quarter. Customer deliveries of the double-cab models built in Fort Wayne began during the first quarter.

The \$24 million will be invested to further enhance the plant's conveyors and other tooling to support the increased production. The work will be completed this summer. With today's announcement, GM has invested more than \$1.2 billion in the plant since 2015.

Since 2009, GM has invested \$23 billion in U.S. manufacturing – more than one-quarter of every dollar spent by automakers.



Denso develops a high-efficiency diode for alternators



DENSO has developed a high-efficiency diode for alternators for gasoline and diesel engine vehicles with the semi-conductor supplier, Hitachi Power Semiconductor Device, Ltd. Production of alternators equipped with newly developed diodes will start for vehicles to be sold in Europe in FY2019, and will be rolled out to manufacturing group companies around the world.

Diode is a components of alternators. Diode has function to flow current in a certain direction and rectifying generated alternating current to direct current. The jointly developed diode significantly reduces the power conversion loss by increasing the efficiency of the function. The new diode improves the power generation efficiency by about 6% compared to conventional products and help improving fuel consumption. DENSO manufactures 25 million alternators in annual total in more than 10 countries. If all the diodes were replaced with the new high-efficiency diodes, carbon dioxide emissions would be reduced by 30 tons annually.

The new diode is developed as a component that fits the conventional alternator. DENSO and Hitachi remained the conventional shape of the diode and increased the efficiency of rectifying function by simplifying IC control function and applying 3D design located IC tip sterically.

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By Swati Deshpande

EXPANDING WINGS

We are in process of enhancing our capacities says
Sunil K M, Vice President – Corporate Strategy, Pennar Industries



Can you please tell us about Pennar's journey since its inception?

Pennar Industries Limited (PIL) was established in 1988 by Nrupender Rao, Chairman, and is currently spearheaded by Aditya Rao, Vice Chairman and Managing Director. The diversified engineering firm has capabilities in automotive components, railway coach and wagon subsystems, precision tubes, pre-engineered buildings, process engineering solutions and environment treatment solutions. The company primarily operates through its eight manufacturing plants, two engineering facilities, and sales offices across India and in the US.

The company has eight manufacturing plants in the country. Can you please tell us about them?

The company has manufacturing plants in Patancheru, Isnapur and Velchal, Sadashivpet in the state of Telangana, Chennai and Hosur in Tamilnadu, Tarapur in Maharashtra and Mallapur in Hyderabad. These manufacturing plants cater to a wide range of sectors with capabilities in custom fabrication, roll forming, pressed components, hydraulics systems, aerospace machining and assembly. We intend to grow its capabilities in all these verticals over the next few years.

Can you please tell us about company's operations overseas?

Pennar undertakes its US export initiatives under Pennar Global Inc (PGI). Currently 10% of the company's revenue comes from exports and most of the export revenue is from USA.

PGI's primary mandate is to enable geographical diversification with the key focus on export of engineering services to US. PGI, with its deep domain knowledge and mature processes, has capability to offer an end-to-end, integrated product engineering. PGI's current focus area for the export of design engineering services are Hydraulic Engineering, Structures, Electrical systems and automotive engineering.

Pennar has vision of becoming a recognised global player and will expand to geographies such as APAC,



"The company is catering to various Metro rail projects by building the metro coaches shells for Mumbai Metro, Kolkata Metro, Delhi Metro. The Railways vertical has exhibited high growth in revenue in the past three financial years."

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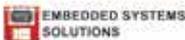
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Africa, Europe and the Middle East. PGI intends to have a manufacturing base in the USA by Fiscal 2020 and is exploring options for technical collaboration to enhance its product outreach. PGI also plans to offer pre-engineered building systems (PEBS) in Africa and the Middle East. PGI will also pursue inorganic growth opportunities either through joint ventures or acquisitions. Utilizing the latest MBS, Autodesk, STAAD Pro and Tekla 3D modelling software to provide a complete BIM compatible engineered package for class A structural buildings pre-engineered buildings, hybrid buildings. It is growing at 50 per cent y-o-y growth and is expected to contribute about 10 per cent of FY19 revenues.

With changes in taxation policies in US (25 per cent imposed on account of section 322 and more Anti-dumping duties for China) India has an advantage with CDW in auto and export industry. We are planning on expanding its tube revenue export backed by the increased capacity in Velchal plant.

//

We are witnessing steady increase in demand across the business units and product lines. The company will meet the additional demand by expanding manufacturing capacity at the existing plants as most of our plant locations can accommodate the required expansion.

The company has been thriving in the railways segment. Can you please tell us about some of the projects/orders that Pennar is working on in this regards?

The company is catering to various Metro rail projects by building the metro coaches shells for Mumbai Metro, Kolkata Metro, Delhi Metro. The Railways vertical has exhibited high growth in revenue in the past three financial years. This vertical consists of our Coaches and Wagon Components business. Our clients for Railways business include Integral Coach Factory, Chennai, Modern Coach Factory, Raebareli, Texmaco Rail & Engineering Ltd., Kolkata, Hindustan Engineering India Ltd., Kolkata, Cimco Ltd., Kolkata, BEML

Ltd, Bangalore, etc. The company has invested significant capex in railways in terms of both capacity addition and product diversification.

Through its hydraulic cylinders' business, the company caters to varied industries. What has been the contribution of this business in the company's growth?

Our Hydraulic cylinder business is relatively small but is growing rapidly. We cater to both, the domestic as well as global demand for hydraulic cylinders that find applications in agricultural, forestry, construction equipment, material handling, tippers and trailers, aerospace and defence industries.

The current capacity is 75,000 cylinders per annum and we are in the process of setting up a new plant with higher capacity. The new plant will be equipped to produce 150,000 cylinders per annum with scope to expand up to 200,000 cylinders as the demand increases. PIL has more than 25 domestic and global customers for hydraulics, including reputed OEMs, distribution and engineering companies in the world. Over the past two year, PIL has supplied more than 100,000 hydraulic cylinders to the end-users in the US market. The company is witnessing increase in demand and hence is doubling the capacity. PIL is augmenting the capacity in a new 45,000 sq. ft. state of the art plant at its existing Hydraulics manufacturing facility at Periyapalayam, Chennai. The plant will be fully equipped with complete infrastructure and best in class machinery and testing equipment to design, engineer and manufacture high quality hydraulic cylinders.

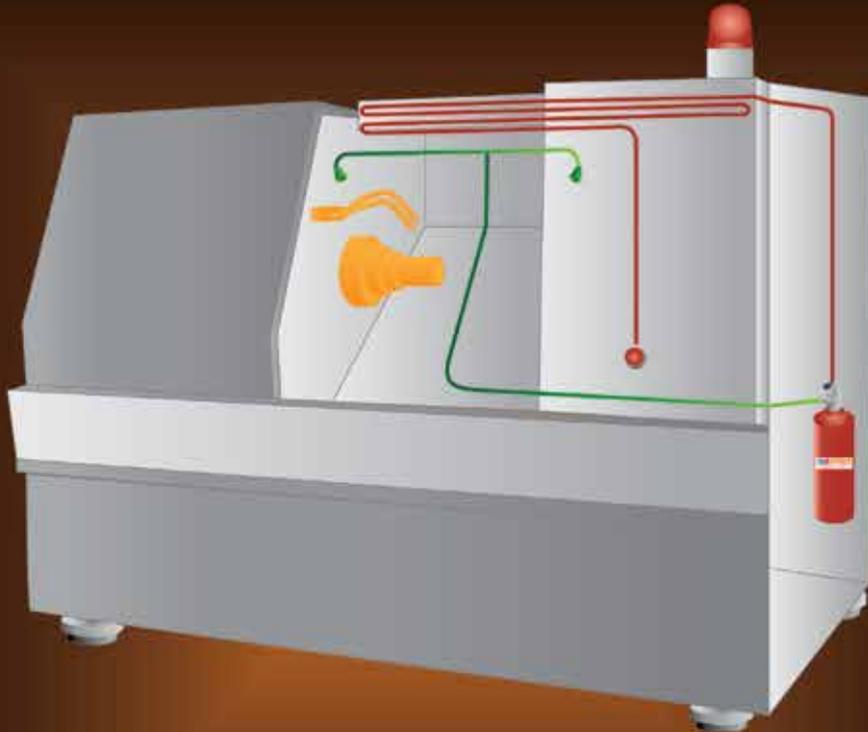
Also, can you elaborate on the company's business in white goods components manufacturing?

The average business of this segment is around Rs 2.5 crore per month. This comes from two major players in air conditioner compressors. We also export shells to USA and business in growing YOY. We don't manufacture shells for the refrigeration segment which is serviced by Chinese and domestic players.

Coming to the auto component segment – The auto industry is at the transitional phase. How do you look at the industry disruption caused by e-vehicles



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in the country? How is it likely to affect your auto business?

We serve auto electrical in 2-wheelers; suspension, chassis and brakes segments in automotive 4-wheeler segment. Pennar has started development work for 2-wheeler auto electrical products. As of now, we don't anticipate any product change in the other segments. Nor do we see any impact to our business.

In order to cater to varied industries, the company must have a strong R&D support. Can you throw some light on the company's R&D efforts?

Research & Development (R&D) plays an important role to us for innovation and new product development. Every business unit has product development teams in place, who will be scouting around the industry for new product identification. The plant engineer-

ing team then develops the new products and submit the sample lots for approvals before going for the production.

Also, please tell us about company's expansion plans.

We are witnessing steady increase in demand across the business units and product lines. The company will meet the additional demand by expanding manufacturing capacity at the existing plants as most of our plant locations can accommodate the required expansion. Pennar Industries will be doubling tubes manufacturing at Velchal plant, we will be doubling Hydraulic cylinder capacity at Chennai plant. Also, we are setting up solar panel plant at Sadashivpet, and enhancing capacity for our Railway business. All these expansions will be carried out over the next 2-3 years. 

CONNECTING COMMERCIAL VEHICLES

WABCO and RIO launch joint Fleet Management Solution to support transport logistics

WABCO Holdings Inc. has announced that it will launch its first joint trailer-specific Fleet Management Solution (FMS) 'RIO 4TX TRAILERPULSE' with RIO, the digital brand of global commercial vehicle manufacturer TRATON GROUP.

The digital brand fully integrates WABCO's new trailer-focused connectivity solution, TX-TRAILERPULSE™, into its cloud-based open platform for freight transport. The service combines trailer monitoring and diagnostics functionalities. RIO will gradually provide their customers with the whole spectrum of the device functionality.

"We are happy to thereby enable transporters and logistics companies to better track, maintain and manage their assets, maximize trailer utilization and improve their cost management. We are in good company because both RIO and WABCO offer brand-independent solutions," said Johan Carlberg, responsible for Partner Management at RIO.

In addition, fleets that already manage their trucks in RIO's connectivity environment will be able to manage their trailers via the same



platform. RIO 4TX-TRAILERPULSE is equipped with WABCO's TX-TRAILERPULSE via the RIO fleet management platform. It can significantly contribute to increasing fleet profitability, whatever their size, as it provides hardware and advanced digital services without incurring significant costs.

The two leading digital service partners to the global transport and logistics ecosystem first announced their cooperation at IAA 2018. Building on this strategic cooperation, WABCO and RIO's first joint Fleet Management Solution is a powerful realization of their promise to drive differentiating efficiency for the European transport logistics market.

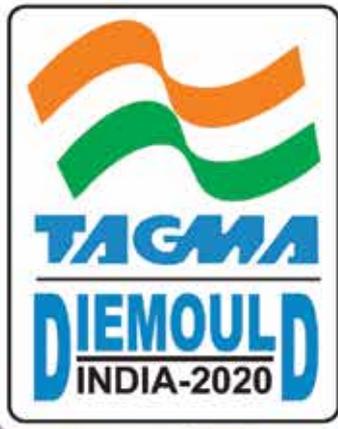
"Extending our trailer telematics capabilities into RIO's open and fully digital platform builds on our overall

mission to help transport operators globally become radically leaner, greener and safer in their daily operational activities," said Nick Rens, WABCO President EMEA. "We are proud to have found in RIO a strong partner that pursues our clear focus on supporting the transport and logistics industry in its digital transition."

Jan Kaumanns, RIO's Chief Executive Officer, added: "Our manufacturer-independent RIO platform has been established through long-term partnerships with industry experience. Building on WABCO's expertise allows us to provide a continuous flow of new services to our customers. Leveraging RIO 4TX-TRAILERPULSE is just the start of a promising partnership that will support our goal to connect all the players of the supply chain ecosystem."

The new digital trailer telematics system will be available in the DACH region in summer 2019 followed by West and Central Europe, with a global rollout in future years to support transport and logistics companies worldwide. 

Source: Wabco



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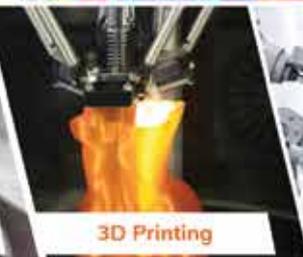
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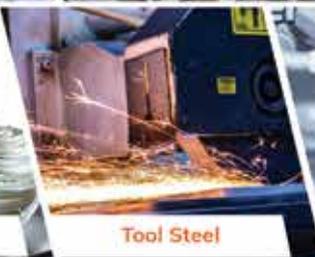
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DEVELOPING SOLUTIONS INDIGENOUSLY

Amandeep Singh, Head—Defence, Ashok Leyland, says the ‘Make in India’ initiative and opening up of Defence sector to Indian Private sector has opened door of opportunities.



“India has one of the largest armies in the world, we are the largest importer of Defence equipment and unfortunately, we are geographically located in a volatile zone. Also, in line with our aspirations to be a Super Power in coming time our Defence requirements, especially ones that can be developed and produced indigenously, are only going to go up.”

How is India’s emphasis on defence manufacturing encouraging Ashok Leyland?

Ashok Leyland has been the largest supplier of logistics vehicles to Indian Armed Forces since over last the two decades. However, for other mobility requirements, most of the vehicles were imported. With the ‘Make In India’ initiative and opening up of Defence sector to Indian Private sector Industry we got an opportunity to get into special role vehicles also like Gun towers, Rocket Launchers, High Mobility Vehicles, Ambulances, etc. We indigenously developed solutions and won most of the tenders for these and have been executing these orders over the last two years. There still exists a large potential not only in wheeled vehicles but also tracked vehicles which we are gearing up to address.

Can you please tell us about some of the prestigious projects that you are undertaking in this sector? Or have recently accomplished.

Over the last 3-4 years, we have got several prestig-

ious Projects which we have executed and some under execution. High Mobility vehicles 8x8, Multi Barrel Rocket Launcher 6x6 Vehicles, FAT 6x6 for Gun towing application, 4x4 Ambulances, Missile Carrying vehicles and Tractors, Light Bullet Proof Vehicles for IAF, 10x10 Smerch Rocket Carriers are few of them. Apart from Armed forces, we are also supplying Bulletproof vehicles to Police Forces for internal security and counter-insurgency operations.

Research and development plays an important role in the manufacturing sector. Tell us about your R&D efforts?

Ashok Leyland is focused on Mobility Solutions in Defence. We have a state-of-the-art Technical Center near Chennai, perhaps the best in this part of the world, where we develop indigenous solutions for all mobility requirements of Indian Armed Forces, DRDOs and Ordnance Factories. We are the only vehicle manufacturer in India who has indigenously designed, developed and manufactured Engines beyond 350 HP. We also have a dedicated R&D team of over 100 Engineers who work only on Defence Specific Requirements like All wheel drives ranging from 4x4 to 12x12, Transfer cases & DropBox, Centralised Tyre Inflation systems, Self-Recovery Winches, Armouring solutions, Turrets, Gun Mounts, Suspension Lock, etc.

How do you foresee Indian market in the defence manufacturing sector growing in the coming five years?

India has one of the largest armies in the world, we are the largest importer of Defence equipment and unfortunately, we are geographically located in a volatile zone. Also, in line with our aspirations to be a Super Power in coming time our Defence requirements, especially ones that can be developed and produced indigenously, are only going to go up. Ashok Leyland is proud to be a trusted supplier of Indian Armed Forces over last so many years and have experience of not only supplying but more importantly maintaining these equipment over their life cycle. We have a clear focus on Mobility solutions and have the capability for in house design and development of these. All this gives us a very good competitive edge which has been evident in our Tender win and execution record. 

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Toyota to establish new plant in Myanmar to locally produce the Hilux

Toyota Motor Corporation plans to establish Toyota Myanmar Co., Ltd., (TMY) as its first vehicle production company in Myanmar where it will locally produce the Hilux from February 2021.

Toyota plans to construct the new TMY plant in the Thilawa Special Economic Zone, situated in the southern suburbs of Yangon city, the country's largest metropolis. Investment is expected to be approx. 52.6 million USD. Toyota plans to hire approx. 130 new employees, and intends to build approx. 2,500 Hilux vehicles per year using the SKD (semi knock-down) method when operations begin in 2021.

Toyota will strive to provide products and services that continue to meet the needs of customers in Myanmar, and develop human



resources for manufacturing through local production, to contribute to the development of industries in Myanmar.

Schaeffler India opens training center at Hosur

Schaeffler India Limited has inaugurated a fully operational vocational skill development training center at Hosur recently. The center has been established



to provide skill training in the fields of CNC Machining and Mechatronics training to the youth of the underprivileged sections of the society. The inauguration of this center is under a program called STEP (Schaeffler Technical Enhancement Program) which is run under the CSR umbrella HOPE. The program will be run by SkillSonics India Pvt Ltd, as the learning and implementation partner.

The inaugural function took place at the STEP, Hosur training center in SIDCO industrial area in the presence of chief guest Dr. S.Prabhakar (I.A.S), Krishnagiri District Collector & Magistrate. The center was inaugurated by senior executives from Schaeffler India - Rakesh Jinsi, Director Schaeffler India Limited Board; Dharmesh Arora, CEO – Schaeffler India; Santanu Ghoshal, VP Human Resource- Schaeffler India and representatives from SkillSonics India Pvt Ltd.

Commenting on the occasion, Santanu Ghoshal, VP Human Resource- Schaeffler India, said: "STEP as a program has been designed to develop and empower the youth and their families from the underprivileged section of the society from the surrounding communities where Schaeffler operates. After establishing two centers in Pune, this is our third center under the STEP initiative, empowering students with technical skills with a focus on making them employable and self-reliant. Every individual should be provided with an opportunity to improve their lives by earning a living through hard work and dedication."

Airbus opens new office in Argentina

Airbus recently inaugurated its new office in Buenos Aires, to strengthen its presence in Latin America and reinforce its commitment to the country.

Alberto Robles, Head of Airbus Strategy & International for Latin America, said that the presence of Airbus in Argentina is a natural step in increasing Airbus' activity in the region. "This new office in Buenos Aires is essential to consolidate our products in the region, while continuing to provide an even closer support to our customers in the country."

Airbus has been present in Argentina for decades. In 1994 Aerolíneas Argentinas became an Airbus customer with the A310-300. Today, the airline operates a long-range fleet of 10 A330 and two A340. Airbus also established a maintenance training centre in collaboration with Aerolíneas Argentinas to support the airline's growth. Airbus maintains 35 percent market share of the country's passenger fleet in service.

Honda opens skill enhancement centres in Maharashtra

Honda Motorcycle and Scooter India Pvt. Ltd. inaugurated Skill Development Centre at Excelus Learning Solutions, a National Skill Development Corporation (NSDC) affiliated centre in two towns of Maharashtra – Dhule & Palghad.

Honda's Skill Enhancement Centre at Dhule & Palghad is equipped with vehicle and service infrastructure. The centre has been developed as a fully functional workshop for students giving practical training on technical aspects of vehicle maintenance and repair. On successful completion of training, Honda will provide recruitment opportunities to candidates at Honda manufacturing plants and dealerships.

Speaking on the initiative, Pradeep Pandey, Senior VP - Customer Service, Honda Motorcycle & Scooter India Pvt. Ltd. said "Honda 2Wheeler India proactively supports Skill India Mission to empower Indian youth."

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SUPER SHOPFLOOR AWARDS 2019 SETS A NEW BENCHMARK

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The Machinist Super Shopfloor Award 2019 winners

The Machinist Super Shopfloor Awards 2019 recently took place at Bengaluru. The aim of this national platform is to recognise the success of Indian manufacturing units located across the country. The trophy was conferred upon the plants that excelled in various categories including Safety, Productivity, Machining Excellence, Digital Manufacturing, Innovation, Green Manufacturing, etc. The newly introduced 'Maintenance' category received tremendous response from the industry.

Duravit India Pvt. Ltd.'s Tarapur plant won the trophy for The Machinist Super Shopfloor of the Year 2019 in SME (MNC) category while Precision Cam-

shafts Limited's Machine Shop, Solapur was bestowed upon The Machinist Super Shopfloor 2019 in SME (Indian) category. In the large enterprises segment, Honda Cars India Ltd's Tapukara plant bagged the title.

Apart from awarding the plants, The Machinist also recognises individual contributions to the industry. Ranga Brothers (Vishnu, Anirudh, Pavan, Kiran & Arjun Ranga) of N R Group were recognised as Super Family Leaders 2019. As Arjun Ranga, Managing Director, N Ranga Rao & Sons accepted the award, he said, "Thank you for this recognition. Family businesses' contribution towards the Indian manufacturing sector is

immense. I am glad that platform such as this is recognising its contribution. Speaking about our business, it was started by my grandfather in 1948. Since then, we have diversified from incense sticks into various other segments like defence, avionics, agro-solar, etc. However, this diversification is only possible due to our people i.e. employees. They are pillar of our organisation."

Udit Sheth, Vice Chairman, Setco Automotive Limited who was declared as The Machinist Super Next Generation Leader 2019 said, "It was interesting to listen to conversation of Women Leaders in the beginning. As part of the auto component industry, we were

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The Machinist Super Shopfloor Awards 2019 Winners' List

| | |
|-----------------------|---|
| Innovation | <ul style="list-style-type: none"> • The Anup Engineering Limited, Odhav, Ahmedabad (Runner-up SME) • Pushpak Products India Pvt Ltd, Aerospace Division, Bangalore (Winner SME) • Bombardier Transportation India Pvt. Ltd., Savli, Vadodara, Gujarat (Runner-up Large Enterprise) • Schindler India Pvt Ltd. (Schindler Ahead), Mumbai (Winner Large Enterprise) |
| Machining Excellence | <ul style="list-style-type: none"> • Supreme Treon Pvt Ltd., Irungattukottai, Chennai (Joint Winner SME) • Cooper Corporation Pvt Ltd, M 60, Satara (Joint Winner SME) • Fiat India Automobiles Private Limited, Powertrain Division, Ranjangaon, Pune (Joint Winner Large Enterprise) • Tata Hitachi Construction Machinery Company Private Limited, Jamshedpur (Joint Winner Large Enterprise) |
| Digital Manufacturing | <ul style="list-style-type: none"> • Continental Automotive Brake Systems (I) Private Limited, Gurgaon (Winner SME - MNC) • PAAMA Agrico Private Limited, Doddaballapur, Bengaluru (Winner SME - Indian) • Havells India Ltd, Baddi (Joint Winner Large Enterprise) • Godrej & Boyce Mfg. Co. Ltd., Mohali (Joint Winner Large Enterprise) |
| Maintenance | <ul style="list-style-type: none"> • Duravit India Pvt. Ltd., Tarapur, Gujarat (Winner SME - MNC) • Supreme Treon Private Limited, Sanand-1 (Winner SME - Indian) • Faurecia India Pvt Ltd, Kancheepuram (Joint Winner Large Enterprise) • Mahindra and Mahindra Ltd, Igatpuri Plant (Joint Winner Large Enterprise) |
| Safety | <ul style="list-style-type: none"> • Danfoss Industries Pvt Ltd, Oragadam, Chennai (Winner SME - MNC) • NTF India Pvt Ltd., Gurgaon (Winner SME - Indian) • Alstom Transport India Limited, Coimbatore (Runner-up Large Enterprise) • Crompton Greaves Consumer Electricals Limited, Fans Division-Goa (Winner Large Enterprise) • Tata Motors Ltd, CVBU, Gear Factory, Pune (Editorial Choice: Winner Large Enterprise) |
| Green Manufacturing | <ul style="list-style-type: none"> • Burckhardt Compression India Pvt. Ltd, Pune (Winner SME - MNC) • Supreme Treon Pvt Ltd., Bawal, Haryana (Winner SME - Indian) • Bajaj Auto Ltd, Chakan (Runner-up Large Enterprise) • JK Tyre & Industries Ltd., Chennai (Winner Large Enterprise) |

continued on next page

discussing SUVs with an OEM and it wanted to make clutching efforts of the vehicle easy and efficient for women. In short, ergonomics and efficiency is extremely important and that's what our company focuses on."

Aravind Melligeri, Chairman and CEO, Aequs Inc. was named as Super Entrepreneur 2019. After receiving the award, he expressed his feelings by saying, "Manufacturing is a tough business to do in India. As I started with this business, it had been an eye opener for me because I had not run a business in India before. Kudos to all the entrepreneurs and business leaders in the manufacturing space in the country as they are operating in the challenging situations. Also, I must congratulate The Machinist for organising such an award platform that encourages people in the industry."

Shekar Viswanathan, Vice Chairman and Whole-Time Director, Toyota Kirloskar Motor was bestowed upon Super CEO of 2019 title. Speaking on this occasion, Viswanathan said, "I am truly honoured by

this gesture. When we started our journey in India in 1998-99, our PPM levels were 700+ while the global standards were 10 to 15. Today, the same supply chain in India is challenging 8 PPM. It is a matter of pride to me because Indian workmen, suppliers and managers have achieved this." Speaking about his future plans he mentioned, "For me, competition does not come from other players in the country. For our organisation, the competition comes from our counterparts in other countries. I want to make Toyota Kirloskar Motors biggest in the Toyota world."

Kamal Bali, President & MD, Volvo Group India received the prestigious The Machinist Lifetime Achievement Award 2019. Bali expressed his gratitude by saying, "I am truly humbled and honoured with this recognition. The Indian manufacturing industry is poised for a massive leap because we are putting in right structures in place. Also, as we go forward, the gap between services and manufacturing industry is blurring. With the help of automation, connectivity, IoT, elec-

| | |
|----------------------------------|---|
| Quality | <ul style="list-style-type: none"> Shandong Heavy Industry India Pvt. Ltd., Hinjewadi, Pune (Winner SME - MNC) Precision Camshafts Limited, Machine Shop, Solapur (Winner SME - Indian) Sany Heavy Industry India Pvt. Ltd., Pune (Runner-up Large Enterprise) Hyundai Motor India Ltd (Engine Shop #3), Irunkattukottai, Sriperumbudur (Winner Large Enterprise) |
| Productivity | <ul style="list-style-type: none"> Duravit India Pvt. Ltd., Tarapur, Gujarat (Winner SME - MNC) PPAP Automotive Ltd, Noida, Uttar Pradesh (Plant II) (Winner SME - Indian) Ashok Leyland Limited, Pant Nagar (Runner-up Large Enterprise) Bajaj Auto Ltd, Chakan (Winner Large Enterprise) |
| Supply Chain Management | <ul style="list-style-type: none"> PAAMA Agrico Private Limited, Doddaballapur, Bengaluru (Runner-up SME) Supreme Treon Private Limited, Sanand-1, Ahmedabad, Gujarat (Winner SME) Cummins Technologies India Pvt. Ltd., CTT-Dewas (Joint Winner Large Enterprise) VE Powertrain (A unit of VE Commercial Vehicles Ltd.), Pithampur (Joint Winner Large Enterprise) |
| Human Resources | <ul style="list-style-type: none"> Supreme Nonwoven Industries Pvt Ltd, Bawal, Haryana (Runner-up SME) Highway Industries Limited, Ludhiana, Punjab (Winner SME) Steelcase Asia Pacific Holdings (I) Pvt Ltd, Pune - Chakan (Runner-up Large Enterprise) Eaton Fluid Power Limited, Pimpri (Winner Large Enterprise) |
| CSR | <ul style="list-style-type: none"> Precision Camshafts Limited, Machine Shop, Solapur (Joint Winner SME) Pinnacle Industries Limited, Pithampur, Madhya Pradesh (Joint Winner SME) Bosch Limited, Jaipur (Runner-up Large Enterprise) GE Diesel Locomotive Private Limited, Marhowra, Bihar (Winner Large Enterprise) |
| Super Shopfloor of the Year 2019 | <ul style="list-style-type: none"> Duravit India Pvt. Ltd., Tarapur, Gujarat (SME - MNC) Precision Camshafts Limited, Machine Shop, Solapur (SME - Indian) Honda Cars India Ltd., Tapukara (Large Enterprises) |



(From L to R) Udit Sheth, Vice Chairman, Setco Automotive Limited (Super Next Generation Leader 2019), Kamal Bali, President & Managing Director, Volvo Group India (Lifetime Achievement Award 2019), Arvind Melligeri, Chairman and CEO, Aequs Inc. (Super Entrepreneur 2019), Shekar Viswanathan, Vice Chairman and Whole-Time Director, Toyota Kirloskar Motor (Super CEO 2019) and Arjun Ranga, Managing Director, N Ranga Rao & Sons (representing Ranga Brothers who won Super Family Leaders 2019 award) at The Machinist Super Shopfloor Awards 2019

tromobility, etc., the manufacturing industry is going to go under paradigm shift. So, you will see more and more women coming into the manufacturing industry.

And naturally, when one half of the population starts contributing towards the industry like other half, you know that change is going to be massive.”

The awards night also saw an interesting panel discussion titled ‘In Conversation with Women Leaders’. Moderated by Editor Niranjana Mudholkar, it discussed the evolving role of women in manufacturing. Bhavana Bindra, VP - Distribution, Cummins Group in India; Jyotsna Sharma, CFO, Bridgestone India Pvt. Ltd.; Manisha Kannur, Executive Director (Strategic Business Planning) Ace Designers; Nirmala Behera Udgata, Executive Director & Head of HR, RSB Group and Dr. Sujatha Narayan, MD, Faiveley Transport, India, were the panellists.

The Machinist Super Shopfloor Awards 2019 was presented by Ace Micromatic Group and was powered by MotulTech India. Forbes & Company with its brand Totem Tools was the Cutting Tools partner while Suresh Indu Laser (SIL) was the Laser Partner. The others who supported the events were – Marposh India as Metrology Partner, Expo Partner for Automotive Manufacturing was Automotive Engineering Show Chennai and Automation Partner was Leuze Electronic. The Machinist Super Shopfloor Awards 2019 was also supported by Associate Partners – igus India, Tyrolit and Warriar Electronics with its brand WEFire. 

By Swati Deshpande

STEADY GROWTH

Kaustubh Shukla, Chief Operating Officer of the Industrial Products Group, Godrej & Boyce says Indian manufacturers in the defence will have steady growth



“Domestic Defence and Aerospace manufacturing present a great outlook for the future and hence we are very enthusiastic about the emerging opportunities and possibilities of sustained growth in the coming years.”

How has been the last year for defence manufacturing industry?

The defence manufacturing industry in India is receiving a lot of attention and experiencing a lot of activity. Policy makers are alive to the need and importance of this industry and are continuously improving the policy framework. All this has resulted in new investments in capital, people and technology and is encouraging new partnerships. The industry is in the early phases and thus will experience rapid growth for the foreseeable long term. Domestic companies are experiencing growth from domestic demand as well as by partnering with global OEMs.

An interesting statistic - according to the Secretary of Defence Production, Indian industry has been doubling the defence exports in the last three years. Three years ago, the total defence export from India was only about Rs. 1,500 crore. Last year, the figure reached Rs. 4,500 crore. This year, by November, we have done Rs. 7,500 crore export, and by March we are going to cross Rs. 10,000 crore. While the numbers are very modest, the rate of growth certainly suggests that domestic defence manufacturing will see very exciting times ahead.

How is India's emphasis on defence manufacturing encouraging your company?

With the Government's emphasis on defence manufacturing, we foresee a definite growth in this sector.

Domestic Defence and Aerospace manufacturing present a great outlook for the future and hence we are very enthusiastic about the emerging opportunities and possibilities of sustained growth in the coming years.

In order to benefit from this, Godrej has developed the required building blocks – required infrastructure, technologies, competencies, people & qualifications and approvals. We also have purchase orders / contracts for long term supplies and are expanding our reach to newer customers and geographies. On the whole we expect very exciting times of sustained growth in this sector.

Can you please tell us about some of the prestigious projects that you are undertaking in the defence sector?

Manufacturing of Air Frame assemblies for the BrahMos project is one of the prestigious projects undertaken by Godrej. We started working on the Air Frame assemblies for the land version missile in 2001 and have delivered more than 100 sets of assemblies till date. We have also won the order for 100 sets of Air Frame assemblies for the air launched version of BrahMos missile for which production has started.

Research & development plays an important role in the manufacturing sector. Tell us about your R&D efforts?

Our R&D has been project-led and application-oriented. One may call it sponsored R&D. We at Godrej have developed hundreds of processes in all fields of manufacturing – forming, fabrication & welding, machining, surface treatments, heat treatments and assembly & testing – for multiple projects, materials, service conditions etc.

Over and above, we also work on developing technologies and capabilities that are futuristic in nature. For example, there is work being done to develop rubber and composites for special applications. However, such pure R&D efforts are a small portion of what we do for developing technologies for projects that are engineered-to-order.

How do you foresee Indian market in the defence manufacturing sector growing in coming five years? How are you preparing yourself to meet this demand?

As mentioned earlier we clearly see that the emphasis by the government to promote domestic Defence production will provide an opportunity for domestic manufacturers. New programmes, purchases by the government, policy to promote indigenous content - offsets policy, and growing realisation amongst global majors on the competitiveness and capabilities of Indian manufacturers will ensure steady growth in this sector.

Based on this assessment we have been steadily growing our volumes. They still remain very modest, but we are focusing in developing capability and competence. Investment for growth will be made in a synchronised manner. 

TAX INCENTIVES TO DEFENCE R&D WILL BOOST THE INDUSTRY

Restoring & strengthening tax incentives for R&D would help encourage investments in technological innovations by MSMEs

The government should allow a minimum of 51 per cent FDI in defence sector without any riders to linkages with ‘modern technology,’ so as to enable international defence companies to exercise adequate control over joint venture companies, intellectual property rights (IPR) and product quality, suggested an ASSOCHAM-BDO joint study.

“The increase in FDI limit will bring in the capital for establishing new facilities and scaling up current facilities while benefitting India through large scale job creation,” noted the study titled, ‘Indian aerospace manufacturing ecosystem,’ conducted by The Associated Chambers of Commerce and Industry of India (ASSOCHAM) jointly with global advisory services firm BDO.

It also said that government must restore and strengthen tax incentives for R&D activities to encourage investments in technological innovations by MSMEs. “This will encourage foreign defence companies to bring best practices and technology to create domestic R&D partners and contribute towards a robust aerospace ecosystem.”

In addition, to boost foreign

investments in aerospace R&D, it should be made as an eligible activity for discharging offset obligations.

Noting that MRO industry, which plays significant role in supporting aerospace domain, has been marred with high tax rates in India and thus has been losing business to facilities abroad, the ASSOCHAM-BDO study recommended rationalising taxation for MRO segment and granting it infrastructure status to attract investments in this space, which would in turn strengthen overall aerospace ecosystem in India.

The study also said that development and transfer of high-end technology is crucial to boost aerospace manufacturing ecosystem. “Government must enable ease of ToT and ensure EoDB for

emerging MSMEs so as to enable them to develop capabilities to be part of global supply chain.”

It further stated that given the industry is extremely capital-intensive, steps towards creating infrastructure and policy environment would propel growth of small and medium enterprises.

The study also impressed upon an urgent need to introduce apprentice programs across universities to boost the availability of skilled manpower at various levels of the aerospace industry. 

Source: ASSOCHAM



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MD
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CEO and Chairman
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Lava Cast set to merge with Setco Automotive

Lava Cast Pvt. Ltd., an integrated automated foundry and fully-machined casting company, is set to merge with its parent company Setco Automotive Ltd. Completion of this imminent merger is expected to take place on the back of Setco group purchasing all the stake owned by Lingotes Especiales S.A. (technology & JV partner) in Lava cast Pvt. Ltd.

The merger would facilitate an increase in business opportunities for Setco Automotive through OEMs, further enabling the purchase of all the supplies under one vendor code. This will also result in an increase of orders from OEM's MHCV and farm-tractor

industries. Additionally, the merger would improve operational efficiency as it would result into efficient buying, economies of scale, reduction in overheads and administrative efficiencies, thereby estimating savings around INR 5 cr per annum.

Commenting on the merger, Harish Sheth, CMD, Setco Automotive, said, "This merger will bring operational efficiencies for our companies and also improve our financial strength, thus ensuring easy availability of finance at competitive rates while contributing to improved cash-flows. It would also help in achieving our target of reaching INR 1000 Crs revenue by FY21 seamlessly."

ZF to acquire 90% of Simi Reality Motion Systems

ZF plans to expand its network of cooperations and investments by acquiring 90 percent of the shares in Simi Reality Motion Systems GmbH. The company and its 35 employees have decades of experience in image-based 3D systems for the recording and analysis of human movement. This knowledge is highly valuable in the development of systems for occupant recognition. These systems are a fundamental element for integrated safety in autonomous driving.

The development of new interior concepts for highly automated or autonomous driving include the potential for new seating positions as the driver can hand over responsibility for driving to the vehicle, either in part or in full. To relax during the journey, for example, in future vehicles, the occupant could move their seat back or tilt the seat further than in current vehicle configurations allow. For occupant protection in these non-conventional seating positions, vehicle systems need to be aware of the size, location and position of the occupant.

"One key to the occupant safety of tomorrow is highly efficient systems for occupant recognition," explains Norbert Kagerer, head of Integrated Safety at ZF. "This is precisely the area in which we would like to become stronger through our investment in Simi Reality Motion Systems, with a view to offering integrated safety systems from a single source."



thyssenkrupp acquires Nashville Machine Elevator

thyssenkrupp Elevator has acquired the Elevator division of Nashville Machine Company. Formerly the exclusive distributor in the Middle Tennessee area for thyssenkrupp Elevator, Nashville Machine Elevator (NME) has 130 employees, all of which will be given the opportunity to join thyssenkrupp.

The office will be integrated into thyssenkrupp as one of its branches in the Southeast, joining sister locations in Knoxville, Chattanooga and Memphis, Tennessee.

"As one of our most trusted distributors, Nashville Machine Elevator has consistently demonstrated an expertise and commitment to thyssenkrupp and our state-of-the-art products and technology," said Steve Wedge, Interim CEO and CFO of thyssenkrupp Elevator North America. "Their strong relationships in the Nashville area coupled with an excellent service, modernization and new installation base makes Nashville Machine and its hard-working employees a perfect fit in the growing thyssenkrupp Elevator family."

Anand Group signs JV with Joyson Safety Systems

Anand Group has announced the formation of a Tri-Party JV to merge the two JVs of Joyson Safety Systems (JSS) in India. KSS Abhishek Safety Systems Private Limited which is a JV of JSS with Abhishek Group is being merged with Takata India Pvt. Ltd. (TIP). TIPL is a JV between Anand Group and JSS. The new Tri Party JV will be called "Joyson Anand Abhishek Safety Systems Private Limited" (JAASS). The merger is subject to approval of the National Company Law Tribunal (NCLT).

Post this merger, JAASS will have four manufacturing facilities in India- 1) Neemrana, Rajasthan; 2) Kancheepuram, Tamil Nadu; 3) Manesar, Haryana and 4) Pune, Maharashtra.

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DRIVING IN NEXT GEN EVs

Two automotive giants are joining hands to develop the next generation electric drive systems.



“The transition to ACES represents the greatest technological shift in the automotive industry in a generation. The pace of change and consumer interest in electrified vehicles is gathering real momentum and it’s essential we work across industry to advance the technologies required to deliver this exciting future.”

Nick Rogers, Jaguar Land Rover Engineering Director

Jaguar Land Rover and BMW Group have confirmed they are joining forces to develop next generation Electric Drive Units (EDUs) in a move that will support the advancement of electrification technologies, a central part of the automotive industry’s transition to an ACES (Autonomous, Connected, Electric, Shared) future.

The strategic collaboration will build on the considerable knowledge and expertise in electrification at both companies. Jaguar Land Rover has demonstrated its leading technical capability in bringing the world’s first premium battery electric SUV to market - the 2019 World Car of the Year, the Jaguar I-PACE, as well

as plug-in hybrid models; and BMW Group bringing vast experience of developing and producing several generations of electric drive units in-house since it launched the BMW i3 in 2013.

Nick Rogers, Jaguar Land Rover Engineering Director said: “The transition to ACES represents the greatest technological shift in the automotive industry in a generation. The pace of change and consumer interest in electrified vehicles is gathering real momentum and it’s essential we work across industry to advance the technologies required to deliver this exciting future.

“We’ve proven we can build world beating electric cars but now we need to scale the technology to support the next generation of Jaguar and Land Rover products. It was clear from discussions with BMW Group that both companies’ requirements for next generation EDUs to support this transition have significant overlap making for a mutually beneficial collaboration.”

The agreement will enable both companies to take advantage of efficiencies arising from shared research and development and production planning as well as economies of scale from joint procurement across the supply chain.

A team of Jaguar Land Rover and BMW Group experts will engineer the EDUs with both partners developing the systems to deliver the specific characteristics required for their respective range of products.

The EDUs will be manufactured by each partner in their own production facilities. For Jaguar Land Rover this will be at its Wolverhampton-based Engine Manufacturing Centre (EMC), which was confirmed as the home for the company’s global EDU production in January of this year. The plant, which employs 1600 people, will be the centre of propulsion system manufacturing offering full flexibility between clean Ingenium petrol and diesel engines and electric units. The EMC will be complemented by the recently announced Battery Assembly Centre at Hams Hall, near Birmingham, in supplying electrified powertrain systems to Jaguar Land Rover’s global vehicle plants. 

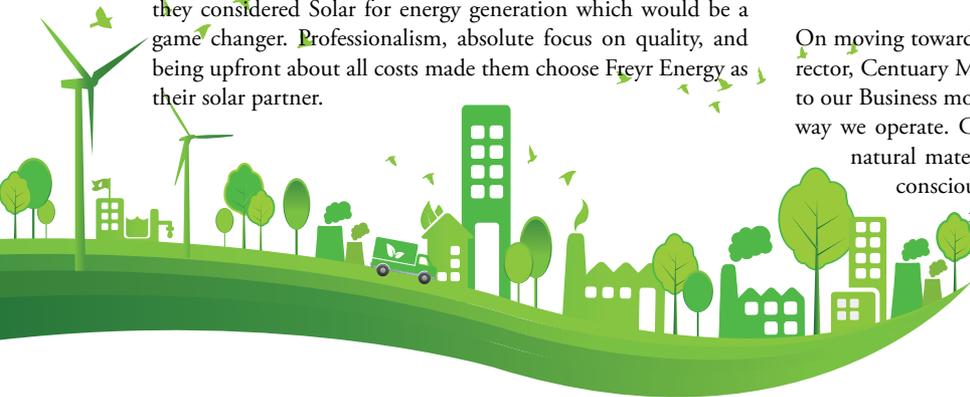
Century Mattresses commissions 240 KW solar system at Kazipally Plant

Century Mattresses has announced the successful commissioning of 240 KW solar system installation at its Kazipally Plant. Freyr Energy, one of India's prominent full-service solar providers, was the preferred partner for this implementation.

While Century's business operations grew and production of mattresses accelerated, the company wanted to make sure that it functions as a responsible business. Thus, they started to scout for solutions that would not only help their plant run effectively but also make them eco-friendly. After assessing a few options, they considered Solar for energy generation which would be a game changer. Professionalism, absolute focus on quality, and being upfront about all costs made them choose Freyr Energy as their solar partner.

After carefully analyzing the energy requirement, costs, savings involved and while keeping the safety risk at minimum, Freyr Energy had commissioned a pilot project of 25KW at Century's Kazipally plant. Subsequent to the successful trial run, an additional 215kW solar power plant was installed in March 2019. With this installation, Century is expected to eliminate approximately 329 tons of greenhouse emissions which would be an equivalent of plant 3,750 trees annually. During the first year, the solar plant at Century would generate around 3.80 lakh kWh of clean power.

On moving towards green energy, Uttam Malani, Executive Director, Century Mattresses said, "Renewable content is integral to our Business model – whether be its products we make or the way we operate. Century has for decades championed use of natural materials such as coir for sleep solutions and has consciously taken this step into renewable energy to further its sustainability quotient. I am positive about the wise choice we have made by partnering with Freyr Energy and look forward to installing solar panels at our other plants too."



Huhtamaki PPL's manufacturing plants go solar



Huhtamaki-PPL Ltd is installing state-of-the-art 1.8 MW rooftop solar power units at six key manufacturing plants across India. The rooftop solar power project will reduce 20 MT of CO2 emissions annually; equivalent to planting about 100,000 trees. All installations are equipped with net metering, online performance monitoring and high-end safety systems and will be operational within the year. The project was carried out in partnership with Swiss headquartered Talesun Energy and EnergyX.

Commenting on the project, Dr Arup Basu, Managing Director, Huhtamaki-PPL said: "This project forms part of our larger environmental sustainability programme that includes reduction of carbon footprint, developing innovative recyclable laminate structures and helping shape a circular economy. It is important for industry players like us to help build awareness amongst consumers that by using flexible packaging, they are being environmentally responsible."

Jaquar Group Bhiwadi unit gets 'Platinum' LEED

Jaquar Group has received the Leadership in Energy and Environmental Design (LEED) Platinum certification for its bath fittings manufacturing facility in Bhiwadi, Rajasthan. The prestigious certification has been conferred by the US Green Building Council (USGBC).

LEED, or Leadership in Energy and Environmental Design, is the most widely used green building rating system in the world. It is a globally recognized symbol of sustainability achievement, denoting proficiency in today's sustainable design, construction and operations standards. The certification received by Jaquar Group's manufacturing facility is in line with the Group's consistent focus on sustainability and innovation.

The Jaquar Group manufacturing unit in Bhiwadi is spread across 35,000 square metre and successfully manufactures 1,25,000 faucets each day. Adhering to global quality certification, the Jaquar Group manufacturing facilities are zero-waste plants, recycling 150,000 litres of water every day and 1200 tonnes of brass recycled every year. Green technology is the guiding force behind the functioning of the plant, which successfully generates 5.4 MW of solar energy.

Rajesh Mehra, Director & Promoter of Jaquar Group said, "It is a mark of great honour for Jaquar Group to receive the Platinum LEED certification by the US Green Building Council (USGBC), the highest mark of quality and efficiency for a green building. This is the second LEED certification received by the Group and therefore reiterates our strong commitment to sustainability."

Airbus Helicopters to establish manufacturing site in Hungary in co-operation with the Government to manufacture high precision parts

Airbus Helicopters and the Hungarian Government have selected the town of Gyula in the Békés County as the site for a new aerospace enterprise in Hungary. Gyula is located in the country's eastern part. The new installation will be built up from scratch and will be the core of an emerging Hungarian aeronautics cluster.

This was announced in Budapest by Bruno Even, CEO of Airbus Helicopters, and Gáspár Maróth, Government Commissioner for national defence industry and defence development and coordination of armament modernization. End of 2018, Airbus Helicopters and Hungary had signed a Memorandum of Agreement to create an industrial cooperation for long term aviation projects.

The purpose of the plant is to manufacture high precision metallic elementary parts for the dynamic systems of helicopters for the complete Airbus product range. The production is expect-



ed to start in 2021. The Hungarian Government plans to establish capabilities for metallic surface treatment and a Hungarian Aerospace Academy to support the new Airbus site by training the future workforce.

The new entity will be a joint venture between Airbus and a Hungarian governmental partner. Airbus will hold the majority of the shares and will operate the plant.

"Hungary offers us the opportunity to implement our industrial strategy based on the specialization of our sites and to set up a greenfield aerospace complex according to the most modern industry requirements" said Bruno Even. "We also can rely on a skilled and well-educated workforce. I'm looking forward to welcoming Hungary as a new member of the global Airbus Helicopters family".

Saab to establish new manufacturing unit in the USA

Saab has announced a new site for advanced manufacturing and production in West Lafayette, Indiana, United States of America. The site will be located at the Purdue University-affiliated Discovery Park District. Saab intends to invest US\$ 37 million over the coming years from 2020.

The initial focus for the site will be aeronautical engineering; producing major structural sections and final assembly of the Saab parts of the T-X advanced jet trainer, developed by Boeing and Saab for the United States Air Force.

Saab has entered into a partnership with the Purdue University, and through this intends to expand its U.S. based Research and Development within possible areas such as sensor systems, artificial intelligence and autonomous systems.

"This is a historic moment for Saab. After careful consideration, we have chosen West Lafayette, thanks to the visionary leadership of both the State of Indiana and the world-leading Purdue University. Today's announcement is a part of our growth strategy in the United States, and deepens our relationship with the U.S. customer. We see great possibilities here for this facility and our partnerships", says Saab President and CEO Håkan Buskhe.

Construction of the new site is expected to begin in 2020. Hiring of local employees will also start during 2020 and Saab will initially create up to 300 new full-time positions for Indiana resident employees at the site. With its North American headquarters in Syracuse, NY, this facility will mean Saab has U.S.-based business units in a total of five states.

SEAT invests EUR 57 mln in its Barcelona factory

The new PXL press installed in SEAT Barcelona involved an investment of just over 31 million euros and it will boost the productivity of this metal press compared to the previous ones thanks to greater automation and manufacturing speed, as well as an advanced robot system. A little over 25 million euros was also invested in two new hot stamping lines that will also help increase efficiency, speed and precision in the production process. In addition to this overall 57 million euro investment, in the past five years SEAT has allocated 6.5 million euros to improving, renovating and modernising the plant.

SEAT Vice-President for Production and Logistics Dr. Christian Vollmer pointed out that "SEAT Barcelona is a key factory for our company and these new facilities will enable us to position it as a technologically strategic plant for SEAT and the Volkswagen Group. The new metal press and the new stamping lines will help us increase our production output a 15%, close to 60 million parts."

The SEAT factory located in Barcelona's Zona Franca began operating in 1953 with the production of the brand's initial models, such as the SEAT 1400 or the 600, the car that put Spain on wheels. In 1993, vehicle production was shifted to the Martorell factory, and since then, the Barcelona facilities have been producing stamped parts such as doors, roofs, mudguards and cross bars. The 80% of the parts for the MQB A0 platform and most of the stamped parts on SEAT models are also made in these facilities. In 2018 alone, more than 52 million parts were made for SEAT, for different Volkswagen Group brands that were exported to 22 factories located in six countries.

By Swati Deshpande

POWER OF MULTIPHYSICS MODEL

Vineet Dravid, Managing Director, COMSOL Multiphysics Pvt. Ltd. says adoption of simulation tools can be seen across spectrum of industries.



“What is also encouraging to see is companies which have consistently been investing in integrating simulation technologies as part of the PLM process have now started seeing results.”

How has been the last year for your company?

We have seen a lot of enthusiasm in the adoption of simulation software across various manufacturing sectors in India. What is also encouraging to see is companies which have consistently been investing in integrating simulation technologies as part of the PLM process have now started seeing results. This has encouraged them to embed simulation deeper into the product design cycle right from the concept stage, a move which will yield even greater returns in the years to come.

Which sectors are driving your growth in India?

We see adoption of simulation tools across a spectrum of industries, since anyone involved in designing products, managing processes and providing engineering consulting can benefit from it. The automotive and aerospace industries are certainly at the forefront.

How do your clients benefit from your software?

COMSOL® has come up with an Application Builder that enables users to create customized user interfaces on top of their own simulation models. These user interfaces are easy to use & can be deployed to designers, who can then run highly accurate simulations without needing expertise to set up complex models, or even without the need to have access to the full software suite.

An automotive giant in India has successfully deployed engineering apps to its design team. This team which earlier did not have access to simulation tools & was reliant on another team to give them physical insights. With the apps, the designers can quickly play around with parameters at the concept stage, and get meaningful insights to help optimize the initial design without waiting for such insights from the CAE team. This also frees up the CAE team's time to focus on hitherto unaddressed problems instead of keeping on iterating on the same problems over and over again. This has helped the company reduce its time to market.

Can you tell us about your latest products?

We have recently launched two products. The first is the COMSOL Compiler™. This allows our users to create .exe file of the COMSOL Models, once they have created a user interface around it. These parametrized applications can then be shared & run by anyone without the need to have a license for the software. You can essentially share the power of a highly accurate multiphysics model at no cost! The second product is the COMSOL Server™ License, CSL, where one can host the above mentioned applications on a server. These applications can then be accessed over the web, without the need for any installation of the software. We also have an Android™ based COMSOL Client available on the Google Play™ store, so simulations can now be run on cell phone too! Apart from this, Multiphysics has always been our forte, and we have recently launched a Composites Module which lets our users perform Multiphysics analyses on composites right from the manufacturing phase to predictive maintenance, and everything in between. 

Successful firing of BrahMos air launched missile from Su-30 MKI Aircraft

IAF successfully fired the BrahMos air version missile from its frontline Su-30 MKI fighter aircraft. The launch from the aircraft was smooth and the missile followed the desired trajectory before directly hitting the land target.

The air launched BrahMos missile is a 2.5 ton supersonic air to surface cruise missile with ranges of close to 300 km, designed and developed by BAPL. The IAF became the first Air Force in the world to have successfully fired an air launched 2.8 Mach surface attack missile of this category on a sea target on 22 Nov 17. Today's was the second such live launch of the weapon. The integration of the weapon on the aircraft was a very complex process involving mechanical, electrical and software modifications on aircraft. The IAF has been involved in the activity from its inception. The software development of the aircraft was undertaken by the IAF engineers while HAL carried out mechanical and electrical modifications on the aircraft. The dedicated and synergistic efforts of the IAF, DRDO, BAPL and HAL have proven the



capability of the nation to undertake such complex integrations.

The firing could be successfully undertaken with dedicated support from Indian Navy by way of ensuring availability of a large number of monitoring ships to ensure range safety clearance.

The BrahMos missile provides Indian Air Force a much desired capability to strike from large stand-off ranges on any target at sea or on land with pinpoint accuracy by day or night and in all weather conditions. The capability of the missile coupled with the superlative performance of the Su-30MKI aircraft gives the IAF the desired strategic reach.

Airbus and Spanish Air Force to develop drone and augmented reality inspections

The Spanish Air Force has become the first air force worldwide to support the development of Airbus' drone and augmented reality-based maintenance inspection services, with the aim of drastically reducing maintenance inspections for large military aircraft and increasing overall fleet availability.



This digital innovation technology will initially be trialled on Spanish Air Force A400M aircraft based at Zaragoza Air Base (31st Wing), with options to extend the technology to other aircraft, including the C295 and the CN235.

General José Luis Pardo Jario, Head of the Spanish Chief of the Air Staff office, said: "This technology has the potential to make a major contribution to maintenance tasks for our fleet. Not only is it more time and cost efficient, above all it allows the upskilling of aircraft maintenance personnel, in accordance with the new digital era we all need to contribute towards in order to reap its benefits."

The technology relies on drones equipped with sensors and high-definition cameras to scan, in a matter of hours and not days, the exterior of an aircraft undergoing a maintenance inspection. A secured connection allows data and information generated to be displayed on tablets and augmented reality glasses, allowing staff to quickly identify and apply maintenance procedures and corrective actions while ensuring all inspection and maintenance procedures are formally and fully recorded on the maintenance log. Not only does this technology reduce the maintenance inspection time, it supports the early detection of defects and helps guarantee quality and post-maintenance airworthiness.

Lockheed Martin and Rafael join hands

Lockheed Martin and Rafael Advanced Defense Systems Ltd. of Israel, signed a teaming agreement to jointly develop, market, manufacture and support Rafael's Smart, Precise Impact and Cost-Effective (SPICE™) guidance kits for U.S. sale.

SPICE is a family of stand-off, autonomous, air-to-surface weapon systems that provide affordable precision in a GPS-denied environment. In use since 2003, SPICE is combat-proven and in service with the Israeli Air Force and several other nations worldwide.

"Access to GPS is becoming increasingly limited in contested environments," said Yuval Miller, executive vice president and general manager of Rafael's Air & C4ISR Division. "SPICE provides a solution to this challenge. Finalizing this exclusive agreement sets the scene for our two companies to provide unmatched mid-range guided air-to-surface weapon systems to enhance mission flexibility and success."

The teaming agreement covers the SPICE 1000 (1,000 pound/453 kilogram weight class) and SPICE 2000 (2,000 pound/907 kilogram weight class) kit variants. Over 60 percent of SPICE is already manufactured in the U.S. in eight states.

Boeing to modernise U.S. Navy's F/A-18 fleet

Boeing has received a one-year contract, which also includes a one-year option for 2020, to continue modernizing the U.S. Navy's F/A-18 fleet under the Service Life Modification (SLM) program. The \$164 million contract for FY19 funds the standup of a second SLM line in San Antonio, Texas, complementary to the line established last year in St. Louis.

"The Service Life Modification program is making great strides as we've already inducted seven Super Hornets into the program, and will deliver the first jet back to the Navy later this year," said Dave Sallenbach, program director. "This program is crucial in helping the Navy with its readiness challenges, and will continue to grow each year with the number of jets we induct."

The San Antonio SLM line is scheduled to receive its first Super Hornet in June, and a total of 23 Super Hornets over the course of this contract. The U.S. Navy fleet consists of more than 550 Super Hornets.

The SLM program extends the life of existing Super Hornets from 6,000 to 10,000 flight hours.



In the early 2020s, Boeing is scheduled to begin installing initial updates to the aircraft that will convert existing Block II Super Hornets to a new Block III configuration.

The Block III conversion will include enhanced network capability, longer range with conformal fuel tanks, an advanced cockpit system, signature improvements and an enhanced communication system. The updates are expected to keep the F/A-18 in active service for decades to come.

Sikorsky receives contract to build 12 CH-53K helicopters

Sikorsky, a Lockheed Martin company will build 12 production CH-53K King Stallion helicopters under a new \$1.13 billion contract from the U.S. Navy. These advanced helicopters are part of the 200 program of record aircraft for the U.S. Marine Corps.

Under the terms of the contract, known as Low Rate Initial Production (LRIP) Lot 2 and 3, Sikorsky will begin deliveries of 12 CH-53K helicopters in 2022, and also provide spares and logistical support. Sikorsky remains committed to continuing to reduce costs over the life of the program. Read the Navy's announcement.

The CH-53K is the only sea-based, long range, heavy-lift helicopter in production and will immediately provide three times the lift capability of its predecessor. The CH-53K will conduct expeditionary heavy-lift transport of armored vehicles, equipment, and personnel to support distributed operations deep inland from a sea-based center of operations. The new CH-53K will have heavy-lift capabilities that exceed all other DoD rotary wing-platforms and it is the only heavy lifter that will remain in production through 2032 and beyond.

IAF's AN-32 aircraft formally certified to operate on indigenous bio-jet fuel

IAF's formidable workhorse, the Russian made AN-32 aircraft was formally fleet certified to fly on blended aviation fuel containing up to 10% of indigenous bio-jet fuel. The approval certificate was received at the aero-engine test facilities at Chandigarh by Air Commodore Sanjiv Ghoratia VSM, Air Officer Commanding, 3 BRD, AF on behalf of the IAF from Mr P Jayapal, Chief Executive CEMILAC.

The IAF has undertaken a series of evaluation tests and trials with this green aviation fuel for the last one year. The scope of these checks was in consonance with the international aviation standards. Today's approval is an acknowledgement of the meticulous testing using the indigenous bio-jet fuel by the IAF.

The indigenous bio-jet fuel was first produced by the CSIR-IIP lab at Dehradun in 2013, but could not be tested or certified for commercial use on aircraft due to lack of test facilities in the civil aviation sector. On 27 July, 2018, Chief of the Air Staff Air Chief Marshal BS Dhanoa PVSM AVSM YSM VM ADC had formally announced IAF's intention to permit the use of all its resources for testing and certifying the indigenous fuel. Since then, IAF's flight test crew and engineers have been evaluating the performance of this fuel against international standards. This is a huge step in promoting the 'Make in India' mission as this bio-fuel would be produced from Tree Borne Oils (TBOs) sourced from tribal areas and farmers, augmenting their income substantially.

By Niranjana Mudholkar

MAKING TECHNOLOGY ACCESSIBLE

A technology company is reaching out to the manufacturing industry by bringing the most advanced solutions at the industry's door steps.



"This is our way of getting closer to the industry and make the most relevant and advanced technology accessible to Indian manufacturers."

Samson Khaou, Managing Director, India, Dassault Systèmes.

With the objective of making advanced technology accessible to Indian manufacturing companies, Dassault Systèmes has launched the 3DEXPERIENCE On Wheels - Connected Factory campaign in Pune. This brings a fully-functional assembly line mounted on a truck showcasing transformational experiences for a smart and connected factory of the future to various manufacturing hubs, industrial corridors, start-up incubators, and academic institutes.

"This is our way of getting closer to the industry and make the most relevant and advanced technology accessible to Indian manufacturers," said Samson Khaou, Managing Director, India, Dassault Systèmes. "India aims at becoming one of the key manufacturing destination by 2020. To achieve this ambition, manufacturers must be more integrated and more agile than ever. With the 3DEXPERIENCE platform, we are leveraging our capacity to help manufacturers in India to reinvent themselves," he added.

The campaign integrates the virtual and the real through a set of experiences for manufacturing opera-

tions management, 3DEXPERIENCE Twin, advanced planning & scheduling, lean management and analytics. While lean management showcases how digital technologies can empower a strong collaboration between operational teams, manufacturing operations management, advanced planning & scheduling and analytics demonstrate the benefits that real-time production monitoring and tracking of key performance metrics can bring to the shopfloor.

Although the solutions presented on the truck were somewhat more inclined towards discreet manufacturing sectors, Guillaume Vendroux, CEO, Delmia, Dassault Systèmes, assured that process sectors are equally important to the company and that it is bringing in relevant technologies for the same. "There is already a huge focus on the food beverages industry. This is definitely one of the key segments for Delmia. We want to continue progressing on this path. We are also making relevant acquisitions in this space. You can expect us to do more on that front."

Khaou, the India MD also shared that this initiative has also highlighted the industry's growing focus on skill development and upgradation. Elaborating on this aspect, KS Lokanatha Reddy, VP - 3DS Business Transformation, India, Dassault Systèmes India Pvt Ltd, said: "We have started working with state governments to take our programme to the student community at a larger level. The purpose is to train not on tools but on industry processes so that the students are ready to be absorbed by the industry. The programme is running successfully in Karnataka and Andhra Pradesh and we are now working with other governments to take it across the country."

Efforts are also being taken to encourage and support start-ups in manufacturing. Sudarshan Mogasale, CEO, 3DPLM (A Dassault Systèmes Company), spoke about the 3DEXPERIENCE lab in this context. "With the 3DEXPERIENCE lab we attract start-ups, who are creating new products. We provide them with our powerful platforms and help in engineering their products so that they can launch. The intention is to foster the start-up eco system. We have started with a lab here in Pune and it is already attracting a lot of start-ups." 

By Vineet Seth

ROLE OF CAM SOFTWARE

It is extremely vital for manufacturing companies to invest in the right CAM software. Here is why.



“CAD/CAM will continue to play, in fact, an even more significant role in the Hybrid manufacturing process.”

A major focus of the CAD/CAM industry, currently, is bridging the gap between subtractive and additive manufacturing. Another area of growing interest is the use of Industrial Robots for applications like milling, tape-laying and laser cutting. Companies like us have already created an ecosystem around the product to help independent players to build innovative products on the programming interface offered by Mastercam.

On the business front, CAD/CAM industry was facing an inevitable consolidation – which started happening post the 2008 slow-down, and continues even today – resulting in many well-known brands merging with others. Obviously, this means that there will be a further consolidation in products and services.

An integrated CAD/CAM system is one, in which various modules, for e.g., Turning, Milling, Mill-Turn, WireEDM, etc., are operational within the same window and within the same interface. In all, an integrated CAD/CAM solution provides a unified interface, which helps boost productivity, reduce training efforts, as well as streamline toolpath generation process.

A full-featured CAD/CAM program like Mastercam can have more than 800 separate functions, each with its own name and icon. Whatever the challenge, there is likely to be a function in the CAD/CAM toolbox that can assist and make the job easier. On the other hand, accessing a particular function from such an expansive tool set can be like searching for a needle in a haystack. A well designed integrated CAD/CAM interface enables features, that users require routinely, and puts them at their fingertips, while making it easy to identify and activate features that are needed less frequently but also boost precision and productivity when they are called for.

A Hybrid manufacturing method is technically more complex than the current method of cutting shapes from blocks of metal. CAD/CAM will continue to play, in fact, an even more significant role in the Hy-

brid manufacturing process. Beginning with designing the near net shape, support structures and 3D build process plan, CAD/CAM software will control the entire process ending with the final shape being cut with codes generated by CAM software, on the near-net shape as input model reference.

The benefits of such processes will be - reducing the carbon foot-print, achieving conformal shapes, reducing machining efforts, reducing material scrap and in light-weighting solutions – to name a few.

ROLE OF CAM IN INDUSTRY 4.0

CAM software will be an active component of the total manufacturing solutions within Industry 4.0 implementation. Various knowledge based inputs will be fed in into the CAM system, thereby allowing the right parameters to be used for the right machine environment. The output too, can be provided to a middle-ware that processes outputs for different machines, for the same component, if need be. Just in time programming could be a possibility provided a closed-loop can be established with machining time, enabling optimisation in the CAM process.

It is vital for manufacturing companies to invest in the right CAM software. A CAM system for complex machining must have the following capabilities -

- Accurately import and/or repair CAD models from various CAD systems.
- Simple to learn & easy to use, yet powerful enough to achieve the most complex task.
- High Speed & High Efficiency Machining Routines
- Multi Axis Strategies with advanced configuration options & Machine simulation
- Speed for toolpath processing, and post processing
- Support for all machine tools & controllers, especially in Post Processing
- Output Gouge/Collision free toolpaths
- Customisable (with API) for advanced and bespoke application development for power users.

Tool utilization factor is of paramount importance, considering that longer the tool life, higher the productivity. Therefore, modern strategies that assist in deriving full tool life are a must in CAM software, than those that are traditional. 

The author is the Managing Director, Mastercam APAC

By Swati Deshpande

OFFERING RELIABLE SOLUTIONS

Rajeev Vaidya, Managing Director, OPEN MIND India believes that CAD/CAM programming will become more automated



“CAD/CAM programming will become more automated, even for 5axis simultaneous machining. Specialized 5-axis strategies will be available to machine complex model features e.g. undercut areas, corner areas with difficult access.”

How has been the last year for your company?

For OPEN MIND the last year was a very successful one worldwide, as we achieved one of our best result ever. This year OPEN MIND is celebrating its 25th anniversary I think this is a very good reason to be even more successful. Worldwide our colleagues love their work, they are passionate, and this is the secret of our success beside our CAM solution hyperMILL.

Which industries are driving the growth of your company in India?

The Indian market is vast with many important and challenging industries. Our CAM solution hyperMILL is applied to a wide variety of industries. It is a modular

and therefore very flexible CAM solution with which NC programs can be conveniently generated for simple and complex components. That is the reason why hyperMILL is successful in use in industries such as aerospace, tool and mould making, in the automotive and in production machining, and in the energy and medical sectors. By having robust solutions that apply to all industries, we perform well no matter the market trends. Aerospace, Defence, Die & Moulds, Medical, Turbomachinery, and other precision engineering are some of the leading industries in India. hyperMILL being one of the leading CAM solutions worldwide offering unique 5-axis strategies as well as powerful 2.5, 3D, 5-axis, mill-turn strategies and unique automation functionalities for all these and more sectors.

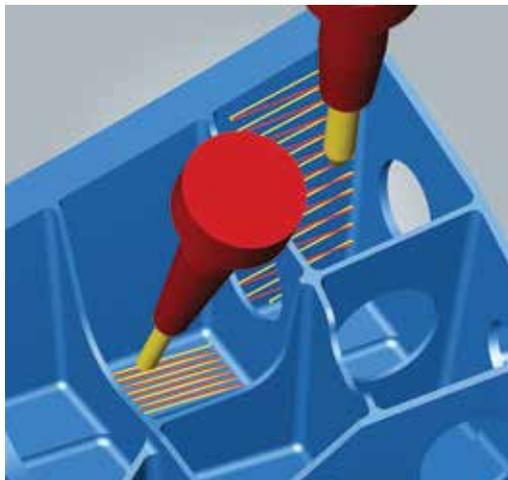
Aerospace manufacturing is gaining momentum in India now. How has it helping your business?

The aerospace industry is gaining more and more importance due to a push by the ‘Make in India’ initiative, by the Government of India. On this backdrop, we were able to increase our presence in the aerospace market further on since last year as Nitin Jain, a specialist in turbomachinery and Aerospace machinery joined OPEN MIND.

hyperMILL has comprehensive high precision and high-performance strategies to save machining time tremendously. For instance, time savings of up to 90 percent can be realized with our innovative finishing strategies and the conical barrel cutter. They are part of our high-performance package hyperMILL MAXX Machining. We are constantly investing in our 5-axis technology to offer more advanced and reliable strategies for the Aerospace and Defence sector. Already a lot of well-known companies in India and abroad from the aerospace industry rely on hyperMILL and its innovative technology

Please tell us about some of your esteemed projects.

Just one example from the aerospace industry - One



of our customers uses hyperMILL smoothly and without any intervention for making wings for the Airbus A350. Our esteemed clients, who use hyperMILL, are spread across industries such as Defence, Research & Development, Aerospace, satellites & space sector, etc. Unfortunately, due to non-disclosure agreements we are not able to share details of such projects.

What are the upcoming trends in the industry?

Automation is a significant trend in the CAM industry these days. The automation of NC-programming

will increase further on. CAD/CAM programming will become more automated, even for 5-axis simultaneous machining. Specialized 5-axis strategies will be available to machine complex model features e.g. undercut areas, corner areas with difficult access.

Additive processing is becoming increasingly important. Particularly relevant is the hybrid production, which works alternately up to the final state of additive and classic subtractive. Both additive and hybrid manufacturing require CAM support and open up another field of innovation. OPEN MIND is very active in additive manufacturing processes based on directed-energy deposition processes.

High efficiency solutions such as hyperMILL MAXX Machining save enormous time and reduce the machine usage to enable increased throughput. Higher performance and enhanced finishing quality during machining processes can be achieved by using new, advanced tool design, adaptive geometries e.g. conical barrel cutter or advanced cooling methods. 

MARUTI SUZUKI TO HARNESS SOLAR POWER FOR MANUFACTURING OF CARS

To commission 5 MW Photovoltaic solar power plant at Gurugram facility

Committed to positively contribute to the environment, Maruti Suzuki India Limited, took an important step to harness solar power to meet its energy needs. The Company recently laid the foundation stone for a 5 MW solar power plant at the Gurugram facility. The captive solar power plant is expected to be commissioned in FY 2019-20

The Company will invest around Rs 240 Million, and will offset CO2 emissions to the tune of over 5390 tonnes annually, for the next 25 years. This is the second grid based solar power plant for Maruti Suzuki. The 1st solar power plant was set up in 2014 at Manesar, with 1 MW capacity. In 2018, this solar power plant was further expanded to 1.3 MW.

The power generated from the solar power plant will be synchronised with the captive power plant to cater to the internal energy needs of the Gurugram



The power generated from the solar power plant will be synchronised with the captive power plant to cater to the internal energy needs of the Gurugram facility

facility. As a unique feature the photovoltaic solar panels of this carport style solar power plant will work as a roof at the new car parking area. While the solar panels generate clean energy, the cars parked underneath will be safe from strong climatic conditions.

Kenichi Ayukawa, MD & CEO, Maruti Suzuki India Limited, said, "Solar energy is abundant, versatile and efficient. This solar power initiative is in line with the Company's philosophy to adopt environment friendly technologies and lower CO2 emissions. Through this solar power plant facility we will harness renewable energy for our business needs

over next 25 years. Maruti Suzuki is committed to expand its environment care initiatives in products, in manufacturing processes and in business operations."

The Company depends on cleaner and renewable sources of energy which form a major share (95%) of its total energy use. The energy requirement at the manufacturing facilities is met by Natural Gas-based captive power plant, supported by grid power. The new solar power plant will complement the power generating capability at the manufacturing plant. 

Source: Maruti Suzuki India Limited

GETTING YOUR CNC GRINDING MACHINE SMART FACTORY READY

Here is how to be future ready!



In the factory of the future, running a factory won't require you to be as hands on with what you produce anymore.

Does moving towards the smart factory mean scrapping your existing CNC grinding machines and having to invest in a whole new set of machinery? Not at all! But it does mean upgrading some of your technology and changing the way you think about how you operate.

CHANGE THE WAY YOU THINK ABOUT TOOL MANUFACTURING

In the factory of the future, running a factory won't require you to be as hands on with what you produce anymore. Instead of a manual production line, you will have an integrated network of machines that is more efficient in manufacturing processes, intellectual prop-

erty generation, tool design, customer responsiveness, cycle time, profitability – and the list goes on. Across your business, automated machines will take care of more of the laborious tasks before work begins.

Don't let the enormity of what you can achieve with a smart factory cause you to stick to what you have always done because it is easier. With a bit of investment to upgrade your existing technology and facilities, you can reap the benefits of automation – dare I say, it's easy.

It is about working with a CNC grinding machine that is smarter. Of course this will need some investment, but it is also about understanding how the new infrastructure will work. The benefit for your team is that instead of needing to manufacture products with manual intervention, your team will be able to program machines ahead of time, so that they are able to do what needs to be done throughout the day. And not only will your CNC machines manage the production, but they'll also collect and analyse data and make automatic adjustments to production in real time to improve the way you're running.

ALL YOUR CNC GRINDING MACHINE NEEDS IS TO BE CONNECTED.

While you will be able to make use of existing CNC machines, it will require you to embrace some new technology. To work effectively with other machines and maximise the benefits of a smart factory each CNC grinding machine will need to be connected to a communication network.

Having a machine connected to a network may seem daunting, but the benefits are unparalleled. Your CNC machine becomes part of a smart, connected set of tools working together to make your work easier.

Depending on the age of your machine, you can connect machines using either WIFI (the best option to avoid messy cabling) or a cabled LAN connection. While newer machines come WIFI enabled, older ma-

chines can be retrofitted with a WIFI adaptor and software drivers. Check with your vendor first to make sure the driver software is supported.

EXPLOIT YOUR NICHE, FINESSE YOUR OFFERING AND CHARGE ACCORDINGLY.

As a small company, you're able to offer a personalised service bigger business can't. You understand your customers' needs. You sell the precise product they need to keep their operation running. They need you as much as you need them.

So being small can be your greatest selling point. You can adapt to the market as it changes and respond to demand. Where potential customers may be frustrated by businesses with long lead times, you have the ability to turn things around quickly and with more flexibility. Customers wanting something you don't manufacture yet can even be an advantage. With the tools and flexibility to make it happen, you can easily expand your offerings and show them how well you understand your niche.



Retrofit with automation, robotic loaders mean lower costs and greater volumes. You can have a new robotic loader at a reasonable price installed into your machine to achieve the benefits of lights out or unattended machine production.

This kind of specialisation is hugely valuable to a business. You're not only providing labour and materials but access to years of knowledge and refinement. It's been shown that customers will pay more for specialised products that offer this level of added value.

EMBRACE AUTOMATION

Most CNC machines, including those that we produce, already come equipped with comprehensive, advanced software that allows flexibility in everything from configuring setup to adaptive processes like product gauging and automatic compensations, freeing your team to work on more valuable tasks.

By creating automated systems and processes, you'll immediately have access to more information than ever before – and this is a huge benefit for you and your customers. Your machines will be able to alert you when you're running low on materials. They will predict maintenance that's required to keep them operating, so you avoid lengthy and expensive disruptions.

Better still, they can become part of a wider network of machines. Integrating with other factories will reinvent your supply chain process. Suddenly, your

factory can integrate with your customers and your machines can speak to one another. Is your customer running out of a product you manufacture? The machine at your end can find out and start the production process without any intervention from you.

MOVE FORWARD ONE STEP AT A TIME

Don't worry – you don't need to do all of this at once and there are easy ways to add automation functionality:

Add after-market software or hardware accessories, such as lasers to measure tools in production and make sure they're meeting required design and tolerances.

Retrofit with automation, robotic loaders mean lower costs and greater volumes. You can have a new robotic loader at a reasonable price installed into your machine to achieve the benefits of lights out or unattended machine production.

Enable machine connectivity on older machines through WIFI adaptor and software drivers to connect machines to each other and the wider factory.

Store tool files centrally with tools and wheel servers. Maintaining a database of each tool file that a machine can use for setup and are a great place to start with software. Your factory can store a whole range of files centrally, so each machine can access what it needs to get the process going.

PLANNING AHEAD FOR FUTURE SUCCESS

This might be brand new for your factory, and there are tricks you will need to learn. For example, did you know that if you're moving jobs between machines, you will need to have the same version of software on each? And again this is an investment but the efficiencies will weigh out the costs in a few months – it is about knowing what will be required to make your factory smart.

If scaled manufacturing is not your background, you might need more information before you scope out your strategy. We can help you understand your specific requirements and help you understand how to incorporate them into your supply chain.

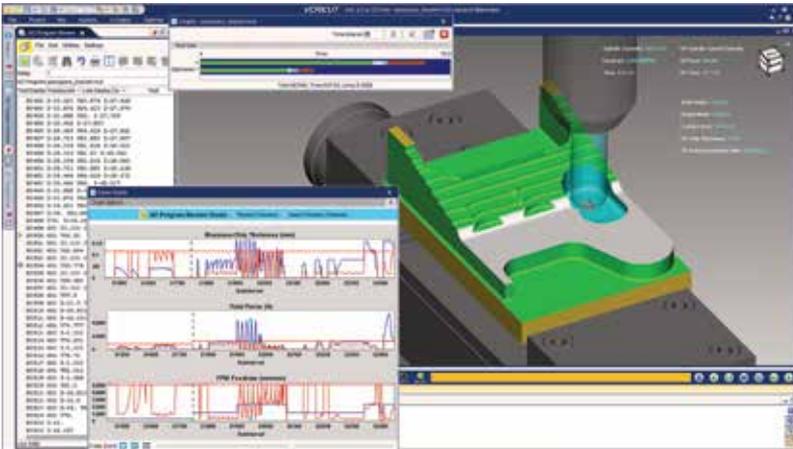
Whatever approach you take, you will need to invest in some degree of technology to keep your machines up to date and your operation functioning effectively. Without this, other companies will move ahead of you as they can produce more complex tools more efficiently.

There are many ways to bring your CNC grinding machines up to speed for your smart factory. The most important thing is that you start. 

Source: ANCA

OPTIMIZATION MODULE TACKLES TOUGH MATERIALS

Here is how the module helps utilizing the cutting tool and the machine tool fully



Most anyone who's worked in a machine shop for any length of time has at some point attended a trade show or machine tool distributor's open house. There they see canned demonstrations of CNC machines busily carving up chunks of brass, mild steel, or aluminium into business card holders and tic-tac-toe games. While these giveaways are fun stuff, wouldn't it be refreshing to see some real parts being machined, preferably from a difficult-to-machine material?

That's what took place at the Okuma Winter Showcase, an annual event the machine builder hosts for 600+ attendees. At the event, attendees were treated to more than two-dozen CNC machine tools under power, most of them making chips. These included an MU-8000V LASER EX super multitasker with laser metal deposition and the GENOS M460V-5AX, a trunnion-style, five-axis vertical machining center offering high productivity, a small footprint, and a surprisingly low-price tag.

There was also an LB3000 EX-II lathe with bar-feed vibration detection, a MULTUS B300II turn-mill

center with collaborative robot part handling, MA-500HII horizontal and MCR-A5CII double-column machining centers, and a MULTUS U3000 multitasking machine.

An impressive line-up, to be sure, but there was one demo that had a large number of show attendees talking, even those responsible for setting it up. "It was pretty cool to see, especially when you consider that we were cutting titanium, a very hard and difficult-to-machine material," says Okuma Applications Engineer Lee Johnston.

He's talking about CGTech's Force, a physics-based NC program optimization module that works within the company's VERICUT toolpath simulation software.

Working with representatives from CGTech & Sandvik Coromant, Johnston programmed a Ti-6Al-4V titanium bracket being made for an aerospace customer, then optimized its toolpaths with VERICUT Force.

"We had the same demo on two vises and ran them side-by-side, one with the standard program and one that was optimized," said Johnston. "We reduced cycle time from an hour to just under 40 minutes, and you could also hear and see the difference in how the tools were cutting and tell that the optimized program was easier on the machine. This is probably the best thing to happen to programming since trochoidal toolpaths."

VERICUT Product Specialist Pete Haas explained that Force works by analyzing the NC toolpath, evaluating the changing cutting conditions, and increasing or decreasing the feed rate to achieve the ideal chip thickness for any given material. Compared to CAM systems and online machining calculators, which attempt to determine average chip thickness and base the feed rate on that, Force calculates the optimal feed rate for every single line of machining code.

"As an example, think about driving to work each



morning,” Haas said. “You encounter straight sections, curves, and sharp turns, and have to slow down or speed up depending on the road conditions. Machining also involves constantly changing conditions, but some CAM systems don’t account for this. They generate a single feed rate that may be too aggressive on tight turns and too slow on the straightaways. Force, on the other hand, uses physics to calculate cut-by-cut throughout the changing conditions and determine the optimal feed rates.”

The result, according to Haas, is greatly reduced cycle time, improved tool life, better part quality, and less wear and tear on CNC machine tools. It works on any material and any machine, and can even be used on legacy programs.

Johnston wasn’t the only one surprised by Force’s capabilities. Even CGTech Technical Support Engineer Chris Davala—someone with 20 years of experience as a machinist and programmer who now works with VERICUT customers across the country—said the demo was an eye opener. “To be honest, I was a little skeptical,” he said. “This was my first hands-on experience with the product, and it’s not that I didn’t have faith in the people who developed it, but there were some bold claims made about the potential gains. I can truly say that, after seeing Force in action, it’s made a believer out of me.”

That’s an easy thing to say for someone employed by the product’s developer. But Sandvik Coromant MTS specialist Richard Howard, who worked alongside Davala and Johnston setting up the demo, backs it up. He supplied the cutting tools and toolholders used for the demo and specified the initial machining parameters.

“As a tooling specialist, I am extremely impressed with how ‘spot on’ the Force software is,” he said. “CGTech has done an amazing job of optimizing programs while taking into consideration tooling geometries and resulting loads. Anyone interested in higher efficiency and prolonging tool life should look into this.” Anyone familiar with Okuma machine technology might consider Force unnecessary. That’s because the OSP control offers advanced features such as Machining Navi, SERVONAVI, Super-NURBS, and adaptive

machining technology. How can a third-party software package make a top-notch machine tool perform even better? There are several answers:

Force has the ability to break up the NC code into smaller bites, adjusting feed rates to maximize chip thickness and keep it constant.

Its optimization capabilities are proactive, not reactive, so everyone knows what to expect before pushing the cycle start button.

Performance issues are clearly identified up front, and the programmer can examine the Force Charts that illustrate projected cutting forces, chip thickness, feed rates, tool deflection and more.

For new materials, new machine tools and cutters, or even new programmers, Force eliminates the guesswork that would otherwise occur.

The result is an NC program that’s both safer and more predictable, with low risk of tool breakage or scrapped parts. Operators have more confidence. Lights-out machining is performed with confidence. Profit margins are improved. And Force-optimized toolpaths “save a great deal of time during roughing,” says Sandvik’s Howard. Parts are machined faster and cutting tools last longer.

Haas summed it up like this: “Force charts provides NC programmers with useful information they never had before. They can quickly and easily visualize what’s happening cut-by-cut as the tool moves through the material, and it’s now possible to visualize excessive forces, inefficient cutting parameters, metal removal rate, power consumption, torque, and tool deflection. Force charts also expose cutting condition improvement opportunities. With one click on the Force chart, the user is taken to the exact location in the program and to the graphical review window for further analysis. The end result is full utilization of the cutting tool and the machine tool.”

Okuma’s Lee Johnston agreed. “At the event we were cutting titanium and saw significant improvement, but I think Force is just as suitable for machining easier materials like aluminium, and for other general purpose work. I look forward to using it on future projects.” 

Source: CG Tech

CUTTING MORE THAN JUST METAL

As the aerospace industry works with new materials and new processes, new tools emerge to machine them.



ISCAR PCD LINE



SOLID CARBIDE LINE

range of advanced cutting tools that are specifically designed for the efficient work of CFRP and composite materials. These progressive products provide our customers with very effective manufacturing solutions related to these challenging materials. ISCAR - cutting more than just metal.

Over the past three decades, composite materials, plastics, ceramics and the myriad of materials covered by the term CFRP have been the dominant emerging materials. Composite materials continue to re-

lentlessly penetrate and conquer new markets and the number of applications for these materials continues to grow. Now, modern composite materials constitute a significant proportion of the engineered materials market and are used in applications from everyday products to more sophisticated niche areas.

Industrial leaders, such as the automotive, aerospace and power industries lead the way.

For example, modern commercial-sized turbines typically use three-bladed designs. These blades are manufactured from fiberglass reinforced polyester with an epoxy resin binder. New materials, such as carbon fiber, are continually being introduced, which provide the high strength-to-weight ratio needed for these large wind turbine blades. Now, the length of a typical turbine blade used on 5 MW machines can reach 60 meters.

“For many applications, its high strength to weight ratio makes CFRP the preferred material in the global aerospace and automotive industries”.

Composite materials are increasingly being used in all aspects of our daily life; such as in sports equipment, cars, motorcycles, consumer goods and health care products. An example of use within the medical field is the new method used for the reconstruction of large or complex-formed cranial bone defects. In this

For many applications, its high strength to weight ratio makes CFRP the preferred material in the global aerospace and automotive industries.

Global manufacturers and technologists are constantly searching for production improvements and investigating the use of different kinds of materials to make their products more attractive to the market. To achieve these aims in a rapidly changing world, all concerned need to be more flexible and willing to embrace change.

The use of a growing number of non-metallic materials is now rapidly increasing and many applications previously considered to be the domain of more traditional materials are now manufactured from non-metallic materials. The use of composite materials and CFRP is now relatively common and the market share of these materials continues to grow.

As one of the leading companies involved in the metal cutting industry, ISCAR ensures that its prolific R&D department continues to innovate and develop a



SUMOCHAM



area, prefabricated, computer-generated, individual CFRP (carbon fiber reinforced plastics) medical grade implants are now used.

It is vitally important for the world's manufacturers and technologist, involved in almost every industry, to be prepared for the new requirements of the market and be flexible enough to find new applications for CFRP and composite materials.

As one of the leading producers of cutting tools for the metalworking industry, ISCAR boasts a wide range of high-preforming, precision engineering polycrystalline diamond (PCD) and Cubic Boron Nitride (CBN) tipped tools. ISCAR also has a variety of advanced diamond coated Solid Carbide tools with a range of geometries to meet the most exacting demands of today's metal wood, CFRP and composite material industries. These products include; inserts, countersinks, ball mills and mills, profile cutters and combined drills, step reamers and a drill with countersinks. Also, our highly experienced engineering team welcomes requests for "specials" tools for the machining of any kind of material.

PCDs are in increasing demand for more efficient machining of modern materials, such as non-ferrous metals, plastics, composite material (graphite) and other hard-to-cut or abrasive materials. CBN tools are required to machine hardened steels above HRC 45, cast iron, super alloys and other specific metals. "High quality tools increase productivity and save production costs". ISCAR R&D resources are committed to helping solve the problem of machining these complex materials are huge, and a significant amount of money is continually being spent on developing an even wider range of solutions.

The machining of materials which are currently used for advanced types of aircraft demands new processes as these difficult materials are lightweight, yet very strong. The tooling commonly used for machining CFRP features long-lasting diamond PCD inserts, vain PCD milling tools or brazed mandrel tools.

When machining composite such as CFRP, there are virtually no chips created. Instead, the material removal mechanism might be better described as 'shattering'. The impact of the cutting edge fractures the hard

carbon fibers, rather than shearing material away. This process causes considerable abrasion to the tool's cutting edge, leading to rapid wear. In composite machining, as well as any other cutting tool application, tool geometry drives cutting performance. However, in the area of composites, tool material also becomes a major driver of performance. Unless the tool's edge material is able to withstand high levels of abrasion well enough to hold its geometry and stay sharp, the tool can wear so quickly that the geometry can change rapidly. In order to successfully machine CFRP, ISCAR has developed hard, sharp solid-carbide tools which are coated with long-lasting diamonds.

The diamond coating used is commonly a polycrystalline diamond (PCD) coating. However, a diamond coating applied by the chemical vapor deposition (CVD) process is the only coating that utilizes 100% real diamond crystals. A major advantage of CVD diamond coating is that it reduces the heat and friction created by the highly abrasive composite material.

Although the machining operations required for composite parts may be simple (sometimes only drilling and trimming), the fixtures designed to support these often complex parts can represent small feats of engineering in themselves. Thus, the fixture for machining a composite part can be a considerable engineering investment. Clean cutting without fraying, delamination or otherwise separation of material layers requires the part to be firmly secured against vibration.

ISCAR's high-quality, precise PCD and CBN tipped and diamond coated tools reduce users production costs and improves the quality of manufactured products. Considerably improved performance on CFRP and composite materials is guaranteed when compared to the use of comparative Tungsten Carbide tools. Also, higher precision and excellent surface finish characteristics are achieved.

ISCAR is known throughout the industrialized world for excellent customer service, quality of products and cost-effective price, not just in the area of metal machining, but also in the field of CFRP and composite working. 

Source: ISCAR

END-TO-END, INTELLIGENT AND ADAPTABLE SUITE OF APPLICATIONS

Delivers operational safety and business intelligence using IoT, video, AI and analytics



SMART SPACES INNOVATION IS A FOCUS AREA FOR US AS WE CONTINUE TO SEE A DEMAND TO USE NEW AND DIVERSE SOURCES OF DATA BLENDED WITH MORE TRADITIONAL DATA TO GAIN RICH INSIGHTS

BRAD SURAK, CHIEF PRODUCT AND STRATEGY OFFICER, HITACHI VANTARA

Hitachi Vantara recently introduced Lumada Video Insights, an end-to-end, intelligent and adaptable suite of applications that delivers operational safety and business intelligence using internet of things (IoT), video, artificial intelligence (AI) and analytics. Lumada Video Insights is an integral part of Hitachi Vantara's DataOps strategy, which redefines data management for the AI era by seamlessly connecting data consumers with data creators to rapidly monetize customers' data.

Lumada Video Insights brings together Hitachi's video offerings for smart spaces with new technology updates, innovations and integrations into Hitachi's

Lumada portfolio. The solution complements and extends the Lumada platform and services ecosystem with expanded AI, computer vision, advanced analytics, data integration and orchestration capabilities to help enterprise and industrial customers accelerate their IoT initiatives and cultivate their own smart spaces and ecosystems.

With multiple customer success stories and increasing demand, Lumada Video Insights demonstrates significant momentum in the emerging smart spaces industry. And when put together with DataOps, it unlocks new opportunities for customers to maximize the value of the vast amounts of data collected as IoT disrupts numerous industries worldwide.

According to Gartner, Inc., "A smart space is a physical or digital environment in which humans and technology-enabled systems interact in increasingly open, connected, coordinated and intelligent ecosystems. Multiple elements — including people, processes, services and things — come together in a smart space to create a more immersive, interactive and automated experience for a target set of personas or industry scenarios.

This trend has been

coalescing for some time around elements such as smart cities, digital workplaces, smart homes and connected factories. Gartner believes the market is entering a period of accelerated delivery of robust smart spaces, with technology becoming an integral part of our daily lives, whether as employees, customers, consumers, community members or citizens. AI-related trends, the expansion of IoT-connected edge devices, the development of digital twins of things and organizations, and the maturing of blockchain offer increasing opportunities to drive more connected, coordinated and intelligent solutions across target environments."

"Smart spaces innovation is a focus area for Hitachi Vantara as we continue to see a demand to use new and diverse sources of data blended with more traditional data to gain rich insights," said Brad Surak, chief product and strategy officer at Hitachi Vantara. "With Lumada Video Insights and our focus on DataOps, we are excited to expand our work with public and private organizations to transform how retail, government and transportation use data-driven intelligence to innovate and achieve greater outcomes."

Source: Hitachi Vantara

UPDATE

SECOND SOCIAL ALPHA ENERGY CHALLENGE LAUNCHED

Tata Trusts and Social Alpha announce the launch of the second edition of Social Alpha Energy Challenge 2.0 (SAEC 2.0) to find disruptive, innovative and impactful technology blueprints and prototypes across the energy value chain. SAEC 2.0 is looking for individuals, institutions and start-ups with clean energy technology innovations that have the potential to address the issues of energy poverty, energy access and climate change, scale across locations as well as business model sustainability. Successful applicants will be expected to

demonstrate impactful science and technology innovations with an underlying focus on affordability, accessibility and user-experience. The Challenge will focus on finding solutions across areas but not limited to household, farm, industry, transport, building, infrastructure and utilities.

Up to 20 innovations will be selected and will be incubated by the Clean Energy International Incubation Centre (CEIIC). CEIIC, Social Alpha's deep-tech Energy Innovation Lab, is the joint initiative of the Government of India and Tata Trusts.

GUIDE DATA, ENERGY, FLUIDS AND AIR IN A VERY TIGHT SPACE WITH IGUS

With the smart micro flizz energy supply system, cables and hoses move reliably at high speeds



INTEGRATED “SIDE WINGS” HOLD THE CHAIN FIRMLY IN THE STRETCHED CONDITION AT ALL TIMES IN A SPECIAL GROOVE IN THE UPPER AND LOWER PART OF THE CHANNEL. TOGETHER WITH PLASTIC SPRINGS ON THE CROSSBARS OF THE E-CHAIN, THEY PROVIDE A SOFT AND QUIET ROLLING. THIS MEANS THE FRICTION, WEAR, ENERGY CONSUMPTION AND NOISE DEVELOPMENT ARE REDUCED SIGNIFICANTLY.

Guiding data and media in the tightest of spaces at high speeds is a major challenge for many users, for example in intralogistics. With the micro flizz, igus offers a compact energy supply system for travels up to 100 metres. It consists of an energy chain, flexible chainflex cables for tight bend radii and an aluminium guide channel. The micro flizz can now also be used with the new smart CFD system. This monitors the data transmission characteristics of the cable in advance and promptly warns of a failure.

Narrow compact spaces and fast movement in lanes, such as in storage and retrieval units, are common usage scenarios for busbar systems. Their big disadvantage: they can normally only be used for energy transmission. In order to be able to supply not only energy but also data, fluids and air simultaneously in the horizontal and vertical directions, igus has developed the micro flizz energy supply system. With this, travel speeds up to 6 m/s and accelerations up to 4 m/s² are possible. The micro flizz consists of a plastic energy chain that travels in an aluminium channel. In addition to highly flexible chainflex control, data and motor cables for tight bend radii, the energy chain can also guide hoses as well as fibre optic cable with data rates of up to 10 GBit/s. Thanks to extensive testing in the in-house 2,750 square metre test laboratory, igus provides a guaranteed service life of 36 months on all chainflex cables. If the user wants to monitor the transmission characteristics of his used bus cable, igus now offers the option of using the intelligent CFD system in the micro flizz. The smart plastics innovation detects changes to the transmission characteristics of the cable in advance and provides timely information

about an essential replacement. Therefore maintenance is planned in advance and an unexpected shutdown is avoided.

Modular and easy to clean system

The main advantage of the micro flizz, in addition to the optional intelligent monitoring, is its special construction. Integrated “side wings” hold the chain firmly in the stretched condition at all times in a special groove in the upper and lower part of the channel. Together with plastic springs on the crossbars of the e-chain, they provide a soft and quiet rolling. This means the friction, wear, energy consumption and noise development are reduced significantly. Another advantage: Thanks to its modular design, the system is easily accessible and therefore easy to clean. Therefore, the use of the micro flizz is also ideal in the field of pharmacy and food production. The energy chain system is available in three different sizes depending on the diameter of the cables.

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GRIPPER FOR SMALL COMPONENTS

For the production of small parts, there is often an enormous margin pressure. This is why over engineering should be consistently avoided in systems engineering, especially due to the fact that a lot of systems are only used temporarily. In order to expand the scope for designers within the SCHUNK gripper portfolio, the competence leader for gripping systems and clamping technology is therefore expanding its range of grippers for small components with an attractively priced basic gripper for simple applications. The pneumatically controlled SCHUNK MPC offers an attractive price/performance ratio whilst at the same time ensuring excellent performance and



attractive construction size staggering, which covers a wide range of applications in assembly automation and for automation in plastics processing. The quickly available basic gripper in SCHUNK quality is available in six sizes between 16 N and 270 N, and maximum jaw strokes between 2.5 mm and 15 mm. Even the smallest size with a weight of only 50 g, allows handling of components weighing up to 80 g. At the top end of the size scale, part weights of up to 1.3 kg are possible. The repeat

accuracy amounts to 0.02 mm. Despite the entry level price, the warranty is 12 months or 7 million cycles. The gripper is rounded off by the newly developed and also attractively priced SCHUNK J02 magnetic switch, meaning solutions from a single source are possible. For applications with higher requirements when it comes to cycle times, precision, and service life, SCHUNK also recommends the proven universal SCHUNK MPG-plus gripper for small components or the mechatronic SCHUNK EGP.

For more information, contact:
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EMAG WINS THE AXIA BEST MANAGED COMPANIES AWARD

Strategic vision, capacity to innovate, sustainable management culture and good corporate governance—the “Axia Best Managed Companies Award” sets expectations high for participating businesses. This year, the organizers have awarded the distinction to the EMAG Group. A speaker at the award ceremony pointed out that the innovative mechanical engineering company has contributed to securing Germany’s economic future and serves as a model for others. The event took place in Düsseldorf, Germany, at the beginning of May.

Small and medium-sized enterprises (SMEs) are essential to the German economy: For instance, they generate more than half the added value and provide nearly 60 percent of all jobs, according to recent data from the German Federal Ministry of Economics. This includes many hidden champions that have advanced to become global market leaders in their industry, such as EMAG: The Group is one of the few makers of manufacturing systems that can cover the entire process chain from soft machining to hard machining. The company produces complete process chains for automotive manufacturing, as well as, for the non-automotive sector. Over the past couple of decades, EMAG has succeeded in systematically expanding its expertise and tapping into new markets—an achievement that has now been recognized by the “Axia Best Managed Companies Award.”

There are a variety of examples that demonstrate what the catch phrase “capacity to innovate” means to EMAG: For instance, the company invests in the development of new production solutions that are crucial for the production of tomorrow’s products, such as electric cars, and it is also working on the digitalization of its machines with its “Industry 4.0”



solutions. “We are very pleased to receive the recognition that comes with the ‘Axia Best Managed Companies Award.’ The distinction confirms the work we have been doing over the past few years and also is an incentive to keep making progress,” explains Claus Mai, CFO for the EMAG Group. “However, this does not change our goals in any way: With our custom-fit innovations, we help our customers manufacture their products faster, more precisely and more efficiently. This is where digitalization, for example, opens up entirely new opportunities that we will not miss.”

Source: EMAG GmbH & Co.KG



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