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ULTIMATE GUIDE TO PROFITABLE MANUFACTURING

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It will be worth the wait!

"It cannot get worse than this", a CEO told me during an off-the-record discussion recently. "In fact, things have already started getting better. We just need that extra push and a few things to fall in place. And if we get a robust budget then we can actually dream of getting back to the 2006-2007 numbers," he added.

If we look at the last two years, one cannot deny that a lot of good ground work has already been done by the present Government at the centre. It is likely that the upcoming Union Budget could actually prove to be the trigger to re-start the economy. Our team's conversations at the recently held Imtex Forming trade show have also been pointing towards the beginning of a slow but sure revival.

"MORE THAN 90 PERCENT OF THE TOP MANAGEMENT REPRESENTATIVES THAT WE HAVE INTERACTED WITH RECENTLY HAVE SHARED THAT THEIR RESPECTIVE ORGANISATIONS HAVE STARTED DOING GOOD BUSINESS IN THE PAST COUPLE OF MONTHS OR SO."

More than 90 percent of the top management representatives that we have interacted with recently have shared that their respective organisations have started doing good business in the past couple of months or so. Of course, there were also a few exceptions but overall the mood is quite upbeat.

Importantly, there is also strong data available in the form of the Nikkei India Manufacturing Purchasing Managers' Index (PMI), which indicates that things will only be getting better now. According to the PMI statistics, the month of January 2016 has seen the Indian manufacturing sector bounce back to growth. And it is hoped that this will be the beginning of a new season of boom for the industry. Well, we are keeping our fingers crossed!

Editor & Chief Community Officer

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PM launches Start-up India movement; Rs10,000 crore dedicated as funding

PRIME MINISTER NARENDRA MODI has launched the Start-up India initiative recently. He said that when he had launched the Start-up India Initiative on 15th August, the announcement had virtually gone unnoticed, but today it had registered with people. He said successful start-ups are usually created by those who are driven by an idea, or an urge to solve a problem that people face. He said making money is not the primary objective, but is often a by-product. The Prime Minister said he wishes to

turn the youth of India from job-seekers to job-creators. He said a dedicated Start-up fund worth Rs. 10,000 crore will be created for funding of Start-ups. Start-ups will be exempted from paying income tax on their profit for the first three years. The Government is working on a simple exit policy for Start-ups. The PM also said the Government is working towards fast-tracking of Start-up patent applications. He announced an eighty percent exemption in patent fee for Start-up businesses, and said a self-certification based compliance system for Start-ups would be introduced for nine labour and environment laws.

Toshiba T&D steps up its 'Make in India' drive

TOSHIBA Transmission & Distribution Systems (India) Pvt. Ltd. (TTDI) has announced the completion of a major 3-billion Yen investment (approx. US$30-million) at its Hyderabad factory, that has boosted production capacity for transformers up by 50 percent, and established a new line for production of 'New Technology' switchgears like Gas Insulated Switchgears and Solid Insulated Switchgears.

The expansion will allow TTDI to meet growing demand in India and globally. The Company will use the new line to start production of Ultra High Voltage transformers up to 1200kV, and will also improve manufacturing and operating efficiency of distribution transformers. The new line for Gas-insulated switchgear will also accomplish the anticipated demand growth in this product, especially in urban areas. "The comprehensive upgradation and expansion is as per our strategy of securing a 20 percent share of the Indian T&D market in the coming years. We will also reinforce TTDI as a core T&D production base for other major markets, including Europe, ASEAN, and Africa," Dr. Katsutoshi Toda, CMD, TTDI said.

Amara Raja to invest Rs5000 cr in Andhra Pradesh

THE AMARA RAJA GROUP (ARG) and the Government of Andhra Pradesh (GoAP) have recently signed a MoU for direct investment in Andhra Pradesh in the fields of Electronics, Energy storage, Automobile Components, IT & Telecom Components, Food Processing, Infrastructure and Services. This was announced at the 22nd CII Partnership Summit & first Sunrise Andhra Pradesh Investment held in Visakhapatnam in January. Under the MoU, ARG and GoAP have committed to an investment of about Rs.5,000 crore, expected to generate approximately 10,000 new jobs over a period of 2-3 years directly, and 20,000 jobs indirectly. Signing the agreement, Dr. Ramachandra Naidu Galla, Chairman, Amara Raja Group, welcomed mutual cooperation for facilitating investments in Andhra Pradesh.

Saint-Gobain inaugurates Rs200 crore research centre

SAINT-GOBAIN Research India's (SGRI) recently inaugurated its new cross-functional Research Centre in Chennai. While SGRI's primary objective is to support Saint-Gobain's existing businesses in India and the region, it will also pave the way for developing new businesses for the region. SGRI will achieve this through developing, maintaining and nurturing transversal competencies, building partnerships with India's premier academic institutions and establishing key linkages with Saint-Gobain's global Research Centres. With an investment of about Rs200 crore, the new Research Centre is spread over 120,000 sq. ft. It will focus on developing innovative and sustainable solutions for Saint-Gobain's existing businesses and will enable the Group to accelerate its growth in the region. Unique to this Centre will be its focus new competencies that will enable it to develop sustainable habitat solutions for hot and humid climates.

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ElectroMech supplies its 5000th crane to Gamesa

ELECTROMECH Material Handling Systems India Pvt. Ltd. achieved a new milestone by manufacturing the 5000th crane – 150 MT Gantry Crane. The landmark 5000th crane was handed over to Gamesa Renewable Energy Pvt. Ltd. After in-depth study of material handling needs of Gamesa, ElectroMech customised an outdoor DG Gantry Crane with a unique feature of 360 degree rotating motorized hook that is suitable to withstand extreme climatic conditions. Tushar Mehendale, MD, ElectroMech said, "Offering tailor-made material handling solutions of international standards to our customers has been our forte, and our constant endeavour is to bring new and innovative solutions to the market." Speaking about the relation between Gamesa and ElectroMech, N. Ravichandran, Executive Vice President of Gamesa said "We chose ElectroMech for our current requirement for a simple reason that the company offers flexibility in taking and executing highly customized orders. What differentiates ElectroMech's offerings is the adaptability of the product and the after sales service."

Messung enters testing & measuring equipment biz

MESSUNG GROUP and Erfi GmbH have announced their exclusive distribution agreement for India. Messung will be an exclusive distributor for the entire range of Erfi products in India. The partnership will focus on providing innovative measuring and testing solutions to diverse electronic industries in the Indian market. Messung in association with Erfi will provide German made precision equipment for testing, measuring and work place systems. Farook Merchant, CMD, Messung Group, said: "Our vision is to provide technologically advanced products and solutions to our clients, and change the outlook of the testing and measuring industry in India, including work place systems." added Merchant. The Messung-Erfi partnership will focus on sectors such as educational institutes, electronic manufacturing, pharma, automobile, consumer durables and wound products.

SKF India announces solar mission

SKF INDIA has announced its solar mission with the inauguration of one of the largest rooftop solar installations among manufacturing companies in Pune, with 1 MW capacity. The launch is a part of SKF India's ongoing solar mission across all major facilities in India. The Pune factory installation is expected to generate 1.5 GwH units per annum. This initiative is expected to reduce the facility's CO2 emissions by approximately 1200 metric tons p.a. SKF plans to install similar rooftop solar plants at other major facilities across India. Shishir Joshipura, MD & Country Head, SKF India Ltd said, "Our solar mission is a reflection of our commitment to the ongoing sustainability programs and aligns with India's National Solar Mission."

International Solar Alliance HQ to be in India

INDIAN PRIME MINISTER NARENDRA MODI, and the President of France François Hollande, jointly laid the foundation stone of the International Solar Alliance (ISA) Headquarters and inaugurated the interim Secretariat of the ISA in National Institute of Solar Energy (NISE), Gwalpahari, Gurgaon recently. Government of India has dedicated 5 acre land in NISE campus for the ISA HQ and also has contributed Rs175 crore for ISA corpus fund and for meeting expenses for initial five years. ISA is part of the PM's vision to bring clean and affordable energy within the reach of all and create a sustainable world. It will be a new beginning for accelerating development and deployment of solar energy for achieving universal energy access and energy security. Modi stated that ISA will be India's first international and inter-governmental organization headquartered in India.

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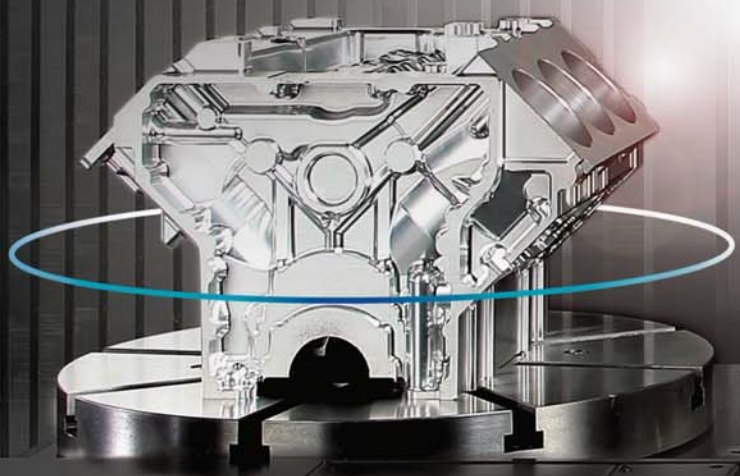

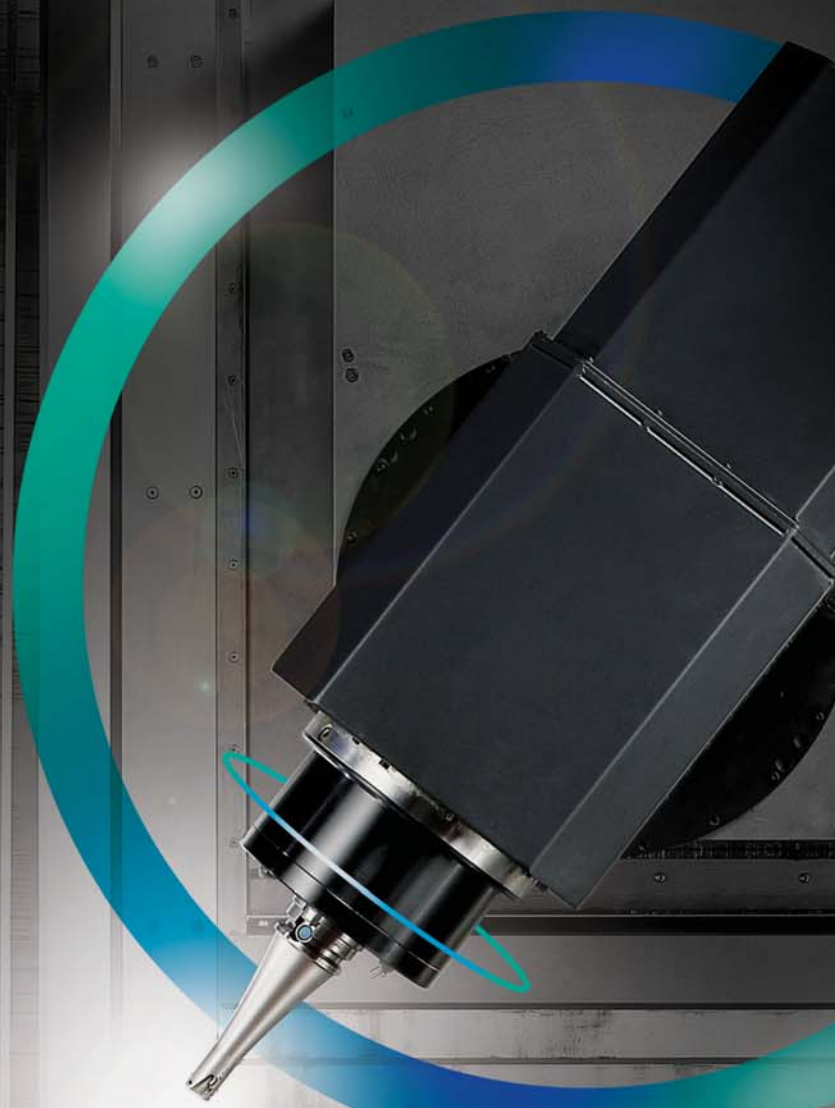

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A list of key events happening between March 2016 to April 2017, both nationally and internationally.

Grindex International 2016
March 3-5, 2016,
Mumbai
www.grindexpo.in

MODEX 2016
April 4-7, 2016,
Atlanta (USA)
http://www.modexshow.com/

Hannover Messe 2016
April 25 to 29, 2016,
Hannover (Germany)
www.hannovermesse.de/home

Rapid 2016
May 16-19, 2016
Orlando, Florida (US)
http://www.rapid3devent.com/

CeMAT 2016
May 31-June 3, 2016,
Hannover (Germany)
http://www.cemat.de/home

AMTEX 2016
July 8-11, 2016,
New Delhi
http://www.amtex-expo.com/

IMTS 2016
September 12 - 17, 2016,
Chicago (US)
www.imts.com

MINExpo International
September 26-28, 2016,
Las Vegas (USA)
http://www.minexpo.com/

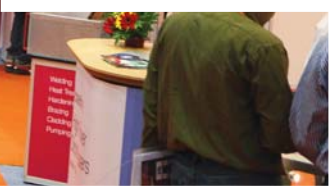
India International Textile Machinery Exhibition 2016
December 3-8, 2016,
Mumbai
http://itme2016.india-itme.com/

BAUMA CONEXPO India 2016
December 12-15, 2016,
New Delhi
http://www.bcindia.com/

ACMA Automechanika New Delhi 2017
March 21-24, 2017
New Delhi, India
http://acma-automechanika-newdelhi.in.messefrankfurt.com/newdelhi/en/exhibitors/welcome.html

ProMat 2017
April 3-6, 2017
Chicago, US
http://www.promatshow.com/

DIEMOULD India – 2016
April 6-9, 2016
Bangalore
www.diemouldindia.org



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HANS VAN BYLEN TO SUCCEED KASPER RORSTED AS HENKEL CEO

Henkel has announced that CEO Kasper Rorsted, who will leave the company at his own request as of April 30, 2016. Effective May 1, 2016, Hans Van Bylen has been appointed as his successor. His successful career at Henkel started in 1984 and he serves as member of the Management Board since 2005, responsible for the Beauty Care business. The appointment to CEO already in spring will enable him to leading the development of the new strategy which Henkel will announce at the end of this year and driving its successful execution.

"With the appointment of Hans Van Bylen as new CEO we have named a strong successor to the CEO position at an early time – as it is common practice at Henkel. Hans Van Bylen is an excellent choice as he has long-standing, international experience in managing brands and markets as well as a Management Board member at Henkel. On behalf of our governance committees and employees I wish Hans Van Bylen all the best and much success in his new role", said Dr. Simone Bagel-Trah, Chairwoman of the Supervisory Board and the Shareholders' Committee. "We have strong brands and technologies, leading positions in many markets and categories around the world and a strong innovation power. Building on this foundation, together, we will successfully lead Henkel into the future", said Hans Van Bylen.

HARMAN APPOINTS PRADEEP CHAUDHRY AS COUNTRY MANAGER OF INDIA OPERATIONS

HARMAN has announced that Pradeep Chaudhry has been appointed Country Manager for its India operations, effective January 1, 2016. Based in Bengaluru, India, Chaudhry will also continue to serve in his current role as CFO of the HARMAN Connected Services division. Chaudhry succeeds M. Lakshmi Narayan, who will serve as an Advisory Chairman until December 2016.

In his new role, Pradeep will be responsible for all of HARMAN's Sales, Marketing, R&D and Engineering operations in the country. With more than 7,500 employees, India is now home to HARMAN's largest concentration of software engineers and designers, focused on developing innovative systems and solutions that leverage cloud, data and analytics to advance the connected car, connected enterprise and connected lifestyle.

Pradeep will report to Dinesh C. Paliwal, Chairman, President and Chief Executive Officer of HARMAN on country management matters and to Sandy Rowland, HARMAN's Chief Financial Officer, in his role as CFO of that division.

"Pradeep's extensive experience in managing the financial and operational structure of multinational technology companies will be of great value to HARMAN as we continue to expand our presence in India," said Paliwal.

TATA MOTORS APPOINTS GUENTER BUTSCHEK AS CEO AND MD

Tata Motors has appointed Guenter Butschek as Chief Executive Officer & Managing Director. zutschek will lead all operations of Tata Motors in India and in international markets including South Korea, Thailand, Indonesia and South Africa. Jaguar Land Rover would continue to be managed by its chief executive officer and director, Dr Ralf Speth, who is also on the board of Tata Motors. Butschek joins Tata Motors after his last assignment at Airbus Group where he served as chief operating officer at Airbus and member of the group executive committee. Prior to Airbus, Butschek worked at Daimler AG for more than 25 years in the international automotive management, leading functions like production, industrialisation and procurement. The last role he held was president and chief executive officer of Beijing Benz Automotive Co. Ltd., a joint venture between Daimler AG and Beijing Automotive Industrial Holding in Beijing, China.

Butschek, 55, graduated in business administration and economics with a diploma from the University of Cooperative Education Stuttgart, Germany. He brings broad functional and general management skills, and wide international experience to his new role at Tata Motors.

Cyrus P Mistry, Chairman, Tata Motors, said, "I am confident that Mr Butschek's ability to lead high performing teams will enable our company to achieve sustainable, profitable growth."

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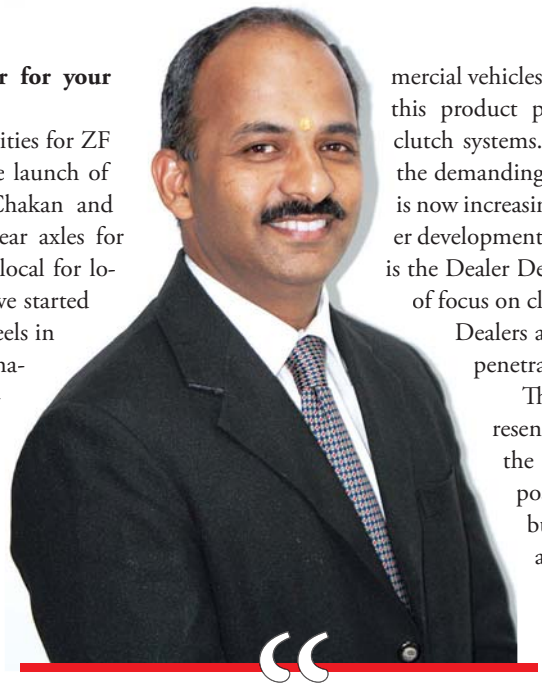
We hope to explore newer verticals and establish India as premium sourcing hub globally, says **Suresh KV**, Country Head of ZF in India and Head of ZF India Pvt. Ltd.

By Niranjan Mudholkar



How was the last one year for your company?

The past year saw a flurry of activities for ZF in India, the highlights being the launch of our multi product facility in Chakan and Chennai facility for front and rear axles for passenger cars. Our intention of local for local was further reinforced when we started manufacturing Dual Mass Flywheels in the second half of 2015 at our Chakan facility. Also with the acquisition of TRW, ZF has joined the top 3 in the global automotive supplier industry and thereby supplements its competency portfolio as well as its worldwide market presence in order to serve the global and local megatrends better.

In the aftermarket space, ZF strengthened its network and extended its product offerings in the automotive and the non-automotive segments. We introduced high performance transmissions, followed by chassis components both for commercial vehicles and passenger cars. We have enhanced this product portfolio by launching passenger car clutch systems. These are specially designed to meet the demanding driving conditions. The business unit is now increasing its focus further on market and dealer development. One of the initiatives in this direction is the Dealer Development, wherein we have put a lot of focus on close collaborations with our authorized Dealers and Services Partners for better market penetration and customer support.

The Industrial Technology Division represented by the Windpower technology and the Off-Highway Systems also saw some positive developments. The Windpower business unit which offers gearboxes saw a strong growth of +25 percent yoy. Advanced discussions with OEMs in the Off-Highway Systems provide a promising growth moment for a segment that saw turbulent times in the last year.

> "India is considered as a prime destination for low cost products. ZF plans on coupling the same with high end, innovative and futuristic manufacturing technology so as to meet the highest quality standards while justifying the expenses."

What is your outlook for the automotive industry in 2016?

With rapid globalisation and constant innovation, the auto sector is growing by leaps and bounds. We are constantly on the move- from electric cars to next-gen hybrid vehicles. This growth trajectory is set to continue in the coming year. After a rather fruitful year, we welcome the coming year and all the challenges and opportunities it brings. Over the years, ZF was successful in localising high technology products in India and this year on, we will focus on the 'Make-in-India' theme and source quality products for our global portfolio. We also hope to explore newer verticals and opportunities and establish India as premium sourcing hub globally. The integration of ZF & TRW will also be a major activity in the next 2-3 years.

How well positioned is ZF in India to leverage on the coming growth?

India is considered as a prime destination for low cost products. ZF plans on coupling the same with high end, innovative and futuristic manufacturing technology so as to meet

Expectations from the Union Budget 2016

For years the manufacturing sector has been hoping for a revival and with the advent of the 'Make in India' program, the sector has started seeing progress. A significant increase in demand has been witnessed in the auto industry. This year's budget should pave way for further growth of this sector. Companies in the auto industry are looking to source innovative and the necessary technology and raw materials required to meet the ever increasing demand and we hope this year's budget will allow us to attract investment for the same. Additionally, reformation in a few bills is expected to simplify the process of taxation and documentation for the current and upcoming projects. Overall, the government has been working tirelessly to develop the manufacturing sector and hence we hope that this year's budget will bear good tidings for us.

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the highest quality standards while justifying the expenses. Over the years, ZF has been working very closely with all its suppliers and its engineers in Germany to deliver superior products and services to the Indian market and have been successful in localising many of the products already.

ZF is well prepared for the future mega trends that we have been observing: from increasing fuel efficiency & reduction of CO2 emission, lightweight designs, electrification and networking to autonomous driving. Many of these megatrends are already being served by ZF with its production ready technology and for other ZF's R&D teams from across the globe has provided with concepts and studies which will be tried and tested as we continue to evolve.

We are looking at the possibility of engineering in India to adapt global products to the Indian market to improve our competitiveness and presence.

"We are looking at the possibility of engineering in India to adapt global products to the Indian market to improve our competitiveness and presence."

Which will be the key focus areas for you in 2016?

We have major plans for 2016. While we continue our association with our existing clients, we plan to strengthen our overall presence in this country. Enhancing our partnership with present clients, our key focus segments this year would be Passenger Cars, Commercial Vehicles and the Off Highway segments.

Tell us about your R&D activities.

In order to continue to be successful with innovative products, ZF annually invests about 5 percent of its sales (2014: around €890 million) in research and development

In India, ZF has the application engineering team for chassis systems and off highway segment. The country has a great advantage when it comes to its engineering base and cost advantage. The readily available strong technical as well as managerial talent has established India as a very attractive R&D destination. ZF is also one of the top 10 patent leaders in Germany with about 700 patents successfully filed in 2013. Our philosophy is to constantly evolve and innovate keeping the global mega trends as the epicentre. We are also exploring possibilities of setting up a development center for supporting our R&D initiatives.

Do you also export from India?

This country has tremendous potential and opportunities for the manufacturing and auto industry. Being one of the fastest growing economies in the world owing to its large size and enormous talent, India provides this sector a challenge to constantly innovate and produce the best quality of products. The Indian auto components suppliers are reliable and have great technological capabilities; hence the products are of superior quality with a good turnaround time. Realising this, we at ZF have decided to source quality products from India for our global product portfolio.

Any plans to expand the existing portfolio?

We have recently launched our passenger car clutch systems designed to meet demanding driving conditions in India. We have signed up with some of the biggest domestic OEMs and are in talks with several others for possible partnerships in the near future. We will be closely monitoring the response to this product and take next steps.

Government's increased safety norms have worked as a catalyst for companies to pay special attention to safety systems. ZF has been ahead of its times with regards to safety of its products as the company understands that dense traffic and high speed characterizes everyday life on roads. Additionally, not only road safety but ZF is particular about environmental norms in India. Compliance and enforcement programs by the Government of India aims to ensure that, even after a period of use, vehicle emissions of criteria pollutants are met. ZF's strategy is to grow from bringing advanced technology to India and develop products in India for India which would tackle these issues and provide sustainable products. We are exploring possibilities in the area of truck chassis components.

Tell us about your key clients?

ZF is associated with all the major OEMs in both automotive and non-automotive space.

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Dongfeng Renault opens first plant in china, to make the Kadjar SUV

On February 1, 2016, Carlos Ghosn, Chairman and Chief Executive Officer of Groupe Renault, and Zhu Yanfeng, Chairman of Dongfeng Group, opened the Dongfeng Renault Automotive Company (DRAC) plant in Wuhan, Hubei Province. Just two years after the joint venture was formed, the first DRAC plant in China will start producing the Renault Kadjar, Renault's latest SUV. The Renault brand is taking on a new dimension in China with a plant which complies with the highest quality standards for vehicle production and a sales and marketing offensive in the fastest-growing segment. The facility, located in Wuhan, in Hubei Province, is a Greenfield plant built in just two years. The facility includes a vehicle assembly plant, a powertrain plant and an R&D Centre to adapt our products to our customers' requirements. It will have an initial production capacity of 150,000 vehicles per year which has the potential to be doubled to 300,000 vehicles. The first vehicle to be manufactured at the plant is the Renault Kadjar, an SUV with racing genes. The car has been fitted with some different equipment compared to the Kadjar released in Europe in 2015. The SUV segment accounts for 30 percent of the Chinese market and is the fastest-growing segment, increasing by 53 percent in 2015.

Carlos Ghosn, Chairman and Chief Executive Officer of Groupe Renault, and Zhu Yanfeng, Chairman of Dongfeng Group at the opening ceremony.

Daihatsu to be a wholly-owned subsidiary of Toyota

Toyota Motor Corporation (Toyota) and its subsidiary Daihatsu Motor Co., Ltd. (Daihatsu) have reached an agreement whereby Daihatsu will become a wholly-owned subsidiary of Toyota by way of a share exchange (expected to be completed in August 2016). The purpose of the agreement is to develop of ever-better cars by adopting a unified strategy for the small car segment, under which both companies will be free to focus on their core competencies. Ultimately, this will help Daihatsu and Toyota to attain their joint goal of achieving sustainable growth. Additionally, the aim of the share exchange is to enhance the value of both brands. Although Toyota and Daihatsu will engage in friendly competition and maintain separate management styles that capitalize on their respective capabilities, bringing the two together under a shared strategy will enable them to jointly overcome otherwise prohibitive obstacles in the future, including resource-intensive undertakings such as the development of next-generation technologies and entry into business areas with growth potential.

MHI Machine Tool & Fuji Oozx to integrate auto engine valve business

Mitsubishi Heavy Industries Machine Tool Co., Ltd. (hereinafter referred to as "MAT"), a Group company of Mitsubishi Heavy Industries, Ltd. (MHI), and Fuji Oozx Inc. have recently agreed to integrate their automobile engine valve businesses. In addition to integrating its hollow-head valve production facilities into the joint venture company, MAT will also transfer its solid valve business to Fuji Oozx. Through the integration of their businesses, the two companies aim to strengthen product diversification and expand business scale. The new company, tentatively named 'Fuji Hollow Valves, Inc.', will be established in February as a wholly-owned subsidiary of Fuji Oozx, and later succeed both MAT's hollow-head valve business and Fuji Oozx's hollow-stem valve business. The joint venture will further develop hollow engine valve technologies and knowhow accumulated by the two parent companies, and will manufacture both hollow-head and hollow-stem valves.

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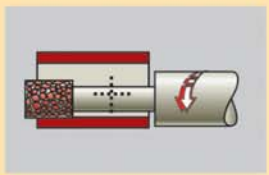

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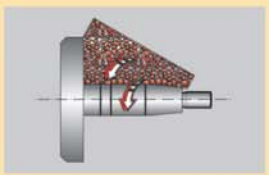

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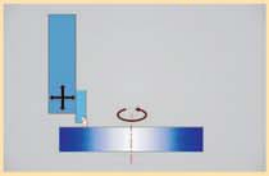

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Audi production network: ready for electric mobility

Audi is preparing its international production network for the mobility of the future. Large series production of the first purely electric driven SUV from Audi will begin at the site in Brussels in 2018. The plant will also produce its own batteries. The company will transfer production of the Audi A1 from Belgium to Martorell in Spain. The Audi Q3, which is currently produced in Spain, will be built in Győr (Hungary) in the future. The model rotation will benefit all the sites of Audi's global production network. "The new model distribution will enhance our production efficiency and strengthen all of the sites involved," stated Rupert Stadler, Chairman of the Board of Management of AUDI AG. "It will allow us to utilize further synergies within the Volkswagen Group and to bundle key competencies." The model decisions protect jobs and promote the internationalization of the production network. As of 2018, Audi Brussels will exclusively produce the first battery-electric SUV from the brand with the Four Rings for the world market. The Audi e-tron quattro concept study that was presented at the Frankfurt Motor Show in 2015 provides a clear indication of the final production version.

WABCO launches budget parts brand ProVia

WABCO has launched a budget spare parts range to be marketed under the brand name ProVia. ProVia helps workshops and fleet operators serving the commercial vehicle industry to bridge the gap between low-end budget parts which can often fall short of quality and reliability expectations and the higher investment required for premium level aftermarket parts for trucks, buses, and trailers. Marketed with the brand promise "There is so much more in every box," ProVia budget spare parts are specifically engineered with a no-frills design that meets reliable performance standards without compromise on quality or safety, according to a Company statement. ProVia currently features a portfolio of more than 40 individual products in four of the aftermarket's most popular replacement categories. By the end of 2017, ProVia is projected to feature budget part alternatives for more than 25 additional product categories for commercial vehicles worldwide, including air dryers, cartridges and pressure limiting valves.

Scion brand to transition to the Toyota brand

Scion, established as a separate brand in 2003 as a laboratory to explore new products and processes to attract youth customers, is now transitioning back to the Toyota brand. Scion achieved its goals of developing unique products and processes, and bringing in new, younger customers to Toyota. With more than a million cars sold, 70 percent of Scions were purchased by customers new to Toyota and 50 percent were under 35 years old.

"This isn't a step backward for Scion; it's a leap forward for Toyota. Scion has allowed us to fast track ideas that would have been challenging to test through the Toyota network," said Jim Lentz, founding vice president of Scion and now CEO, Toyota Motor North America. "I was there when we established Scion and our goal was to make Toyota and our dealers stronger by learning how to better attract and engage young customers. I'm very proud because that's exactly what we have accomplished."

Rolls-Royce Motor Cars introduces the Ghost 'Eternal Love' collection to the China market

Rolls-Royce Motor Cars has debuted Ghost 'Eternal Love' recently at the Minsheng Art Museum in Beijing. Embodying the theme of love, the new bespoke collection is exclusively designed for the China market, coupling modern design elements inspired by the white swan with remarkable Rolls-Royce craftsmanship and cutting-edge technology. Leon Li, Director of Rolls-Royce Motor Cars China, explained the significance of the latest design, "The Ghost 'Eternal Love' demonstrates to our customers the unparalleled creativity of the Rolls-Royce Motor Cars Bespoke team while it meets the needs of our customers for exclusive personalisation. Embodied in this latest masterpiece is the emotional inheritance of the Rolls-Royce brand, a representation of our undying passion for creating the best cars in the world."

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GM launches personal mobility brand Maven in US

General Motors has recently announced its next step in redefining personal mobility with a new car-sharing service called Maven, which combines and expands the company's multiple programs under one single brand. Maven's mission is to give customers access to highly personalized, on-demand mobility services. The global Maven team includes more than 40 dedicated employees from the connected car technology industry as well as ride- and car-sharing professionals from Google, Zipcar and Sidecar. "GM is at the forefront of redefining the future of personal mobility," said GM President Dan Ammann. "With the launch of our car-sharing service through Maven, the strategic alliance with ride-sharing company Lyft, and building on our decades of leadership in vehicle connectivity through OnStar, we are uniquely positioned to provide the high level of personalized mobility services our customers expect today and in the future." Maven is expanding its offerings in multiple cities and communities across the U.S. Services are customized to regional customer needs and include city, residential, peer-to-peer and campus programs. Maven customers will experience seamless smartphone and keyless integration with the vehicle. Maven customers use its app to search for and reserve a vehicle by location or car type and unlock the vehicle with their smartphone.

Continental to localize safety technologies in India

With increasing awareness and acceptance of safety technologies in vehicles, India is emerging as a focus market for airbags, Anti-lock Brake Systems (ABS) and Electronic Stability Control (ESC). The Chassis & Safety Division of international automotive supplier Continental will start within 2016 the production of ABS and ESC units in India. A new assembly line for ABS and ESC for passenger cars and later ABS for two-wheelers will be located in the existing Continental Automotive Brake Systems plant in Gurgaon, Haryana. The local production start of the Electronic Control Unit (ECU) is planned for the year 2018 in Bangalore. The company targeting the delivery of its first localized ABS/ESC products for India to a leading vehicle manufacturer, by end of 2016. "The Indian market is one of the world's largest markets for compact cars and two-wheelers. By producing these systems in the market for the market, we are matching our portfolio to the requirements of our local customers, while keeping our technologies affordable", said Felix Bietenbeck, Head of Continental's business unit Vehicle Dynamics. "India tops the list of nations in total number of road fatalities. The widespread use of ABS, airbags and ESC in vehicles can contribute considerably to reducing the number of serious injuries and fatalities on Indian roads", said Claude d'Gama Rose, Managing Director, Continental Automotive Components India. "With decades of experience in this area, Continental offers a portfolio of high performance, advanced products which can contribute to greater road safety," he added.

Passenger car ABS and ESC will be produced locally at the Continental Automotive Brake Systems plant in Gurgaon, Haryana

Pricol targets revenue of Rs3000 crore by 2020

Pricol Limited, a leading manufacturer of automotive components for the global market, today unveiled its new brand identity. This new identity reflects its core values and strategic focus in its businesses for India and global markets. The logo demonstrates the value and the commitment Pricol brings to its four significant stakeholders viz., Customers, Employees, Suppliers and Shareholders. The logo also depicts the four stakeholders working in convergence creating value for each other. Pricol has set a target of doubling its consolidated revenue globally by 2020. The company has strengthened its leadership pipeline to deliver enhanced efficiency and effectiveness, and aligned infrastructure to support this growth. "Our new corporate identity showcases Pricol as an Innovative, evolving global automotive component maker with a track record of 40 years of customer service with a Passion to Excel in every product and service that we provide," said Vikram Mohan, Managing Director, Pricol Limited.

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Magna expands in China with new engineering center in Shanghai

Magna International Inc. has recently announced that it is growing its footprint in China, with the establishment of a new seating engineering center in the Xuhui District of Shanghai. The newly established engineering center will help Magna match the pace of growth in the world's largest automotive market. The new location, which will include a seating testing lab and prototype shop, will employ approximately 60 people initially, but is expected to increase employment to more than 100 at full capacity. "Opening a technical center in China is a reinforcement of our commitment to our customers as they are looking for innovation and technology breakthroughs in the local market," said Mike Bisson, President of Magna Seating. "This center will help us stay in tune with local industry expectations and trends so that we can continue to deliver the most innovative seating solutions to the market."

BMW JV opens new engine plant in China, to produce latest gen petrol engines

BMW Brilliance Automotive (BBA) opened a new engine plant with a light metal foundry in Shenyang recently. The new location will produce the latest generation of the BMW TwinPower Turbo three and four-cylinder petrol engines and forms part of the BBA production network based in Shenyang in Northeastern China. BBA is a long-standing joint venture between the BMW Group and Brilliance China Automotive Holdings Ltd. A total of around 2,000 BBA employees will work at the engine plant over the long term. Oliver Zipse, member of the Board of Management of BMW AG, Production, stated during the opening ceremony: "This is another milestone in the history of our joint venture and further confirms the success of our cooperation. The new, groundbreaking engine plant, complete with a light metal foundry, will play an important role within the BMW Group's worldwide production network. It forms part of our strategy for globally balanced growth with production capacity in the respective regional markets." Yumin Qi, Chairman of Brilliance China Automotive Holdings Ltd., expressed his gratitude: "During the last years BBA has made considerable progress and set up an excellent, state-of-the-art production location in Shenyang. With these facilities we are able to deepen our presence in the Chinese market and to continue our success. We do appreciate the great achievements of BBA as well as the good cooperation with our partner BMW Group."

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'Chinese' Formula for Success

Construction equipment manufacturer Sany has been growing exceedingly well in India in the recent times. **Deepak Garg,** Director & Chief Executive Officer, Sany Heavy Industry India Pvt. Ltd. shares the secret behind this success story.

By Niranjan Mudholkar

Many years back when the Sany Group - one of China's largest industrial manufacturing organisations - started its global foray, India was its first international venture. More than the geographical proximity, it was the potential in the Indian market that prompted the Group to come to India in 2002 with Sany Heavy Industry India Pvt. Ltd. In 2009, the Company inaugurated its 80-acre manufacturing plant in Chakan, Maharashtra with an investment of US$ 100 million. In the last 14 years of business presence, including six years of local manufacturing, the Company has steadily become a key player in the infrastructure equipment sector in the country. And in October 2015, the Sany Group signed the Green Energy Commitment towards development of 2000 mega watt of renewable energy projects with investments of US$ 3 Billion (Rs.20,000 crore) for the period 2016-20. It is in this background that your Editor visited Sany India's manufacturing facility at Chakan.

The first question was obviously about the recent focus on the renewable energy segment. But before answering the question, Deepak Garg, Director & Chief Executive Officer, Sany Heavy Industry India Pvt. Ltd. has a counter question - "How did you find our facility?" My response is obviously based on the two-hour quick tour done in the morning. "I am impressed. Advanced manufacturing equipment, nice implementation of lean principles and excellent house-keeping. More importantly, it gives the impression that you are here for the long-term."

Garg smiles at the answer and acknowledges the appreciation. "Yes, you are right. We are here for the long-run. And in fact, the recent announcement related to the renewable sector is also a reflection of our commitment to the Indian market." Garg, whose business card says that he is also the CEO for Sany South Asia, says that Sany wants to contribute to India's vision of achieving 175 GW power by 2020. "Since the Sany Group has good capabilities in the renewable segment, we felt that it would be a good platform for us to contribute to the growth of renewables in India. That's why we decided to have 2000 mega watt of renewable energy projects in India – with a focus on the wind energy segment. And Sany India will surely provide a platform for this business in India," he says.

Phenomenal growth

Now, we turn to the business that he is directly responsible for – construction equipment (CE). The last few years haven't been good for the CE industry in India due to the slump in the infrastructure sector. While the sentiments have improved quite positively since the present government has taken charge, a lot more is required on the ground. How has it been for Sany India? "Well, it is a known fact that infrastructure sector hasn't been doing well for a long time in India. Off late, in the last three to four months the market has improved a little. Things are a little better now. The market numbers are also improving. For us, the growth has been quite phenomenal. In the Sany India manufactured products, we have grown almost 70 percent last year."

And the reasons for this significant growth (which has obviously come on a small base)? "Firstly, we have improved our distributor network. We have added five dealers in some of the regions where we did not have them earlier. Secondly, we have also focussed on some of the key regions to get a good market share. Thirdly, we have focussed on our own manufacturing while maintaining quality levels which are – I would say – above industry levels. All this has actually driven lot of growth for Sany India last year," Garg answers.

Customer perception

The general perception about Chinese companies is still shrouded in suspicion. How has Sany India dealt with the issue? "It has taken time. There is no magic wand to change perception of customers anywhere in the world. I personally interact with the customers, the dealers and my team. From

About Sany India

Sany Heavy Industry India Pvt Ltd (Sany India) is a wholly owned subsidiary of Sany Heavy Industry Co Ltd which has its global headquarters in Beijing, China. This was the first big Chinese investment in Maharashtra and also the first overseas investment for the Sany Group. Sany's Pune plant has a built up area of around 63,588 m2 and is Sany Group's first overseas facility with comprehensive integration of research and development, manufacturing, sales, service and logistics. Sany globally spends five percent of its revenue back to R&D. The facility also has a state of the art global training center where trainees are trained by simulators. Sany India, with its head office in Chakan near Pune, is supported by seven regional offices and nine branch offices spread across the country.

these three major stakeholders, I never hear a complaint about the product quality. My customers tell me that my product is far superior and that's what gives me the confidence. Last year, more than 30 percent customers have come back to us for repeat purchases!"

Garg points out that these customers have previously owned other products as well. "Let me tell you, that in our segment, the customers are pretty mature these days. That also gives us the confidence that these people have found our machines more advantages for their business. Our dealers, who had tough times in 2013 and early 2014, started making some profits in late 2014 and in 2015. I believe that profit is the net result. What drives the business is their confidence in the product. Today, they are confident about the superiority of the product for the customers' requirement."

> "Firstly, we have improved our distributor network. Secondly, we have also focussed on some of the key regions to get a good market share. Thirdly, we have focussed on our own manufacturing while maintaining quality levels which are – I would say – above industry levels."

Garg believes that the most important factor for him is that his own team is confident about the product and they believe that it is better than the best of the competitions. "With these three factors, I feel our product is really very good. Our team has left behind the wrong and negative perception associated with Chinese companies. We are no more under that cloud. Well, it does come around when we get some new customers. But today, now I have the confidence that I compete with the best of the world in India and the product quality that we offer is the best in the world. We also now have the recognition from our existing customers so it is easier for us to convince the new customers."

Expectations – from government and industry

Faster implementation of the Goods and Services Tax (GST) will obviously be a key expectation from the Government. But what more does Sany India want the government to do with regards to the CE industry? Garg agrees that in terms of taxation, GST is a major issue and that it will happen sooner or later. He believes that apart from reforms in taxation, the government has to provide a platform for consumption. "Well, that's the only thing that the government needs. Debottlenecking of the power projects, coal mines allocations, interlinking of rivers, opening up of irrigation projects, river transport, roads and highways projects and so on must start immediately. And we are hopeful that it will soon start. The Minister of Road Transportation Shri

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Nitin Gadkari has said that by March 2016, he would touch the target of building 30 km of roads everyday. At the Excon 2015 inauguration, he went to the extent of saying that the internal target is to reach 100 km! That shows the intention and if things materialise then I think that would be a fair platform for the industry to grow. We can see the days of 2006-2007 coming back in the next two to three years. One issue could be cash flow but I see it coming through now."

> "Road equipment, port equipment and crawler cranes will be the next equipment that we will produce locally in India."

And what must the industry itself do? Garg says that the industry needs to upgrade the technology and efficiency of its products. "At the end of the day, what we have to do is to make the projects low cost and viable by providing the right equipment. We need to reduce the use of diesel consumption by making fuel efficient equipment."

Driven by innovation

Garg shares that his team is continuously talking to the customers to understand their pain points and those aspects are then addressed at the R&D and manufacturing levels. "For example, let's say I pitch a machine to a customer for mining. If you look in isolation, the machine would be very good. But the customer tells me "I want the next fifty machines from you, can you be better the machine in the aspects that I want?".

So what does a company like Sany do? "Our team flies in, sits with the customer, understands the customer's requirements in terms of productivity, fuel consumption, speed and so on. Those points are then worked out again and again until we arrive at the customer requirement. The customer drives the improvement and innovation! This efficiency goes not only to that customer but to the entire clientele in that category. Were we inefficient earlier? No. It is the market demand, it is the customer requirement. And we respect and fulfil that. It is a win-win for both of us. Our R&D is driven by the tagline - "All for customers and all from innovation".

Garg says that Sany is an innovation driven company. "Our R&D has a slightly different structure. Yes, we do have the product R&D teams. But these product R&D teams are supported by specialists in categories like design, engines, hydraulics, electronics and so on. So all these teams work in tandem. Sany India also has its R&D team in this office at Chakan which is currently supported by specialists from China. "But we are moving towards having a stronger R&D team in India itself," adds Garg.

Manufacturing and exports

With regards to the products manufactured at the Chakan plant, Sany India is using about 30 percent of local content. "Obviously, we intend to grow that gradually but considering the fact that we have ramped up our manufacturing in terms of the product portfolio only two years back, I think 30 percent is a decent number," Garg says. In terms of the manufacturing capacity, Garg shares that the Chakan plant can go up to 5,000 units of equipment per year with the current infrastructure.

"At present, we are utilising only about 18 percent of our capacity but we can increase it by configuring the manpower

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if required," he shares. Sany India is currently manufacturing hydraulic excavators, transit mixers, truck cranes and concrete batching plants. "Road equipment, port equipment and crawler cranes will be the next equipment that we will produce locally in India," Garg adds. Sany India also started exporting in the middle of last year, which clocked a healthy 13 percent contribution to the overall revenues. The Company is exporting excavators to the Middle East, Africa, South East Asia, and also to the Indian sub-continent. There is a slightly old CII document, which envisions India becoming a CE manufacturing hub by 2020. Garg is obviously aware of it and feels that it is very much achievable. "Sany India is already doing it with 13 percent of exports and we will definitely be increasing exports from our Chakan facility in the future," he says.

Sany India has invested Rs 650 crore in India so far and while it sufficient for now, Garg says that there will be more investments if required. While he clocked 70 percent growth last year on a small base, Garg is confident of touching the same figure again this year, even with an increased base. "I see the future growth coming from earthmoving equipment that will be used for projects like roads, railways, ports, metros, and from hoisting and lifting equipment that will be primarily used for wind energy projects," he states.

Training and development

Part of the Sany India facility is a significantly large training campus. "We as a Group believe a lot in training; training is not generalised but specialised to the market requirements. Being a global group, we have diverse training requirements," Garg shares. So the training is across products and across geographies. "Accordingly, we have created an overseas training center at Sany India. The training programmes are structured not just internally but also towards our customers. Our training starts from the receipt of the machine by a customer. If it lands at a site, we train the customer, his operator, his helper and his maintenance team at site. Once they become fleet owners and they require advance training then we call them here. We have different levels of training programmes which can be customised as per the customer requirement," he explains.

The vision

Deepak Garg, who is a veteran of this industry of more than two decades, is very passionate about his work. He dedicates six days a week with almost 18 hours of work per day. So does he get any time for himself out of this tight schedule? "Very little. But whenever I get some time, I spend it in reading books and in watching news channels. I also love driving on the Mumbai-Pune Expressway, which I find refreshing." Having completed two successful years with Sany India, Garg is now geared up for a long play. "You know, the Sany Group is one of the largest industrial Groups in China. I want build a similarly big Sany or may be a bigger Sany in India five years down the line." And what will drive this huge ambition. "My fabulous team, our better than industry R&D, a robust marketing network and a comprehensive product range that no one else can offer," he says with confidence.

Great **Expectations!**

The economy needs big push from the Government and the industry is hoping that this will happen with the upcoming Union Budget!

By Niranjan Mudholkar

A lot is expected from the Union Budget 2016-17. Reforms on the fronts of taxation and policies will be required to kick-start the economy through private sector investments. These will need to be robustly supported by government capital expenditure. Yes, GST is on everybody's mind (and heart). But will the Government be able to pull it off? We will soon find out. Of course, there is a long list of what the industry expects the Government to do. The Machinist spoke to a cross-section of the industry to get some understanding.

"We have a few expectations from the Government that will help us support the Make-in-India drive. Firstly, from the customer's perspective, we are expecting a concession in the present excise duty of 12.5 percent for the construction equipment industry in India. Secondly, while many OEMs are now working towards increasing the exports from India, we look forward to some support from the government in the form of low-cost funding. Lastly, as we are competing with China on manufacturing and doing the business locally and in the global markets, we are expecting our Government to support the Indian steel industry so they can in turn support us with better cost structure of raw steel/ parts," says Deepak Garg, CEO, Sany India. Interesting and insightful perspective from a Chinese manufacturing major betting really big on the India market.

Ravichandran Purushothaman, President, Danfoss India, feels that given the huge gap in skilled manpower in the farm-to-fork model, it is important to look at the fruits the effort of skilling this sector will reap by exempting service tax on initiatives directed towards building awareness and skilling for the cold chain sector.

"Another move that will be a green signal for the cold chain industry is taking the outright exemption route for CENVAT waiver for cold chain equipment which will encourage manufacturers to use energy efficient equipment and therefore cut down on energy usage and costs," Purushothaman says.

> We look forward to the Union Budget giving a positive direction to the economy. The focus should clearly be on introducing measures to further boost domestic investments and demand."
>
> **Dr. A Didar Singh,**
> Secretary General, FICCI

The Danfoss India Head also believes that rolling out the GST bill as early as possible is essential to boost our GDP as this will have an overall impact on the development front. Rationalisation of direct taxes including a clarity on the reduction of 30 percent to 25 percent over a period should be ushered in.

"Initiatives such as Make in India and Start up India will have a direct impact on manufacturing sector and structural reforms and can help develop a sustainable ecosystem for these industries to thrive. It is crucial that reforms that were initiated last year are supported throughout this year as well," he says.

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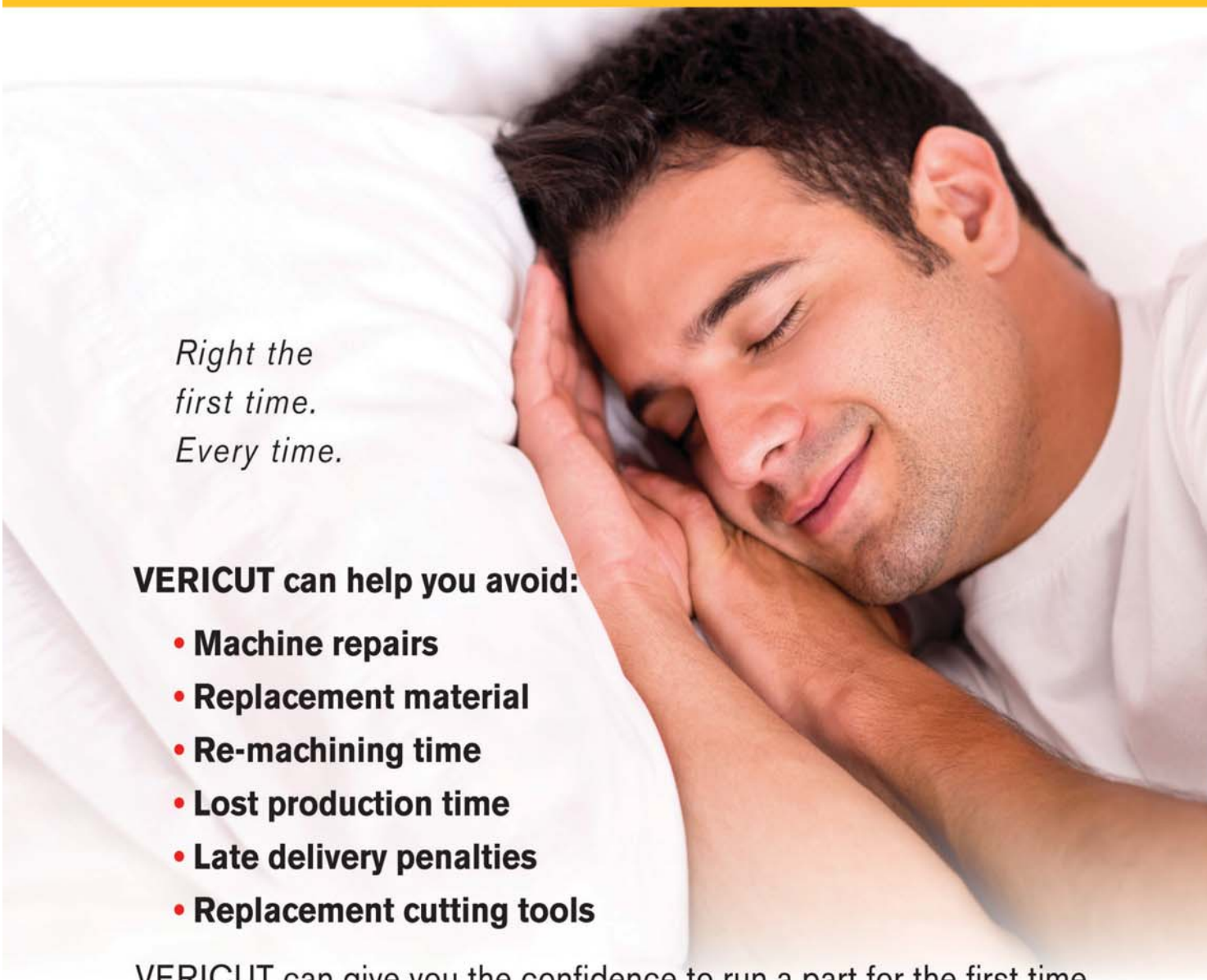

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Purushothaman also cautions that while the government continues to tame food prices in the country, to prevent food losses at a long term period is a draconian task if long term measures are not taken immediately. "One such measure that should be in place is the extension of NABARD fund towards food processing. Another is reforms especially in the infrastructure and food sector which could have a direct effect on SME and MSME which form the backbone of the country. These measures will provide impetus to the development of food processing sector on a cluster basis in the country to reduce wastage of agricultural produce and to create employment opportunities, especially in rural areas."

Sanjeev Ranjan, Managing Director, International Copper Association India, sounds the alarm bell since he expects 2016 to be a very tough year for the Indian economy. And he has an explanation. "Amongst the BRICS nations, India is the only country which is still performing better than the others. But this is subject to strong headwinds – improved US economy leading to a stronger dollar against a weaker rupee, slowdown in Europe and a rather volatile situation in China which is going to put a lot of pressure on Indian economy."

He points that at present Indian exports are at an all-time low and despite the government focusing on Indian manufacturing it has not taken off yet. Infrastructure continues to limp along and adding to this is the increasing NPAs with the PSU banks. The woes continue with the rural economy slowdown and increasing imports that are cheaper than India and dumping of material that takes place under Free trade agreements or otherwise

Against this backdrop, Ranjan says that the challenge in front of the FM is huge and daunting as he has to grapple with not only containing the fiscal deficit but look at how to spur growth. How he manages this will be a task which to a large extent depends upon the approach which the government takes. The budget other than allocation of funds against receipts these days has become less of a trigger for the economy as action has shifted to states which are calling the shots, as this is where the implementation happens.

Infrastructure, which plays a crucial role in the development of the Indian economy, is under stress and requires immediate attention and a holistic approach to address the issue. There are various steps / initiatives that the Government can take - encourage consumption through tax incentives, ensure better tax collection and penalise tax defaulters. "Get the stalled projects off the ground, skill the workforce, as demanded by a new set of infrastructure requirements. Restructuring the bad debts with PSUs in an effective manner and implementation of GST to help the industry and economy grow will all help," he says.

Ranjan also has some other suggestions - increase government spending as private players are still sitting with idle capacities on account of lack of consumer demand. "Ensure compliance by states on UDAY scheme in terms of building energy efficient and a better T&D infrastructure, expedite work on smart cities, provide people incentives to change old vehicles and finally increase spending under various rural programs – to spur growth in the rural economy," he adds.

V.P. Mahendru, Chairman, Eon Electric, strongly feels

"There is a need to provide income tax benefits to LED manufacturing companies, accelerated depreciation benefit to LED plants and push towards faster implementation of GST. The government should set up an interest refund rebate for manufacturers who have shifted to LED production."

V.P. Mahendru, Chairman, Eon Electric

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Ravichandran Purushothaman, President, Danfoss India

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"As we are competing with China on manufacturing and doing the business locally and in the global markets, we are expecting our Government to support the Indian steel industry so they can in turn support us with better cost structure of raw steel/parts."

Deepak Garg, CEO, Sany India

"The government needs to demonstrate concrete action to revive investment, increase growth and generate employment. In line with the 'Make in India' initiative taken by the Government, the manufacturing sector needs backing in the form of tax concession."

Manish Goel,
Managing Director, Shilpi Cable Technologies Limited

"Solar project have over 60 percent imported components, hedging support will help in viability of projects. Cheaper power for domestic manufacturing and providing funding for manufacturing in India are major points, which will support solar industry."

Ashok Nehra, Head-Development and Strategy, Rays Power Experts Pvt. Ltd.

that there is need to promote LED lighting industry as it will go a long way to save power for the nation and reduce pollution as already committed by us at the concerned UN forums. From the industry point of view, he says that there is a need to provide income tax benefits to LED manufacturing companies, accelerated depreciation benefit to LED plants and push towards faster implementation of GST. "The government should set up an interest refund rebate for manufacturers who have shifted to LED production. Further, Excise Duty exemption should be extended for LED lighting manufacturing companies present in special industrial promotion zones, like Haridwar because of the intensity with which the demand for LED Light is increasing."

Mahendru also wants the budget to create an enabling environment which can address the issue of skill gap, improve ease of doing business and accelerate digital deployment even for smaller towns and villages for better reach. "Government spending for smart cities should be optimised to ensure faster adoption of smarter techniques for early development of new products required for the Smart Cities. Further, an LED substitution fund should be created for state governments and public sector to shift all conventional lights to LED lights within two years."

Manish Goel, Managing Director, Shilpi Cable Technologies Limited, wants the government to demonstrate concrete action to revive investment, increase growth and generate employment. "In line with the 'Make in India' initiative taken by the Government, the manufacturing sector needs backing in the form of tax concession. In this regard, lowering the corporate tax rate would be a welcome step. We are hopeful that the budget will announce a set of incentives and plans to drive the manufacturing surge in the country."

Goel points out that the current budget allocation for the Smart City project is at Rs 48,000 crore. "While this is a modest beginning, for the proper implementation of the same, the sector is looking at the Union Budget 2016-17 for a detailed road map and greater funds allocation. This will give impetus to telecom and power companies which in turn will also boost the cable industry," he believes.

Ashok Nehra, Head-Development and Strategy, Rays Power Experts Pvt. Ltd., opines that the solar industry's growth will largely depend upon the upcoming budget. "Major point for our industry will be removal of MAT for solar projects for initial 10 years, allowing financial institutions and banks to lend for 25 years for solar power projects, increase in priority sector lending limits from Rs10 crore to Rs 50 crore, as solar projects are very capital intensive." Nehra draws attention to the fact that solar project have over 60 percent imported components. "So hedging support will help in viability of projects. Cheaper power for domestic manufacturing and providing funding for manufacturing in India are major points, which will support solar industry."

Summing up the industry's expectations, Dr. A Didar Singh, Secretary General, FICCI, says that everyone wants to see a continued momentum on the reform front. "We look forward to the Union Budget giving a positive direction to the economy. The focus should clearly be on introducing measures to further boost domestic investments and demand," he states.


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Connectivity and Digitalisation

Auto connectivity and digitisation will remain the top trend till 2025, according to KPMG International Global Automotive Executive Survey 2016

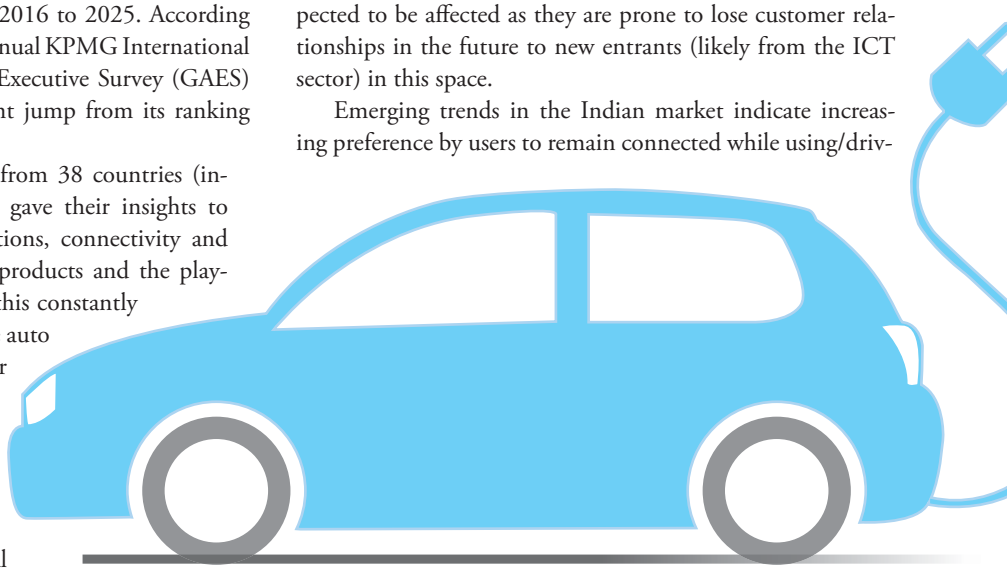
Automotive industry executives agree that connectivity and digitalisation could collectively be the most important trend that could hold through 2016 to 2025. According to the seventeenth annual KPMG International Global Automotive Executive Survey (GAES) released recently, this is a significant jump from its ranking (10) last year.

This year, 800 auto executives from 38 countries (including 74 executives from India) gave their insights to KPMG on business model disruptions, connectivity and digitalisation, customer data, new products and the players who are expected to survive in this constantly evolving industry. 82 per cent of the auto executives surveyed expected a major business model disruption in the next five years. For further understanding, KPMG also surveyed over 2,100 customers globally (including 200 from India).

Dieter Becker, KPMG's Global Head of Automotive, comments, "The ever-changing service and data-driven business models should pave the way towards owning, securing and retaining the key stakeholder – the customer. In order to meet their current needs, becoming a customer-oriented service provider is of utmost importance. One way traditional car makers can add value and offer customised client experiences is by leveraging the massive amount of data that both the car and its driver(s) produce."

According to 95 per cent of the respondents from India, the volume segment of the industry is likely to witness a disruption in the years ahead. Rajeev Singh, Partner and Head, Automotive sector, KPMG in India said, "Connectivity and digitisation are likely to impact all automotive companies in India. Volume and mass market manufacturers are also expected to be affected as they are prone to lose customer relationships in the future to new entrants (likely from the ICT sector) in this space.

Emerging trends in the Indian market indicate increasing preference by users to remain connected while using/driving their vehicles. Few applications already aid in establishing connectivity between smartphones and vehicles. Data is going to play a key role in the service and marketing of vehicles to Indian customers."



Data for cash

However, according to the KPMG GAES report, the majority of auto executives say the use of data and the application of informational engineering is still at a nascent stage.

Around 91 per cent of the respondents were unanimous in their agreement that vehicle manufacturers in India are currently using informational engineering in connectivity related services such as predictive consumer analytics. A change in consumer mind-set is likely to take place as customers are becoming increasingly aware of the value of their data and may not be willing to provide it to third parties without receiving

Connectivity and digitalization has finally outpaced other key trends such as 'growth in emerging markets' and 'alternative drivetrain technologies. *Source: KPMG GAES 2016*

considerable direct incentive or reward.

Becker states, "Indeed, customers are aware of the value of their data and KPMG's GAES results show that for these stakeholders, cash is king. A majority of the customer respondents across all age groups said that monetary benefits for their data is the most attractive benefit, followed by customer incentive schemes, and individualised service and customer experience."

> "One way traditional car makers can add value and offer customised client experiences is by leveraging the massive amount of data that both the car and its driver(s) produce."
>
> **Dieter Becker,**
> KPMG's Global Head of Automotive

Rajeev States, "Intelligently combining the data generated by the vehicle itself (upstream data) and by passengers in the car (downstream data) will be the key to survive for automotive companies. The key question to be answered in future is who owns the up- and downstream data generated in a vehicle.80 percent of the survey respondents from India have rated Big Data as extremely important ahead of other trends such as autonomous / self-driving cars.

Factors of influence

Key product features that are likely to influence consumer purchasing decision with respect to the automobile industry in India in the next five years were identified as safety innovation and environmental friendliness, ahead of other features such as brand image, ergonomics and comfort, fuel efficiency and use of alternative fuel technologies.

Traditional manufacturers are likely to be groundbreaking innovators in the future. However, as they are facing a new highly digitalised and connected age with numerous new players, OEMs seem to be aware that these developments are not yet reflected in their business models.

The most influencing macroeconomic changes likely to impact strategies of automakers, according to Indian respondents are financial or economic crisis (96%) which shows that last crisis had enormous impact on the automotive industry and is still present in the minds of executives. Oil price volatility (95%) and Fluctuating / instable raw material costs (92%) are other factors likely to influence strategies of automotive companies in India.

Rajeev concludes: "New business models such as ride sharing, platform consolidation to reduce cost of manufacturing, contract manufacturing, and emergence of Big Data to understand the unknowns, will pose both as an opportunity as well as a challenge. In a decade's time market share in India is likely to be decided on data and revenues generated by the customer while driving in fully connected vehicles rather than just selling cars on high volume basis."

Spectacular

The Auto Expo always creates excitement. But the 2016 edition has been truly special because it reflected the heartfelt endeavours of an industry ready to bounce back to the growth it really deserves! The Machinist presents some glimpses

Hyundai unveils Tucson & showcases Hyundai N 2025 Vision Gran Turismo

Hyundai Motor India showcased its global SUV, the Tucson at the 2016 Auto Expo. Hyundai Tucson represents a significant step forward in the future SUV line-up for the Indian Automobile Market. Hyundai has high aspirations for the brand globally. The All-New Tucson is a bold car bringing our brand slogan 'New Thinking, New Possibilities' to life. Through great design and advanced technologies, it represents the future of Hyundai products in India beyond expectations. Speaking at the Tucson Unveil at the Auto Expo, YK Koo, MD & CEO, HMIL, said, "The Auto Expo is a very important platform to showcase Hyundai's strength of design, technology and future products. With the spirit of challenge and innovation; we will expand the Experience Hyundai programme to strengthen the brand in 2016."

Hyundai Motor showcased its high performance sub-brand N which is a result of intensive testing and product development. The sub-brand N builds on Hyundai Motor's successful motorsport experiences and technology capability to drive future performance-oriented and race-track-capable models forward and bring 'the most thrilling winding road' fun to customers who truly love cars. Hyundai Motor presented its innovations through various zones like FUTURE ZONE, GENESIS ZONE, SPORTS ZONE, ECO ZONE, ICOTY ZONE, TECHNOLOGY ZONE, SAFETY ZONE and KIDS ZONE.

Toyota launches the all new Prius and the all new Innova 'Crysta'

Auto Expo 2016 saw Toyota Kirloskar Motor (TKM) unveiling the 4th generation Prius in the Indian market. The new Prius combines a super premium styling and an enjoyable driving dynamics that defy conventional notions of an Eco car. Pioneer of Hybrid Technology, a modern day icon, the Prius is the first vehicle to be built on Toyota New Generation Architecture (TNGA) and the most favored for its eco-friendly innovation.

"India being a crucial market for us, we believe there is more to the market beyond just the numbers. We have taken good stock of our priorities for the road ahead and we do not want to make just more vehicles but also want to address other critical issues associated with energy, environment and safety with our revolutionary hybrid technology. Considering the rising oil imports, road safety and increased pollution, we believe that environment-friendly vehicles will go a long way to remedy this. And Implementation of environmental measures is one of the most important management goals of Toyota worldwide."

The opening day of the Auto Expo also witnessed the unveiling of one of the most anticipated launches of the year 2016, the All New Innova, which in its latest avatar will be called "Innova Crysta". The new Innova Crysta comes with an All-New Developed Frame, an All-New Engine and for the first time an All-New 6 Speed Automatic Transmission. The Innova Crystacombines aggressive styling, robust engine and a well-thought out feature set.

Tata Motors unveils future range of passenger vehicles

With a promise to introduce new products every year, Tata Motors showcased its future range of passenger vehicles at the Auto Expo 2016 that fall within its new MadeofGreat promise to auto consumers. The product line-up features the new sporty compact sedan (project code named KITE 5), the production ready, lifestyle SUV- HEXA in automatic and manual variants, compact SUV – NEXON and the personalized editions of the new passenger vehicles from Tata Motors. The new hatchback has been showcased publicly for the first time at the Auto Expo 2016. While it carries the 'ZICA' label for the duration of the event, the new name will be announced after a few weeks, ensuring all necessary consumer/ branding and regulatory aspects are addressed, and the launch will take place thereafter. Tata Motors has partnered with Jayem Automotives for developing performance and special vehicles. At the Auto Expo, the first product from this partnership, a sporty hatchback, was on display. According to Mayank Pareek, President Passenger Vehicle Business Unit, Tata Motors, "We are focused on bringing to our consumers the most exciting and dynamic, youthful, high performance vehicles that should be segment-defining in style and features. The new range of Tata Motors vehicles showcased here at the Auto Expo will offer our customer a more robust choice and at the same time, redefine our passenger vehicles for the modern customer looking for stylish technology in the cars of their choice." These products form the front-line in the company's transformation journey. Tata Motors Smart Hub 2016 represented the new, youthful, energetic and bold character of passenger vehicles.

Six Next Gen smart mobility solutions on the Force Traveller

Force Motors, the market leader in large vans category, showcased six smart mobility solutions on the Traveller to serve tomorrow's India. A pioneer in the field of light transport that gave India iconic brands like the Tempo, the Matador and the Minidor continues with its founder's vision of harnessing the latest technology, anticipating the changing requirements and developing appropriate solutions for India. The two star attractions were the luxurious 15 seater Traveller Royale and the 9 seater Traveller Super. Both these vehicles come with factory fitted air conditioning, Luxurious reclining seats, Larger Sealed Glass windows, ABS, EBD and Air suspension (offered for the first time in this category).

Motorsports is the testing ground for automobile makers. It is a matter of great pride that Force Gurkha clinched the top two positions at the first and second editions of the Rainforest Challenge – a top ten toughest motorsport event. The learnings from this will be incorporated in the future variants of Force Gurkha that will be introduced later this year.

Force Motors also showcased the newly developed advanced of 3, 4 and 5 Cylinder BSIV compliant Common Rail Engines that will power their new generation SCVs, MUVs and LCVs. They also displayed engines and axles produced for all Mercedes Benz Cars and SUVs made in India.

Mercedes-Benz India unveils the India bound S-Class Cabriolet

The key highlight of the fascinating range of 'winning' products from Mercedes-Benz was the much awaited showcase of the GLC and the unveiling of the India bound S-Class Cabriolet.

The fascinating 'winning' product display was completed by the most exclusive and highly customized product in the armored luxury car segment in India, the Mercedes-Maybach S 600 Guard. For racing enthusiasts Mercedes-Benz displayed in its pavilion the special Mercedes-AMG PETRONAS F1 team's FIA World Championship title winning car.

General Motors India brings new-generation Chevrolet Carline

General Motors revealed more details of its transformation strategy for India by announcing the 2017 launch of an all-new four-door notchback, the Chevrolet Essentia, at the 2016 Auto Expo in New Delhi. The Essentia headlines Chevrolet's aggressive plan to increase its presence on Indian roads by tackling the fiercely competitive A-segment head-on with an exciting new car that recognizes the need for a traditional but richly appointed notchback. GM also showcased a fun and spirited soft-roader concept based on the same platform called the Chevrolet Beat Activ. The concept explores exciting new opportunities in the market for a youthful car designed to stand out in a crowd. Based on Beat platform, the Essentia and Beat Activ were specifically designed, to suit the tastes and needs of the discerning Indian consumer while also ensuring strong global appeal, at the GM Korea Design Studio. The two show cars build on the car-maker's earlier promise to launch a new MPV, the Chevrolet Spin, in 2017. The Essentia and Spin will mark the next wave of exciting new Chevrolet products that will be introduced to the Indian market over five years. "GM's transformation in India is clearly reflected in the development of the Chevrolet Essentia and Chevrolet Beat Activ. We are heading into a new era with new-generation products that will catapult the Chevrolet brand in India, giving consumers vehicles that have never been seen in the market. Our aim is to ensure that our models are more relevant, better connected, more exciting and safer than ever before, for complete customer satisfaction."

Volkswagen unveils four new products

Volkswagen unveiled exciting new products, including Volkswagen Ameo at the 13th edition of the Delhi Motor Show. With a heady combination of power and performance, the lineup highlights Volkswagen's continued commitment and steady growth plans for the Indian market.

Addressing the press conference, Jürgen Stackmann Board Member for Sales and Marketing, Volkswagen Passenger Cars said, "The Delhi Motor Show is a great opportunity for us to showcase our enhanced product portfolio of segment-leading carlines to customers in this dynamic and growing market. Volkswagen wants to play a key role in India not only in terms of sales and market share, but also in terms of safety, quality and innovation. That is why we are strengthening our efforts here. We are expanding our product portfolio in India with the made for India product, Volkswagen Ameo, our first compact sedan, the latest edition Tiguan, which marks our debut in India's SUV segment and the new Passat which will be launched in this fiscal."

Michael Mayer, Director, Volkswagen Passenger Cars India said, "Our recently launched products – 21st Century Beetle, New Vento, New Jetta and New Polo have garnered a positive response from customers across the country. With the evolving Indian consumer, we have here a great opportunity to cater to their requirements of safety, build quality and innovation and make Volkswagen as the most accessible German premium brand in India."

Ashok Leyland unveils India first four Next Gen products

Ashok Leyland took the covers off Four all-new next-generation technology products at the Auto Expo 2016, Greater Noida, Uttar Pradesh. They also displayed a variant of their ever popular DOST. Inspired by the 'Made in India', the 4940 Euro 6 truck is built to exacting standards, using latest engineering and technological knowledge, and meets the strict Euro 6 emission norms. Euro 6 norms demand a dramatic reduction in NOx and particulate matter – as low as one-tenth compared to existing Euro 3 norms. HYBUS, India's first non-plugin hybrid bus, comes from Ashok Leyland's ambition to create a better future for our planet. GURU is the Company's latest offering in the ICV segment and SUNSHINE is the next generation school bus.

"There is always a **better way** of **doing things!**"

The Machinist caught up with **B K Rajkumar,** Executive Vice President-Business Excellence at Godrej & Boyce Mfg. Co. Ltd. under whose leadership and guidance the Company employees have successfully completed a strategic change at the manufacturing level

By Niranjan Mudholkar

Successful manufacturing companies are always driven by the quest to continuously improve on what they are doing. They are guided by questions like "How can we improve this?" or "Is there a better way of doing this?". And more often than not, these improvements are initiated by the operators on the shopfloors.

In the manufacturing parlance, this activity is described as kaizen. Kaizen is actually a Japanese term where 'kai' means change and 'zen' means good, so together it means a good change or improvement. Today, the term – as a business process – means 'continuous improvement'.

Godrej & Boyce (G&B) has institutionalised the practice of kaizen with great benefits to the organisation. In 2009, it started organising the annual 'Kaizen Fest', an exhibition and competition where in it accepts entries from employees across levels. "The competition is held at three levels – manager, supervisor and workmen. An external panel judges all the entries and the best kaizen at all levels is selected and implemented in the business. The kaizen made by G&B employees have also won prestigious external awards at CII, Kaizen Institute, Kaizen conference etc," shares B K Rajkumar, Executive Vice President-Business Excellence at Godrej & Boyce Mfg. Co. Ltd. So far, G&B has won 22 awards at the National level and eight awards at the state level. "Of course, G&B used to follow kaizen even before 2009 but it was limited to individual kaizens. In 2009, we started doing it at the corporate level." Accordingly, a proper structure was created and kaizen coordinators were appointed for each of the fourteen different divisions of the organisation.

A kaizen council was established and it created a set of guidelines in the form of SOPs as well as monitoring parameters. "The objective has been to build a robust forum for blue collar engagement in kaizen with a focus on the operators," Rajkumar shares. The 'fest' has been increasingly popular as is evident from the growing participation. "In 2010, we had about 35 percent participation from our operators. This has gone up to 90 percent in 2015." Initially, with the objective of encouraging involvement, the focus was on quantity of kaizens. However, now the focus has shifted to quality.

"We introduced the kaizen exhibition in 2012. The exhibition has become quite popular as it provides a platform for the operator to share their kaizens at a broader level. Since 2013, we started creating themes for the kaizen fest to make it more interesting. For example, the theme was 'Saptarang' (seven colours) in 2013 and it was 'Sarvatra' (everywhere) in 2014. With Sarvatra, the idea was to communicate the message to the operators that kaizen can be implemented everywhere – at the factory, at the vendor's facilities and even at their homes," Rajkumar shares. In 2015, the theme has been 'Symphony' with the focus on bringing harmony amongst different areas of work.

A quick example

Godrej Security Solutions faced an operational issue at its plant when the operators needed to improve the quality of internal threading in Mounting Hub of Marine doors because the constant usage affected both the thread quality as well as the finish leading to rework. The kaizen developed by the team not only resolved the problem but significantly improved the efficiency by reducing the rework time from 20 percent to five percent! The Kaizen also reduced the cycle time by seven percent and the indigenous design fatigue decreased as inspection reduced from 100 percent to sampling.

In great 'Form'

With recorded business orders worth about Rs450 crore and potential business enquiries to the tune of about Rs4300 crore, IMTEX Forming 2016 continued with the tradition of success

IMTEX FORMING 2016, an international show on forming technology and Tooltech 2016, a concurrent event of machine accessories concluded on 26 January 2016 on a positive note. The exhibition had around 485 exhibitors displaying over 500 live machines in three exhibition halls covering a gross area of around 30,000 sq m. Four countries – China, Germany, Japan and Taiwan formed country pavilions. The participation other than India came from 22 countries. Organised by the Indian Machine Tool Manufacturers' Association the twin exhibitions held at the Bangalore International Exhibition Centre in Bangalore attracted a footfall of around 40,000 visitors.

Over 100 trade delegations from various industry sectors such as aerospace, auto components, automobiles, capital goods, defence, electrical and electronics, oil and gas equipment, railways, plastic machinery sector, white and brown goods, and many more visited the show.

Key public sector undertakings such as Bharat Heavy Electricals, Hindustan Aeronautics Limited, Indian Space Research Organisation, National Aeronautics Limited, Railways, Ordnance Factory Board, etc. visited as part of trade delegations. Many private companies such as Bajaj Auto, Fiat India Automobiles, Larsen & Toubro, Robert Bosch Automotive Electronics India, Volvo Construction Equipment, Hawkins Cookers, Toyota, Maruti Suzuki, Caterpillar, PRICOL, Infosys, UTC Aerospace, Honda Cars, TVS and Kalyani Technoforge also visited the show.

Exhibitors who attended the show felt that there is a demand base for metal forming machines in India. The interactions have been fruitful and the exhibitors were keen to take the established relationships to the next level. Overall the exhibition recorded business orders worth about Rs450 crore and generated potential business enquiries to the tune of about Rs4300 crore.

Parallel events organised during IMTEX FORMING also had good turnouts. The International Seminar on Forming Technology organised a day prior to IMTEX FORMING had around 250 delegates participating in concurrent sessions on Design & Software, Equipment and Tools, and Process.

For the first time 40 academic institutions participated in the i2 Academia Pavilion. Twelve institutions including IITs made presentations to the industry as part of the IMTMA Industry Institution Collaboration (IIIC) initiative. The best research presentations were awarded prizes.

> "The strong presence of business visitors and policymakers from India and overseas made it a truly pan global event and paved way for further growth of the Indian manufacturing industry."

Around 300 students participated for 'CONNECT' – an awareness programme for imparting knowledge on the machine tool industry for young engineers. Students from both mechanical and electrical engineering streams availed of this opportunity to gain more knowledge on machine tool and manufacturing sector and to pursue their career in these industries. By interacting with industry experts they were able to understand how machine tool industry helps in industry growth.

Close to 40 students participated in the "JAGRUTI" – a programme to familiarize engineering students with the machine tool industry and the technological happenings in this industry segment. IMTMA organises JAGRUTI with the help of UDAAN members.

To conclude, IMTEX FORMING 2016 & Tooltech 2016 was a grand success. The strong presence of business visitors and policymakers from India and overseas made it a truly pan global event and paved way for further growth of the Indian manufacturing industry. IMTEX FORMING will return in the year 2018 after a gap in 2017 when IMTEX (Metal Cutting) will take the centre stage.

'The perfect **B2B platform'**

On the fourth day of IMTEX 2016, a visibly relaxed **V Anbu,** Director General, IMTMA took time off to talk to The Machinist on the success of IMTEX Forming 2016 and what does the future holds for IMTEX 2017

By Pushpendra Shukla

Q. Congrats on yet another successful IMTEX. What is the secret behind IMTMA's continuous and consistent success?

IMTEX 2016 is a well-established show today as it has evolved over the years. One of the key factors is it is a very important B2B platform for both manufacturers and buyers. IMTEX has become a very efficient ecosystem today to support any activity for the machine tool industry as a whole. IMTEX is very successful as it has attracted 22 countries in addition to key players from India. There is a tremendous potential for companies to showcase their products in live condition.

Q. While trade exhibitions like IMTEX and IMTEX Forming are definitely business platforms for buying and selling machines, would you say these shows have also acquired a new dimension of technology exchange and transfer through collaborations / JVs / M&As?

Absolutely! If you look at IMTEX while it is being recognised for Business 2 Business, what is important is the degree of maturity and level of activity that is taking place today. In this year's IMTEX, there was a need for the Industry and Academia to come together and showcase what they have to offer to each other. So, over 40 colleges across South participated at this year's edition. Not only this, students also came in large numbers to understand the latest offering in terms of technology and innovations and participate in discussions resulting in passing of adequate information across all levels.

Not only this, many companies take this opportunity to announce new partnerships JVs and product launches. IMTEX is the perfect platform for them.

Q. IMTMA is also continuously enhancing its trade shows every year. So what new can we expect at IMTEX 2017?

It has been evolving and the focus for 2017 would be on metal cutting technology solutions. The key aspect for IMTMA to look at now is how to add capacity in terms of infrastructure.

"By the end of March 2016, we can expect a 5-10 percent growth. However, in the next five years, I see a CAGR of 15 percent and by the end of year 2020, consumption will surpass Rs 20,000 crore from the current Rs 10,000 crore."

V Anbu, Director General, IMTMA

There is an additional demand from exhibitors to display their products, technology and innovations and in all likelihood we are expecting a large number to turn up.

Gradually, we are seeing an interest not only from manufacturing companies in India to participate and show case but also from other countries including developing countries in Asia. There is a gradual shift from current level to higher levels as we are witnessing growth.

Furthermore, we are expecting 25 countries to participate in 2017 from the current 22 Countries such as Germany, Japan, Italy, Asia, UK and of course USA apart from all key Indian companies who will be present in 2017.

Q. The figures till September 2015 show that the Indian machine tool industry has actually shown a decent growth despite the difficult market conditions. Where

is this coming from? What is your projection for the current FY and the next year?

Till September 2015 for the one-year period before that we have seen 8–10 percent growth. Indian companies have focussed on niche and traditional areas such as automotive, railways and defence. New innovations, product development and engaging with customers resulted in growth happening in these segments.

By the end of March 2016, we can expect a 5-10 percent growth. However, in the next five years, I see a CAGR of 15 percent and by the end of year 2020, consumption will surpass Rs 20,000 crore from the current Rs 10,000 crore.

IMTMA had envisaged the industry to grow to Rs23,000 crore by 2020. Do you still see this happening? Where do you see the challenges?

The Challenges to overcome are Policy initiatives which are handled by the centre- be it GST or Land Reforms. It will be a national level impact on a variety of manufacturing segments. We will see investment flows particularly in manufacturing happening in a proposed manner.

The Machine Tool industry which IMTMA is a member off will primarily see demand happening from other manufacturing sectors resulting in companies entering with new investments.

There will be a connection seen between user segments and machine tool industries growth in a very close manner. That is what we are hoping to see happening in the years which will drive growth in Machine Tool Industry to a high level.

The key focus is innovation, technology and product development. Companies are investing in this including the Government of India and Research bodies and in the years to come, there would be good positive growth for the industry and the economy.

> "The huge scope for imports would be big machines from countries like Japan or Germany, not in terms of numbers but in terms of high end technology that only key players will continue to play a role in."

How is the Indian machine tool industry changing with regards to technology upgradation? Do you see the dependence on imports getting reduced at least marginally in the next 2-3 years?

We don't advocate 100 percent manufacturing technology from India which is not also strategically a good idea. We need newer technologies from other countries also.

A few years back our domestic production was less than one third and imports were two-third. Today, we have reached a stage where it is a 50 percent market share that we are enjoying with domestic production levels at 45 percent plus and imports at 55 percent. A few years from now and it would be reversed. The huge scope for imports would be big machines from countries like Japan or Germany not in terms of numbers but in terms of high end technology that only key players will continue to play a role in.

What is your assessment of the market scenario with regards to the Indian buyers of machine tools and cutting tools? They have definitely become more demanding and price sensitive but have they evolved in terms of factors like understanding of technology, value propositions and lifecycle cost?

This happens in every market. Of course, Indians are more demanding and expect better value and lesser prices. The key over here is that companies have to offer better customer engagement, product development and innovation thus meeting customer requirements and also improve business engagement. I do not see it as a conflict though it is a good sign. I am sure more Indian companies will be able to meet this requirement which will soon become the norm.

The author is a Chennai based freelancer.

Coming closer to **customers**

Christopher Raj, MD, Bruderer India, shared with The Machinist that the Company has recently inaugurated its first refurbishment facility in the country in Whitefield, Bangalore. Excerpts of the interview…

By Pushpendra Shukla

When did Bruderer move from Mumbai to Bangalore?

We moved from Mumbai to Bangalore over a year back. Our sales and marketing teams along with the service engineers are now based out of Bangalore with an office in Chennai keeping in mind the auto majors' presence in Chennai.

How many stamping presses has Bruderer sold in India?

We have sold over 200 stamping presses till date in India and we aim to be aggressive in terms of business in the coming years

How do you cater to the repairs of the presses in India?

We have just inaugurated our refurbishment facility in Bangalore on January 20, 2016. It is a state of the art facility that is at par with other countries like Japan, Germany, Singapore and China.

What's the facility's capacity?

We can accommodate refurbishing 6 to 8 machines per year and are open to expansions as and when required.

> We have just inaugurated our refurbishment facility in Bangalore on January 20, 2016. It is a state of the art facility that is at par with other countries like Japan, Germany, Singapore and China."
>
> **Christopher Raj,** MD, Bruderer India

Why have one facility in India after so many years?

Every machine has a life. Our machines are built to have a life of 30 to 40 years. Our Customers in India earlier had to ship out the machine which involved huge costs, and sticking to the statutory requirements laid out by the law of the land was quite cumbersome. It made sense to set up one here in India.

Do you manufacture spare parts in India?

No, we get all our spare parts from our HQ. We only inspect the machine, fix it and give it back to the customer. As said earlier, our machines have a life of 30 to 40 years. After refurbishments, our machines will run for a further 30 years comfortably.

What about training your engineers? Are they equipped to handle this?

Our engineers are already experienced and on the field. However, we have brought in an experienced engineer from Switzerland to train us further wherein, we can strip a machine and fix it back.

What brought you to Imtex?

We have been a part of Imtex for a very long time. Bruderer AG believes in participating in key exhibitions worldwide and Imtex is one of them. We have not only built our brand through Imtex but have also conveyed to our customers of the new facility and have generated a lot of leads that will take us forward business wise.

What is the kind of investments made in the facility?

We have invested quite a lot not only in terms of money but in terms of machines, parts, quality engineers and training. In the next 12 weeks we shall start servicing our customers effectively.

The author is a Chennai based freelancer.

Switzerland based Bruderer AG manufacturers of high speed stamping presses entered India way back in the 2000s establishing a 100 percent subsidiary named Bruderer Presses India. Bruderer AG is a 70 year old family run business with the Third generation taking over the reins under the guidance of the 2nd Generation. It employs over 500 people in Switzerland and has sold 15000 presses worldwide. Out of these 15,000 presses, 14,000 are still working fine.

Energy Efficiency is the **key focus** in today's manufacturing world

At the Imtex Forming 2016 held at Bangalore International Exhibition Centre in January, **Bernd Dietz,** Metal Forming in charge from Siemens Germany took time off to discuss his views and plans for Siemens India with *The Machinist*

By Pushpendra Shukla

Q. What is the idea of a Metal Forming group within Siemens?

Worldwide, our customers know we have a wide range of products. We are into the manufacturing of Gas Turbines, Medical Equipment and Industrial Products. Normally, these Products are not enough for our end customers or the Original Equipment Manufacturers (OEMs) and they expect and want more from us especially in terms of newer know-how and technologies. They expect solutions from us and we constantly work towards this goal of giving our customers what they want.

In the Industrial Product segment, there is the metal forming group from Siemens that I am in charge of that offers solutions that are tailor made for the metal forming industry.

Q. Which technology do you offer your customers or the OEMs?

Our end customers are OEMs who in turn offer solutions to the end customers such as the press shop in factories and large industries. These applications are of course the core of the press shop. There are conventional fly wheel presses, hydraulic presses and the latest in the offering is the Servo presses.

There are other equipment like handling equipments etc. All of these solutions require different packages and solutions and we offer ready to apply software packages to our OEMs.

Q. Can we buy a press or a handling or handling system from Siemens?

Siemens, world over, in this segment works closely with the OEMs and supplies the software system to them only as they are our end customers. They in turn offer total solutions to their end customers with our technology as a part of the package.

Q. Can an OEM buy a "plug-and-play" solution from Siemens?

Yes and no. These packages are ready to apply. Each OEM has his own idea and solutions that can be applied by them. The basic idea is that the OEM uses these packages from Siemens to cater to his customers as per their requirements. It must be understood that each package is unique and adapted to what they want. It is more of a tailor made requirement and not a standard package.

> It must be understood that each package is unique and adapted to what they want. It is more of a tailor made requirement and not a standard package."

Q. What is the lead time from Siemens to OEMs?

Our packages are ready to apply and already existing. We introduce this to them

and they adapt it. They can start the project immediately. Simply put, from day one our software system can be put to use.

Q What is your view point of hot topics currently raging in the Industry?

Nowadays it is energy efficiency and how to make the systems more energy efficient. Producing the same part or numbers with lower energy consumption is the key point that is asked by everyone. It is very vital that we address this immediately. To be clearer, Machines or systems ought to be more efficient with lower energy consumption.

> "Our packages are ready to apply and already existing. Simply put, from day one our software system can be put to use."

Q Servo Press drive systems seem to be larger and more powerful than a drive system?

Server press is definitely a hot topic. Today, companies are looking at integration on one automated platform because we look at the future integration of complete factories.

Q Why should one invest in a Servo Press?

A very good question. We get this query from OEMs always and sometimes even their end customers. The idea of Servo Press is flexibility and productivity. Though the investment is larger it is important to note that the productivity levels increase and the rate of return is far higher in a shorter period of time.

Slightly expanding, Servo Press can run a larger number of tools and customers who were hesitant to use this are now happy as they see a large number of tools and flexibility. The investment in one Servo Press can give a return of say two old style presses. It is definitely important to note that flexibility and productivity are the key over here.

Q Where could an end customer get more information about your solutions or even see a servo press that is based on Siemens products and solutions?

In India, Siemens has a branch presence so the technology is offered by Germany. There is a metal forming group that supports local Siemens offices like India and I am usually in touch and close contact with the offices and supporting them. Eventually, the offices take the lead and we assist them in every way possible.

If someone is interested, our head office in Germany and the India offices are always available to talk or help. For anyone who is keen to see our solutions deployed in our OEMs, Pune based Electropneumatics & Hydraulics (India) Pvt. Ltd. - who have our systems - can be contacted.

The author is a Chennai based freelancer.

Forming technologies, forging ties!

The Machinist magazine interacted with a variety of exhibitors at Imtex Forming 2016 to get insights into industry trends and technologies.

By Pushpendra Shukla

Angel India foresees Laser Cutting technology as the game changer

New Delhi based Angel Cad Cam India, suppliers and dealers of Printing and Imaging Products with major emphasis on Laser cutting technology machines have announced a tie up at the IMTEX 2016 with a leading manufacturer of laser machines namely DNE from Shenzen, China which has sold over 900 laser machines worldwide last year. Angel Cad Cam started this business with plotter machines and as the technology advanced, we moved along and today we are in the business of laser. Laser is the current trend that is making an impact in the world of manufacturing. "We have been taken by surprise by the enquiries that have poured in from visitors for our products at the IMTEX 2016. It is evident that companies want automatic and precision products which only laser can offer. Till today, it has been the traditional method of manual cutting that resulted in wastage of materials and time too," said **Anil Kumar,** Director, Angel India. Angel India Cad Cam clocked a turnover Rs 30 crore last year and is expecting to achieve a higher number this year with the recent tie up.

Dalmec Manipulators keen for more challenges in India

Italy based Dalmec Industrial Manipulators, the innovators of Industrial Manipulator worldwide under the brand name of DALMEC set up a manufacturing plant at Pune three years back. The showcasing of their products at the IMTEX 2016 has generated a lot of interest amongst the visitors as was seen. "Dalmec Manipulators allows the ergonomic, safe and effective handling of any product, if it is to be said in very simple terms. We are able to lift any kind of product weighing from 10 kg up to 1500 kilograms using compressed-air only", said **Praveen Hosur,** Country Manager of Dalmec India. Dalmec present in 45 countries has sold over 450 ma-

chines in India in the past three years already and are gearing up to face the enquiries generated by the show. "We have sold our manipulators to all the Auto majors, F&B, Packaging, Sheet metal handling and all related manufacturing industries in India. Using zero gravity, we make the weight of products almost weightless. This results in efficiency and effectiveness of the operators, an increase in productivity and also helps in reducing hazards due to handling various products. Even the fatigue in operators come down and reliability increases which is beneficial for one and all," Praveen added.

"Imtex is one of the big shows which attract quality crowds in all segments of industries. The idea of participating in Imtex is visitors can see what we can offer under one roof. We want to explore this opportunity and show we are the best in the industry," he commented.

Though Dalmec is the pioneers in this business and rated No 1 worldwide, Praveen and team are constantly looking out for Heads of Industries and Plants to challenge them with their unique problems that will ensure a new machine is conceptualised.

data M India to expand its presence

Pune based data M Software India has been in India since the 1990s and in the past ten years converted to become a subsidiary of the Germany headquartered group. After a decade of understanding the Indian market thoroughly, data M has now chalked out expansion plans for India explains **Max Sedlmaier,** Dipl.-Ing. (FH) I Director, data M Software India.

In 2005, data M started its operations in India to strengthen its product sales as well as support and engineering services. Data M is now increasing their employee strength from the existing numbers to a far higher number. There are even talks of shifting one of thier businesses from Europe/UK to India.

"data M India has an increasing base of customers. Over these years, we have been extending our consultation services to automotive industries, construction industries, locomotive industries and others in developing specialized products," he further added.

data M India had participated in the Imtex 2016 at BIEC, Bengaluru and according to Max, they are extremely pleased with the response they have been getting from prospective customers. As they are regular exhibitors in Imtex, they are now eagerly awaiting to showcase their software to these interested customers.

Fibro India showcases products at Imtex India with 'Made in India' tag

Fibro India, a wholly owned subsidiary of Fibro Germany was established in 2008 and has made rapid strides in the field of rotary tables and die sets. Fibro India has the distinction of being the only manufacturing plant outside of Germany. Now under the helm of **Vivek Nanivadekar,** Executive Director, Fibro India has chalked out plans to make its presence felt both in India and in the Asean markets. Vivek Nanivadekar spoke about Fibro India and his plans.

Q. Fibro India has participated for the first time in Imtex India. What prompted you to participate?

Fibro India though present in India for many years first by a dealer and then by a direct presence by having its own office felt the need to inform the public at large (companies) that we not only have an office but a manufacturing plant in Chakan, Pune. Not many are aware of this fact. After this show, the awareness factor has been created and we are going to participate in the Imtex 2017. What we are displaying here is 70% die sets and 30% of rotary tables. Next year it would be vice versa.

Q. When was this manufacturing plant established?

It was established in 2013 and we are now planning to acquire more land to expand.

Q. When did you take over Fibro India?

I have decades of experience in the machine tools industry and I took over the management of Fibro India three years back. Our first move was to beef up our marketing and support teams so that our existing customers are taken care of. Now, our plant is also operating and we are ready to expand.

Q. Do you cater to other countries apart from India?

Yes. We have impressed upon our headquarters that our quality is the best and we can supply to other Fibro offices in US, UK, Europe and Asia. We are supplying our machine tools to them directly. Earlier, it was routed through Germany that resulted in more time and costs. This move has made us very cost effective today.

Q. What is the future plans of Fibro?

Fibro Germany was very happy catering to their existing markets in Europe and USA. Today, we are expanding by leaps and bounds and with the new plot being acquired, we are sure to be more aggressive. We have invested over Rs 20 crore and we are confident of our HQ pumping in more funds as and when required. The Asian markets are growing and we have to be present. It is very important.

Ionbond Coatings eyes 45% market share, new centre in Chennai operational by May 2016

Japan based Ionbond Coatings having a presence in over 17 countries with 39 service centres in Europe, North America and Asia for the past 40 years has established its presence in India with plants in Pune and Chennai. The company has chalked out big plans for India and excerpts of the interview with **Dr. Atul Kulkarni,** India in Charge and GM Operations.

Q What is your focus for Ionbond in India?

Our focus at Ionbond in India is to provide both high quality standard coating portfolios for the cutting, moulding and forming tool market and to offer customized solutions for our customers making OEM components.

Q How is the response at the IMTEX 2016?

We have been participating in IMTEX 2016 every year and we are very pleased with the response we get. The showcasing of our latest technology results in enquiries and interests that is very encouraging for us.

Q Post IMTEX, what would ionbond be doing?

As mentioned earlier, we have a presence in Pune and Chennai in India. We are setting up a new plant in Orgadam located in Chennai. This centre is a state of the art plant and the technology is at par with what is available in say Japan or USA. The Orgadam centre has the latest technology for surface coatings which are primarily used in all industrial and medical sectors.

Q What is the cost of setting up this plant? When is being operational?

We have invested close to Rs 10-12 crore in this plant. We expect it to be operational by May 2016.

Q What is the market share of Ionbond in India?

We have a market share of close to 25% and with the new plant becoming operational, we expect to garner a share of 45%.

MTI takes up Leifeld distributorship

Machine Tools India, one of the oldest machine trading houses companies in India established by the British in 1928 was later bought by one of the Tata family members in 1971. Six years back, it changed hands with New Delhi based business man Ashok Gupta purchasing it. He has a strong presence in the Logistics business. The company has a turnover of Rs 500 crore and is still the one of the largest trading houses in the country. Over 50 companies across the world in the business of machine tool, metrology and sheet metal have tied up with them for distributing their products and technology.

Joseph Francis, Director, Machine Tools India, shared that Machine Tools India recently took up the distribution of a German based company called Leifeld and was showcasing the same exclusively in this exhibition.

"Leifeld is a pioneer in the spinning and flow forming machines across the world and has now marked its presence in India. Though its products were sold directly to manufacturing companies in India, Machine Tools India is now the official distributor," he said.

Joseph Francis has a reputation to upkeep and has repeatedly spoken about after sales support and service. "It is easy to sell a product to a customer but it is challenging to provide after sales support. Many companies have gone bankrupt as they are unable to provide this particular service to the fullest satisfaction. Machine Tools India has laid special emphasis on this and has over 70 support engineers dedicated to train and support customers after the sales are complete."

Machine Tools India apart from catering to the private sector has a strong presence also in the Public sector companies such as Railways, Defence and HAL to name a few.

Alkon Plastics bets big on ecommerce logistic companies for small part storage bins

Mumbai based Alkon Plastics, a three-decade old company in the business of plastic storage systems are eyeing the ecommerce logistics industry aggressively. Logistics companies which have sprung up in the past few years handle hundreds and sometimes even thousands of products of all shapes and sizes.

Alkon caters to the pharma, auto and hospital industry also. Currently over 50 distributors in the country and a presence in over 30 countries.

Sandeep Marhwa, Export Director, Alkon Plastics explained about the need of the hour in this highly unorganized industry.

This Rs 50 crore company based out Mumbai focuses on small parts management system as it is virtually a monopoly today. More than a thousand SKUs are stocked at times in a typical manufacturing or ecommerce set up but there is no effective system to handle this

Basically, larger firms such as Neel Kamal focus more on the large SKUs as it is a big volume business. Alkon helps a typical warehouse manager by offering small storage systems that helps them reduce space which is very crucial and timely retrieval.

"We have come out with a large variety of sizes today. We have over 58 sizes and 80 to 90% of customer requirements are met by us immediately on enquiry," he added.

Commenting on their participation at Imtex Bengaluru, Alkon has been a part of Imtex for the past five years and have seen successful enquiries arising out of their participation.

Euromac enters India, showcases latest punching machine at IMTEX

Italy based Euromac, pioneers in the field of Punching. Bending and Notching machines have entered India with its office in Mumbai and dealers across North. In India, Euromac had commenced operations in July 2015.

Sanjeev Maurya, Sales Manager, Euromac India, said, "We have just launched the latest punching machine which has the highest speed of punching till date compared to the competition. The response for this has been tremendous."

Euromac has its manufacturing plant in Moderna, Italy and 98% of the machines built are in-house that ensure total quality control of the machines with no chance of errors.

The other products that will be shortly launched are the Apex Bend which is a vertical bending machine that will be rolled out next year – January 2017.

Commenting on Euromac's participation in IMTEX, Sanjeev said, "We just cannot ignore IMTEX. It is the biggest show in this part of the world. We know the buyers will come and it is easy for us to showcase our products. We decided to be here and the response has been good. The customers admire our product as no one has this kind of technology."

"Keeping in mind price sensitive Indians, our machines are economically priced and as earlier mentioned they are built totally in house so quality is unmatched. The features are good and eventually manufacturers can make more margins using our machines. The capacity and productivity levels are more than 30% which is extremely good," he said.

Euromac India has a sales target of selling one machine a month to start with and as they are new in India, their focus is on building their team which is currently across North and West. South of India will soon see Euromac employees in Bangalore and Chennai.

The author is a Chennai based freelancer.

Solid stamp of **trust** and **reliability**

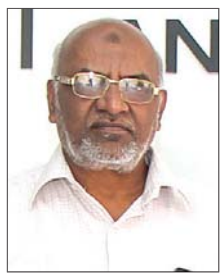
When a well-known locking solutions and systems manufacturer decided to go for CNC machines, it categorised the supplier on the basis of power required to run the machine, operational safety, environment friendliness, end application and above all whether it gives the best productivity in terms of optimised cycle time.

Since its beginning in 1897, the Godrej Locking Solutions and Systems, a unit of Godrej & Boyce Manufacturing Company Ltd, has set several benchmarks in the locks industry – from the first spring-less lock in 1907 to the iconic 'NavTal' in 1954 to the Ultra range in 1995 to the revolutionary 3KS in 2007. From a state-of-the-art manufacturing facility in a suburb of Mumbai, the company provides locking solutions that reach homes, offices, industries and the hearts of millions of people in India and around the world for whom 'locks' means Godrej.

A symbol of trust and security for 118 years, lock on almost every Indian home's front door is of Godrej. It goes to show how the customers have placed their trust and confidence in the company. Since the first lock was manufactured in 1897, it has been Godrej's endeavour to constantly evolve and design products and services that exceed the expectations of individual and institutional customers. Over the years, the locks have changed in form, function and scope of application, but one thing remains constant – the solid stamp of trust and reliability. The company adheres to global quality norms and hold ISO 9001, ISO 14001 and OHSAS 18001 certifications.

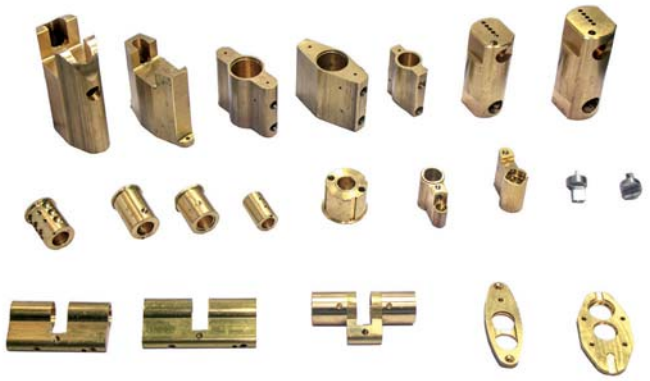
"Explaining the manufacturing process, the official said they carry out forming, die casting, plating and then machining (that includes milling, drilling, turning, boring etc.) of the products."

"Initially, we were carrying out manufacturing process on conven-



Since our style of manufacturing is quite flexible, we designed some special fixtures also that matched our machining process. However, later we shifted to vertical machining centres (VMCs) and turning centres as they give us opportunity to machine various designs of locks on a single machine."

MHM Shaikh,
Associate General Manager (Manufacturing), Godrej Locking Solutions and Systems



tional lathe and special purpose machines (SPMs). Since our style of manufacturing is quite flexible, we designed some special fixtures also that matched our machining process. However, later we shifted to vertical machining centres (VMCs) and turning centres as they give us opportunity to machine various designs of locks on a single machine," the Associate General Manager (Manufacturing) of the company, MHM Shaikh said.

"We serve all types of customers and customise locks as per demands of the consumer. This is the reason why one can see Godrej lock on almost every Indian door. This trust of customers on us has transformed us into a company that provides locking solutions," Shaikh said. Explaining the manufacturing process, the official said they carry out forming, die casting, plating and then machining (that includes milling, drilling, turning, boring etc.) of the products. "In fact we do all the processes that a VMC has been designed to do," he added.

As on today, the company has over 50 machines of which 20 are Haas machines. "We carry out machining on VMCs, turning centres and turnmill centres. We purchased first Haas machine in 2006 and by 2010 we had six Haas machines. After that, we are adding one machine in our kitty almost every year," the Senior Manager (Manufacturing) of the company, D N Kharat said.

The methodology adopted by Godrej for selecting any machine tool is that they first prepare an exhaustive list of parameters and features as per the end application. After preliminary round of discussions with various vendors, a comparative analysis is done and 5-7 vendors are selected who match at least 80% of their requirement.

Explaining the rationale behind selecting Haas machines, the officials said that when the company decided to go for CNC machines, it categorised the supplier on the basis of power required to run the machine, operational safety, environment friendliness, end application and above all whether it gives the best productivity in terms of optimised cycle time. "We found everything in Haas and decided to go with them. Besides this, we were satisfied with the maintenance aspect of Haas machines as it involves minimum wear and tear that reduces operational cost. Also, the service support from Haas is excellent and their engineers respond to your call within no time. This adds value to our trust on Haas and its machines," the officials said.

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D N Kharat,
Senior Manager (Manufacturing), Godrej Locking Solutions and Systems

"The installation of ST10Y turnmill centre from Haas did magic for us. It reduced the cycle time beyond our expectations as it gives us advantage of two machines in one. We plan to add many more from this series," Mr Shaikh quipped.

"Ever since we installed first Haas machine, the company has helped us a lot in the process that included service and application support. We were able to lessen the machine downtime and increase our productivity. Our end component accuracies are in the range of 20 microns and we are able to meet the same with Haas machines," Shaikh said and added that Haas machines are true value for money.

"And with continual improvement in terms of precision deliverables and responsiveness to their customers, Haas is worth recommending to the industry. I am sure that with Haas' support, Godrej Locking Solutions will continue to reap rich dividends in the years to come. It's a partnership built on trust, support and continual engagement which will certainly go very far," Shaikh concluded.

Source: Haas Factory Outlet – A Division of CNC Servicing & Solutions (I) Pvt. Ltd.

Ensuring **precision**

A tier one auto component supplier uses machine tool probes for precision metrology in the manufacturing of forged wheel and car chassis to meet quality requirements for the European car market

The automotive industry is fiercely competitive. Tier-one manufacturers are constantly looking for breakthroughs in areas such as performance, safety and innovative design, all of which places ever stricter requirements on the processing of metal components. SuperAlloy Industrial Company Ltd. (SAI) is a supplier of high-quality lightweight forged metal products. The forged wheel and car chassis components SAI produces are used by the world's top car manufacturers, thanks to the company's insistence on premium quality and precision manufacturing. Renishaw machine tool probe systems, including the OLP40, RMP60, OMP60, and the NC4, are a perfect match for SAI, allowing SAI, assisted by Renishaw, to make great progress on the route to high end precision manufacturing.

SAI's relationship with Renishaw began with CMM measurement. Dr Henry Shih, CEO of SAI, explains: "When we entered the European market in 2008, we realised that our high-end car manufacturer clients' quality, dimensional stability and precision requirements for metal products were extremely high. While our equipment at the time was able to meet their volume requirements, we needed to enhance product quality and reduce the amount of rework and corrections during processing so as to achieve high quality levels. Through Renishaw, we discovered machine tool probe measurement solutions that could deliver in-process measurement control and real-time data feedback on our existing CNC machines, thereby providing effective precision manufacturing control. This was a massive help in terms of increasing production efficiency and precision." SAI is currently focused on supplying high-quality forged metal products. SAI's customers are all high-end automobile manufacturers that demand specialised technologies and services, including some of the world's top-tier car makers such as BMW, Mercedes-Benz, VW, Porsche, Ferrari, Ducati, Bentley, Audi, Rolls Royce, Jaguar, Land Rover, Ford, Chrysler, Toyota, GM and Honda.

The production of aluminium forged wheel rims

The forged wheel production process is complex, particularly for low-volume, high-diversity production. SAI produces more than 200 types of wheel which requires the utmost production flexibility. Strict standards are applied to workpiece setting, reference measurements and key dimension detection during metal processing, as the precision requirements for machining wheel mounting surfaces exceed the requirements of even the aerospace industry. SAI currently has 600 CNC machine tools working on wheel rim production, including 150 Victor Taichung lathes and 450 YCM milling machines. All these machine tools are engaged in production on a three shift process five days per week. So how does SAI ensure that the precision and stability of 600 machine tools remains consistent?

In order to increase production precision and reduce scrap, SAI equipped the relevant lathes with Renishaw OLP40 touch probes, which use optical signal transmission and are adapted for turning processes. The CNC milling machines were equipped with RMP60 machine tool probes which use wireless radio transmission to measure workpiece position and reference height, as well as providing in-line key dimension detection, thereby increasing production performance.

Y.C.Kao, Senior Manager of SAI's Wheel Production Department, explains: "The automated workpiece setup enabled by Renishaw machine tool probes allows us to ensure that the cutting dimensions remain stable and consistent when we are producing wheel rims, as well as effectively reducing human

error. For example, the air valve hole cutting thickness Process Capability Index (CPK) rose from 0.71-1.13 to 1.35-1.43 when using Renishaw machine tool probes."

3D appearance modelling for forged wheel

Wheel styling design has moved from flatter surfaces towards more 3D effects in recent years, causing wheel rims to become ever larger, and placing increasingly stringent demands on processing precision. Until 2011, SAI's acceptable tolerances for wheel rim production (with the flatter designs used at the time) were 0.05-0.10mm. However, the tighter tolerance requirements of the current 3D designs has gradually increased cutting times and processing; wheel rim appearance processing takes as long as 180 to 240 minutes, with the result that any rework imposes considerable pressures in terms of both production time and cost.

OLP40 probes allow SAI to carry out in-process measurement control to achieve tolerance of less than .0.02 mm, and can replace human measurements and updates to workpiece coordinates. This greatly improves cutting and efficiency for surface precision processing after coating. Even more importantly, it reduces rework by 80 percent, as before the introduction of in-line measurement systems wheel production generally had to be processed twice to achieve the necessary precision. When combined with Renishaw software, the probes not only play a role in guidance during production, but also provide in-process control and real-time feedback, immediately updating and correcting data during metal cutting, and efficiently monitoring and controlling dimensions and deformations. Renishaw machine tool probe systems have allowed SAI to increase production precision and product quality, while also reducing scrap from 2-3 percent to 0 percent, and improving production efficiency.

Precision processing for car chassis

The automotive industry has already evolved from focusing on basic safety requirements and performance towards enhanced driving comfort, improved fuel efficiency and reduced emissions. The safety and stability of lighter vehicles moving at high speed is closely connected to the manufacturing of the car chassis. The higher the precision of chassis produced with aluminium alloys, the safer and more stable the car is when travelling at speeds as high as 200 km/h, and the more comfortable the driving experience. The lighter the chassis, the lower the fuel consumption, and thus the easier it is for the vehicle to meet environmental requirements.

SAI has continually improved its forging and mechanical processing technology. The company moved into the processing and production of precision car chassis in 2011. SAI now has 38 Tongtai high end five-axis CNC machine tools, all of which are equipped with Renishaw OMP60 optical machine tool probes and NC4 non-contact laser tool setters.

Unlike wheel rim production, chassis production tends to involve high volume and lower diversity, but nevertheless still requires high-precision metal cutting and processing. Renishaw OMP60 optical machine tool touch probes use advanced modulated optical transmission to provide 360° signal transmission. The probe simplifies measurement and calibration processes, thereby achieving high-precision measurement for workpieces with complex profiles. The NC4 uses innovative laser technology to perform high-speed, high-precision measurement of cutting tools as small as 0.2 mm, and to perform tool breakage detection on cutting tools as small as 0.1 mm. Its non-contact method avoids the potential for causing wear or damage of cutting tools.

Production times for car chassis are relatively short, and can generally be kept within 20-25 minutes. Renishaw machine tool probe systems provide the operator with turnkey solutions for real-time positioning and measurement, and in-process control measurement, helping to further automate production processes.

Trusted brand, thoughtful service

SAI chose Renishaw because of the company's trust in the Renishaw brand. Shih explains: "When we choose suppliers, we don't just look at the price of the product; we also attach a great deal of value to their R&D capabilities and service. Renishaw has an excellent reputation in manufacturing industries, and also provides service for different industries, so it doesn't just offer a product or a solution, but also shares with us its experience, expertise and the industry's best practices. Renishaw is also meticulous in terms of its technical support, and the Renishaw team reacts quickly to solve problems; this is particularly impressive to us."

SAI's trust in Renishaw began with the use of CMM probes. The company now has 10 CMMs fitted with Renishaw probes. For machine tool performance checks, SAI has also fitted its machining centres with Renishaw QC20-W telescopic ballbar measuring instruments for the most comprehensive diagnostic testing and verification functions.

Source: Renishaw

Reaching out the Global Manufacturing Industry

ISCAR introduces a multitude of advanced new cutting tools

Constantly at the forefront of technical developments in the area of cutting tool advancements, ISCAR maintains its unrelenting progress as a result of the company's continuous creation of innovative, high-quality products.

Innovation is in the DNA of ISCAR. Through the groundbreaking work of the company's prolific R&D Department, and prompted by the ever evolving needs of global industry, each year ISCAR introduces a multitude of advanced new cutting tools. ISCAR's quest for continuous cutting tool progress ensures that customers receive the very latest, most efficient metal cutting technology available.

ISCAR 'in-the-groove' with a parting gift for efficient machining

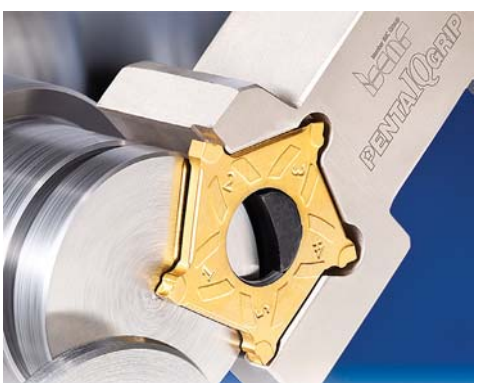
ISCAR's progressive policy of unceasing product enhancement is reflected in the recently launched additions to ISCAR's comprehensive GRIP range of parting and grooving tools and now provides the most comprehensive range of highly efficient products for all parting and grooving situations. Included in the range is an extensive choice of insert geometries, chip breakers and carbide grades.

ISCAR fully understands that parting and grooving operations are extremely important aspects of the turning process. As multiple factors need to be considered in all parting and grooving operations, including the machine tool being used, the kind of material being parted/grooved, the required depth of cut and feed and speed rates, ISCAR is now able to supply the most appropriate, highly efficient parting and grooving solutions for all possible circumstances.

In summary, when parting and grooving, ISCAR cutting tools increase productivity and profitability as they last longer and allow much increased cutting parameters to be applied.

TANG-GRIP- A unique tangential single-ended insert with a revolutionary clamping method.

ISCAR's TANG-GRIP is a high quality, single-ended insert that was developed to enable highly efficient parting. A revolutionary, secure clamping method using a tangentially orientated pocket provides pocket life 3 times that of any other conventional self-grip system. TANG-GRIP's robust clamping method enables machining at high feed rates and provides excellent straightness and surface finish characteristics. [fig.1]



ISCAR's latest TANG-GRIP innovation is the introduction of cost effective blades. TANG-GRIP flat top economical blades now feature 4 pockets compared to the previous version which had 2 pockets, whilst the integral shank tools feature 2 pockets compared to its predecessor which had a single pocket.

By doubling the number of insert pockets, when compared with other tools and blades, the advanced new shank tools and blades deliver the cost-effective advantage of half the price per pocket. No other cutting tool manufacturer is able to offer such an economical advantage.

The new ISCAR TANG-GRIP blades and tools are extremely rigid and are capable of bearing heavy tooth loads (high feeds), they resist lateral loads and deliver excellent surface straightness. The 35 mm blades, which are 30 mm longer than any other standard blades, can be used for deep grooving and parting applications.

Due to TANG-GRIP'S beneficial flat top configuration, no chip obstructions are encountered under all possible machining conditions.

Covering all parting and grooving applications, the advanced TANG-GRIP range of high quality inserts are available with a wide variety of chipformers, with both neutral and angular frontal cutting edges. The extensive range comprises blades and inserts in 1.4-12.7mm widths in IC5400, IC830, IC808, SUMOTEC grades and includes an easy to use clamping and extracting device.

The Tang-Grip blades feature an engraved ruler to assist in overhang adjustment and are supplied in standard sizes which fit ISCAR's blocks.

PENTA-IQ-GRIP – A 5-star pentagonal parting and grooving insert for up to 20mm depth of cut.

Following the successful introduction of the PENTA 24 and PENTA 34 inserts, ISCAR has recently introduced the latest evolution of the renowned PENTA family PENTA- IQ-GRIP. [fig. 2]

As the PENTA prefix suggests, ISCAR's advanced new

parting insert boast 5 cutting edges. PENTA-IQ-GRIP inserts, available in 2 and 3 mm widths, are ideal for parting up to a 40 mm part diameter or up to a 20 mm depth of cut.

An innovative dovetail wedge clamping system ensures very stable PENTA-IQ-GRIP insert clamping, secure edge indexing and rapid insert replacement. In addition, the robust structure enables the application of high machining parameters, resulting in much reduced cutting time.

As well as delivering significant performance advantages, PENTA-IQ-GRIP provides excellent straightness and surface finish characteristics in parting applications.

PENTA-IQ-GRIP outclasses all other self/screw clamping mechanisms currently available. Also, when compared to competitors' parting inserts that have more than 2 cutting edges, PENTA-IQ-GRIP provides double the depth of cut.

ISCAR's advanced new PENTA-IQ-GRIP is able to outperform other manufacturers' single, double or triple-edged inserts for grooving and parting applications.

PENTA-IQ-GRIP assures prolonged insert tool life, at least double that of single, double or triple ended parting inserts. PENTA-IQ-GRIP inserts are available in 3 sizes for parting: D22 (up to 22mm part dia), D32 (up to 32mm part dia), and D40 (up to 40mm part dia).

D22 and D32 mm sizes can also be used on Swiss-type and small CNC machine tools.

All inserts feature C- and J-type chipformers to accommodate a wide variety of machining and material applications. PENTA-IQ-GRIP is produced from grade IC808G; a hard, fine grain substrate with excellent chipping resistance, whilst a TiAlN PVD coating provides impressive wear resistance.

DO-GRIP – The one and only double-sided twisted parting insert with no depth of cut limitation.

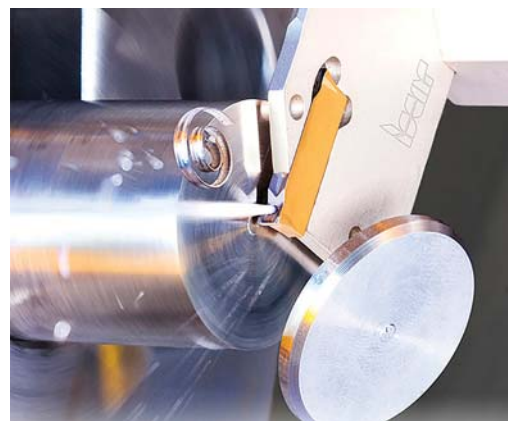
In addition to highly efficient parting inserts in single and double-ended conventional configurations, ISCAR offers a unique double-ended twisted geometry for unlimited depth of penetration. The DO-GRIP range also includes the largest choice of parting widths available in today's market, covering all application ranges. ISCAR offers a wide variety of chipformers and the most advanced grades to ensure unbeatable performance and extended tool life. [fig. 3]

JET HP – A cool answer to a hot problem!

In grooving and parting operations, applying high-pressure coolant provides excellent chip breaking results on all materials. On exotic alloys such as Inconel and titanium, it is usually impossible to break the chips with standard external coolant pressure. High-pressure coolant reduces

or even eliminates built-up edge phenomenon, especially when machining stainless steel and high temperature alloys. [fig.4]

JET-CUT, a part of the JET HP family, is ISCAR's DO-GRIP high quality parting insert that features an ingeniously designed internal coolant channel that passes through the insert. This advantageous arrangement ensures that the insert's body is internally cooled while also delivering an efficient coolant jet close to the cutting edge. [fig. 5]



Materials such as titanium, Inconel, or austenitic stainless steel tend to harden during the cutting process and to form long and tangled chips. The efficient delivery of coolant to the cutting zone by the use of JET-CUT DO-GRIP parting inserts improves chip formation and slashes flank and cratering rates.

A common problem encountered when using conventional cooling in grooving and parting applications is that the chips can prevent the coolant from reaching the cutting edge, thus reducing the insert's life. Over, the unique design of the JET-CUT DGNC inserts enables the efficient delivery of high levels of coolant contributing substantially to prolonged tool life.

Compact, chip-repellent design

The new R2.40 plastic energy tube from igus snap-open lid ensures easy filling

At the Motek and at the EMO, igus is presenting the energy tube series R2 with 40 millimetre inner height, which offers the right solution for compact installation spaces such as in machine tools. Like its big brother, R2.75 with 75 millimetres interior height, the new energy tube provides users with protection against chips, dust and dirt. At the same time it is easy to open and close, making assembly work very simple.

Chip-resistant energy chains, so-called energy tubes, offer cables protection from external influences in dirty environments or inside processing areas. Constructed on the basis of the cost-effective E2-principle (two parts per chain link) made of tribologically optimised plastics from igus, the chip-proof energy tubes of the R2 series also offer, in addition to the advantages of lubricant and maintenance free operation, protection from external dirt accumulation and flying chips. At the Motek igus will present the energy tube in a new size with 40 millimetres inner height to a specialist audience. This can be opened both along the outer radius (R2.40) and in the inner radius (R2i.40), allowing users to choose an option that is the easiest for them when filling the cables and hoses. The lids can be snapped open in either direction and need not be completely removed for filling the tube.

High cable protection trough smooth inner contours and curvature snap-open lids made of the same material. The universal mounting brackets of the R2.40 moreover ensure chip protection and provide comprehensive options for internal strain relief. *(Source: igus GmbH)*

Gentle design for cables and easy on the ear: The contours of the lid of the R2.40 energy tube are smooth and their curvature and tight manufacturing tolerances guarantee that chips do not accumulate between the stop dogs. Smooth inner contours of the energy tube and rounded latching separators made of the same material also protect the cables. The integrated grid design also ensures a firm hold of the interior separation, even in side-mounted applications. With an integrated brake on the individual chain links, the chain runs audibly quieter. Less vibrations means more precise work on the workpiece. With the double stop dogs, the energy tube can absorb high fill weights and can even master long unsupported lengths. The universal mounting brackets of the R2.40 moreover ensure chip protection and also provide comprehensive options for internal strain relief.

For more details contact: Harish Booshan; Product Manager; E-ChainSystems® & ReadyChains®; igus (India) Private Limited; Email: Harish@igus.in; Website: www.igus.in

Sensors and signal lamps from one source

Leuze electronic now offers a versatile range of industrial LED signal lamps with degree of protection IP 66 for a temperature range of -30°C to 60°C.

These transducers are extremely bright, vibration-resistant, maintenance-free and energy-saving, which is typical of LED technology. Built-in indicator lamps as well as modular signaling column elements for complete stack lights provide many design possibilities for multicolored, all-round and clearly visible signaling. Continuous and flashing light variants, also with acoustic signalers, as well as extensive accessories for easy mounting increases flexibility for applications in intralogistics, packaging systems and large machines or automated modules in machinery. The signaling devices signal individual operating states as well as processes with increased hazard potential, such as muting, to guarantee safety at work. Leuze electronic consistently strengthens its position as the leading supplier of electrical automation with this new comprehensive product range – from signal capture to signaling.

For more details, visit: http://www.leuze.in/en/india/

Ace Manufacturing Systems Ltd. launches new high speed DTC 400 XL

Micromatic Machine Tools Pvt. Ltd. launched the new High speed Drill Tap center DTC – 400 XL on February 9, 2016 at its Technology center in Peenya Bangalore. DTC 400 XL is the latest contribution to Indian manufacturing from the stable of Ace Manufacturing Systems Ltd., the machining center arm of the India's largest machine tool conglomerate – Ace Micromatic group.

USPs of DTC 400 XL

- Designed for high speed drill Tap application along with full milling capability
- Fastest Chip to chip time of 1.8 sec
- Compact & Powerful, having a choice of BT-30 / BBT – 30 spindles
- Optimally designed and built to ensure accuracy during high speed operation
- Rigid structure with roller type LM guideways for higher rigidity and superior performance
- High rapid traverse of 60 / 60 / 48 mts/min - on X / Y / Z axis respectively
- Quick return function enables accurate tapping and shorter cycle time
- Equipped with high speed pocket tilting type 16 tool Automatic Tool Changer
- Delivers high accuracy and high productivity at a very optimal price.

Dr. S Devarajan, Sr. VP – TVS Motor Co. Ltd, graced the ceremony as the chief guest and launched the new product amidst a large crowd of manufacturing professionals from in and around Bangalore. He shared his vision and deep insight of manufacturing and machine tools and the importance of various aspects of TPM & Lean manufacturing.

The presence of N K Dhand, MD of Micromatic Grinding Technology, P Ramadas, MD, AMS and current IMTMA VP, and T K Ramesh, CEO of Micromatic Machine Tools Pvt. Ltd. made the event memorable. The event ended with a Vote of Thanks from S. Sreekanteswar, GM – Market development & Strategy, with the assurance that Ace Micromatic group would continue to work in the direction of creating new products to improve productivity and support Indian manufacturing in their vision of becoming globally competitive.

For more information, visit: http://amsl.in/

Compact powerhouses with integrated intelligence

SCHUNK has further developed the modules of the second PowerCube generation, placing greater focus on heavy-duty use in industry. With the PR 2, PDU 2 and PSM 2 high-performance rotary modules, SCHUNK has expanded its mechatronic program with three especially compact drives with compact performance. All regulating and power electronics have also been fully integrated into the new modules. This saves the need for an external controller, minimises the cabling necessary and reduces susceptibility to errors.

The next generation of PowerCubes: The PR 2, PDU 2 and PSM 2 intelligent mechatronic modules will convince you with maximum performance and minimum space requirements.

Fast and simple commissioning: Equipped with standardised plug connections, the modules can be quickly and easily connected. Control can be provided via Profibus (up to 12 Mbit/s) or CAN-Bus (up to 1 Mbit/s). For commissioning and parameterization via PC with the SCHUNK Motion Tool, the modules have a USB device connection. Addressing is done manually via an easily configurable rotary encoding switch. Initial module movements can be realised manually via a DIP switch. The status of each module can be seen on an LED display. Due to Harmonic Drive gears, the PR 2, which was designed as a rotary module, and the PDU 2, conceived as a linear axis drive, achieve very high torques of between 16 Nm and 184 Nm, depending on the size. For fast movement of small masses, the direct-driven PSM 2 can be used. At a torque of up to 0.7 Nm, the compact module achieves speeds of up to 4,800 rpm.

For more information, contact: Satish Sadasivan, Schunk Intec India Pvt. Ltd., Email: info@in.schunk.com; Web: www.in.schunk.com

New performance class for drilling

Walter adds the high-end DC170 Supreme drill to its range of tools

The new Supreme tool, the DC170 Supreme for steel and cast iron workpieces, is more than just another high-performance tool. Thanks to its revolutionary design and new features, this high-end drill is in a performance class which has never before been achieved and boasts the very latest high-end technology. It is the characteristic lands in particular which make this tool stand out from the rest, both visually and in terms of technology. The flat grooves guide the coolant that is released at the tip around the drill, ensuring 360-degree cooling. This allows the circulating coolant to control the machining temperature.

The radial lands on the tip are a new feature never before seen on a solid carbide drill. These continuously guide the tool, reduce vibration to a minimum and keep the tool exactly on course. Furthermore, its unique design means that more solid carbide mass confronts the cutting forces than on a normal solid carbide drill. This makes the DC170 Supreme tougher, which is particularly important when drilling inclined hole exits or cross holes. In short: All these new features ensure excellent process reliability and outstanding tool life, even with the highest of cutting data. In addition to the currently available drill lengths of 16xD and 20xD, customers can now also choose from the shorter dimensions of 3xD, 5xD, 8xD and 12xD. Custom-made versions can also be supplied via the Walter Xpress Service for rapidly available special tools.

For more information, visit: www.walter-tools.com

The DC170 Supreme – THE IKON OF DRILLING – stands out from other drills due to its revolutionary design, characteristic lands and brand new features. *Image: Walter AG*

LVD introduces new design PPEC Series Press Brakes

LVD Company nv announces a new generation of the PPEC series hydraulic press brakes. PPEC models up to 350 tons now feature a new modern and ergonomic design with integrated status lighting. In addition, the touch control for all PPEC machines, ranging from 35 to 640 ton, has been upgraded to LVD's latest graphical icon driven TOUCH-B controller.

Ergonomic design

The new design with built-in status lighting gives the PPEC an elegant appearance in line with the Easy-Form® press brakes. The status LED lights indicate the machine's operation status, enabling more effective shop management for higher throughput. An optional LED lighting system illuminates the back gauge and front work zone areas to provide better operator visibility.

Intuitive touch screen control

The touch control has been upgraded from the CADMAN® Lite control to the full-featured, icon driven TOUCH-B control. Working with TOUCH-B is easy and intuitive, no matter the skill level of the operator. With minimal input he can create and simulate 3D-designs on a 19" touch screen. Additionally the controller is compatible with LVD's offline bending software CADMAN®-B.

Press brakes equipped with the TOUCH-B control also feature a jog button on the foot pedal, allowing the operator to 'jog' individual axes of the machine for fine adjustments.

The status LED lights indicate the machine's operation status, enabling more effective shop management. *Photo LVD*

For more details, contact: Product Manager Press brakes, Steven Lucas, LVD Company nv; Email: slcs@lvd.be; Website: www.lvdgroup.com

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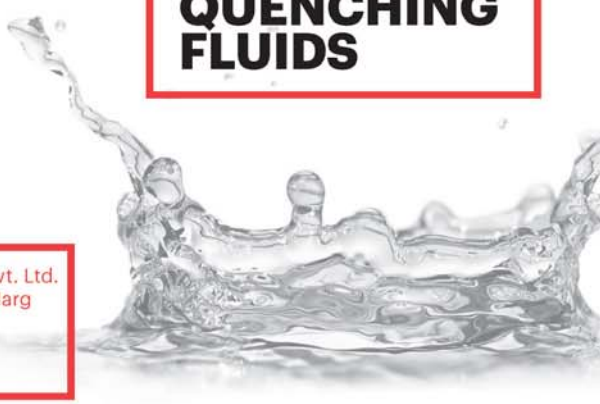

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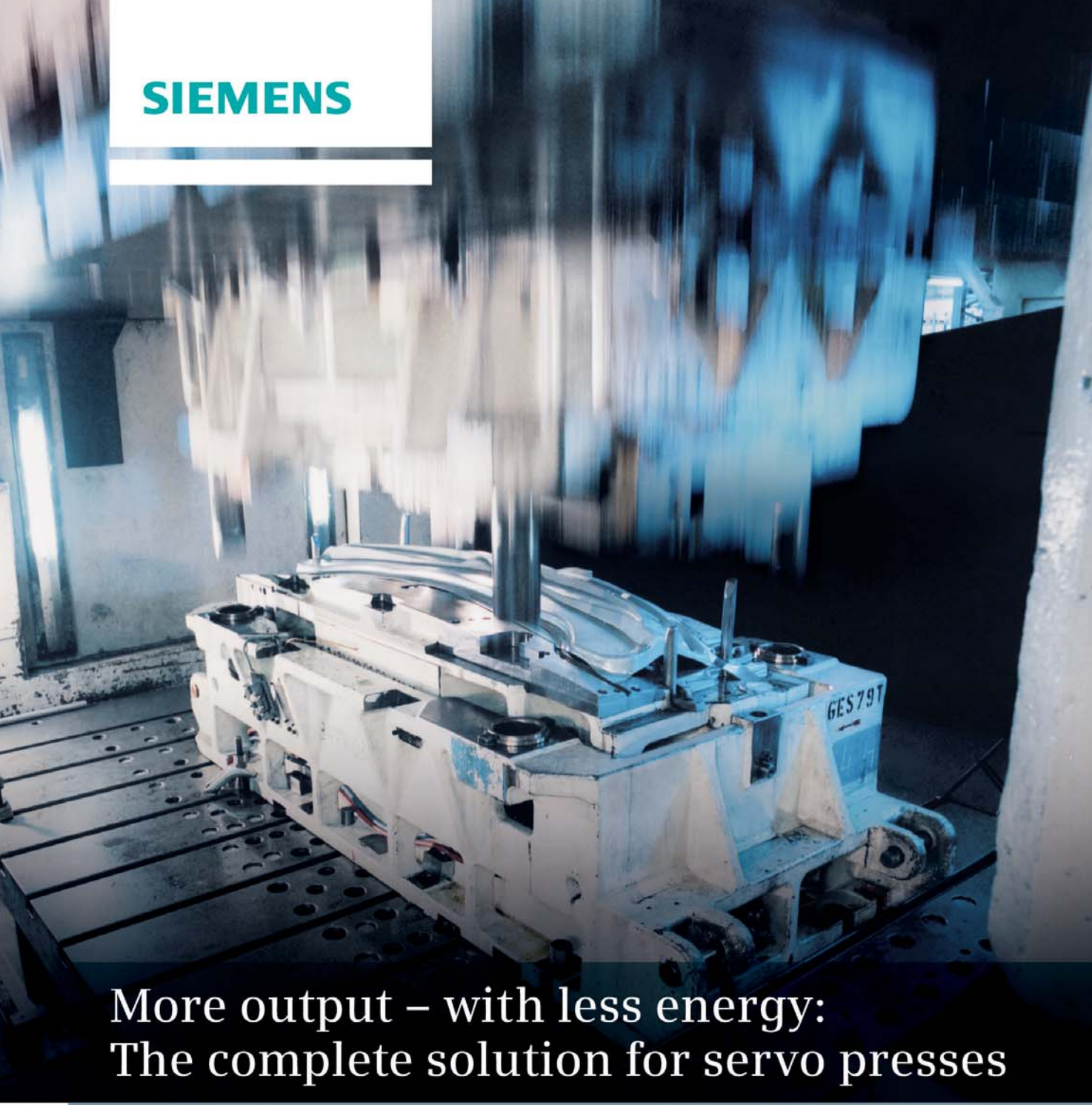
SIEMENS



More output – with less energy: The complete solution for servo presses

Metal forming

How to combine the flexibility of hydraulic presses with the speed of mechanical presses, maximizing your energy efficiency at the same time?

With our complete package for servo presses. This is based on proven standards, particularly the motion control system SIMOTION® and the SINAMICS® drives. It not only increases your output but also optimizes the movement profile for the plunger, ensuring long-term energy savings.

To find out more, go to: www.siemens.com/metalforming or call us on 1800 209 1800 (Mon-Sat 8am to 8pm IST)

www.siemens.co.in