

THE MACHINIST

RNI No 71129/98

Volume 12 Issue 2 • February 2017 • Rs 75

www.themachinist.in

**AUTOMOTIVE
RISE OF THE
ELECTRICAL VEHICLE**

**BUDGET
A THUMBS UP
FROM THE INDUSTRY**

**IMTEX 2017
THE TRANSFORMATION
BEGINS!**

NOW OR NEVER!

*A cheerful **Kaher Kazem**, President and MD, General Motors India, defies the challenging scenario as he endeavours for a magical turnaround for his organisation in the Indian market*

We're entering the future of Are you coming?

Optimize your machining processes and decision-making with CoroPlus®, the new suite of connected solutions for digital machining.



Save time and improve quality in design and planning



Get real-time machining insights



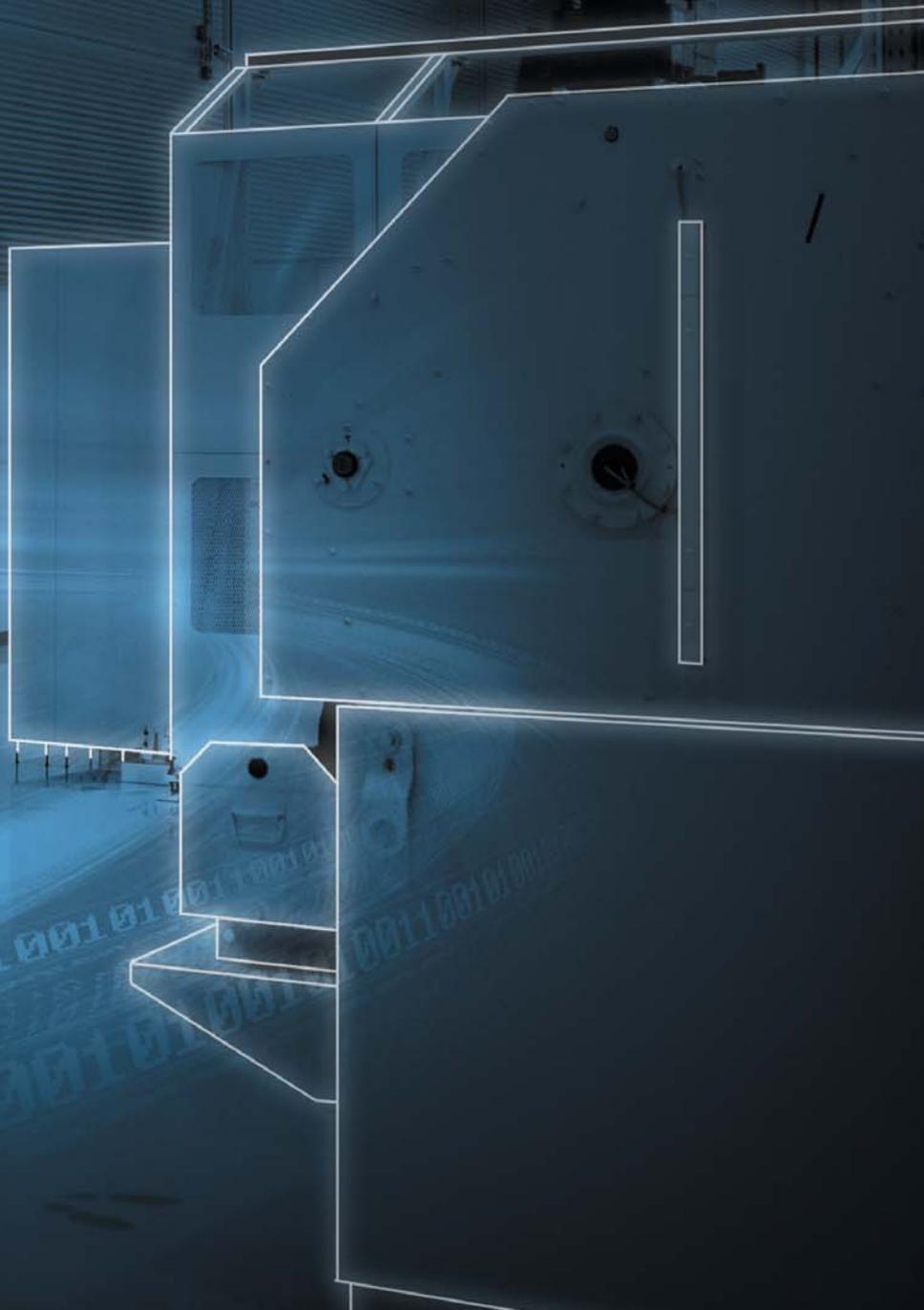
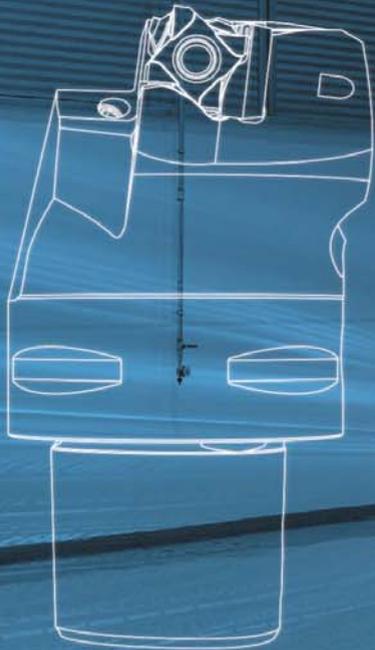
Improve your processes through advanced machining analytics

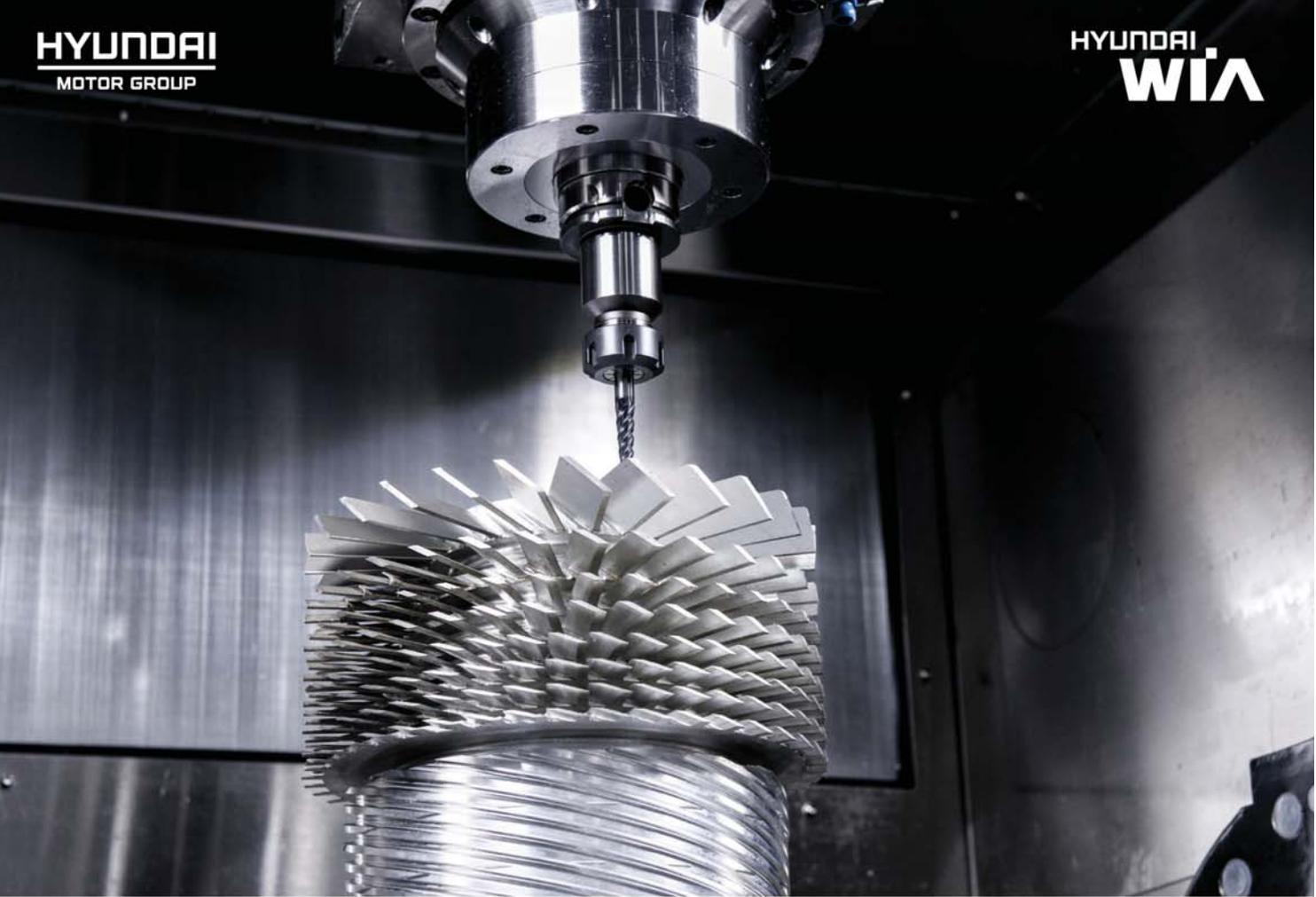


Visit us online at [coroplus.sandvikcoromant](https://coroplus.sandvikcoromant.com)

manufacturing.

SANDVIK
Coromant





INSPIRATION In TECHNOLOGY - PROGRESSIVE TECH



KF5600
(Next generation VMC)

L2600SY (Robust Y-Axis Turning Center)

XF6300 (Flexible Performance & state-of-the-art 5-Axis VMC)

HYUNDAI WIA INDIA PVT. LTD.

#4/169, Rajiv Gandhi Salai, (OMR), Kandanchavadi, Chennai - 600 096, Tamilnadu, India
Tel. +91 76049 03348 e-mail. sales@hyundai-wia.com, service@hyundai-wia.com
<http://www.machine.hyundai-wia.com>

DIE & MOULD SOLUTIONS



RDXSeries

CNC High Speed Vertical Machining Centre (Die Mould)



PerformanceSeries

CNC Machining Centre (High Torque)

Performance LargeSeries

CNC Large Vertical Machining Centre



NXSeries

CNC Double Column Machining Centre (5 Face)

K MillSeries

CNC Bridge Type Vertical Machining Centre



made in india



made for the world



JYOTI CNC AUTOMATION LTD.

G - 506, G.I.D.C. Lodhika, Village : Metoda, Dist : Rajkot - 360021, Gujarat (INDIA).
T + 91-2827-306100/101, E info@jyoti.co.in, sales@jyoti.co.in

jyoti.co.in

Chief Executive Officer **Deepak Lamba**

Chief Financial Officer **Subramaniam S**

Publisher, Print & Production Controller **Joji Varghese**

Brand Publisher **Rishi Sutrave**
rishi.sutrave@wwm.co.in
+91 9820580009

Editor & CHIEF COMMUNITY OFFICER **Niranjan Mudholkar**
niranjan.mudholkar@wwm.co.in
+91 9819531819

Associate Editor **Swati Deshpande**
swati.deshpande1@wwm.co.in
+91 99204 00833

Assistant Art Director **Sanjay Dalvi**
sanjay.dalvi@wwm.co.in

ADVERTISING

South **Mahadev B**
mahadev.b@wwm.co.in
+91 9448483475

West **Ranjan Halder**
ranjan.halder@wwm.co.in
+91 9167267474

North **Ashish Sahay**
ashish.sahay@wwm.co.in
+91 9899688440

SUBSCRIPTIONS

subscriptions.rmd@timesgroup.com
022 22733274 / 66354083

Printed and published by Joji Varghese for and on behalf of owners Worldwide Media Pvt Ltd (CIN:U22120MH2003PTC142239), The Times of India Building, Dr DN Road, Mumbai 400001. Printed at JRD Printpack Private Limited, 78, Resham Bhavan, 7th Floor, Veer Nariman Road, Churchgate, Mumbai - 400 020. Editor: Niranjan Mudholkar. Published for February 2017.

Disclaimer: All rights reserved worldwide. Reproducing or transmitting in any manner without prior written permission prohibited. All photographs, unless otherwise specified, are used for illustrative purposes only. The publisher makes every effort to ensure that the magazine's contents are correct. However, we accept no responsibility for any errors or omissions and accept no responsibility for any loss or damage caused as an effect thereof. The information provided in this publication is for general use and may not be appropriate for the specific requirements and / or conditions of the reader/s. The opinions expressed by experts are their own and in no way reflect those of the publisher.

Editorial Advisory Board



Aravind Melligeri, Chairman and CEO, Aequs.
Works towards making India a leading hub for high quality precision manufacturing & aerospace



GK Pillai, MD and CEO, Walchandnagar Industries Ltd.
Brings the best of the public and private sectors for the benefit of the manufacturing industry



Nitin Chalke, MD – India, Eaton.
Combines the understanding and expertise of five business segments to provide visionary leadership



Viren Joshi, CEO and President, Sigma Electric Manufacturing Corporation.
Blends the proficiency of growing new businesses and managing growth at large MNCs



Super Times Ahead!

The Machinist Team spent six good days at Imtex 2017. Despite an extended weekend, the trade fair was buzzing with business visitors from day one to the last one. The show is often referred to as a barometer to gauge the current scenario and the future trend in the manufacturing industry. So if we really go by the upbeat mood at the show then we can safely say that the Indian manufacturing industry is in for 'Super Times' ahead.

Every single stall we visited and every business leader we met at the trade fair strengthened our view that the turnaround that we have all been anticipating for our industry is already in progress.

“EVERY SINGLE STALL WE VISITED AND EVERY BUSINESS LEADER WE MET AT THE TRADE FAIR STRENGTHENED OUR VIEW THAT THE TURNAROUND THAT WE HAVE ALL BEEN ANTICIPATING FOR OUR INDUSTRY IS ALREADY IN PROGRESS.”

The short term inconvenience caused by demonetisation has been left behind and the economy is now all set to reap the long-term benefits of this revolutionary economic reform. A practical yet positive and visionary yet realistic budget has given further boost to the economy. The January PMI numbers too have provided a solid reason for cheer. All key manufacturing sectors including automotive, aerospace & defence, railways, ship building, energy, and even construction equipment are poised for excellent market conditions in the next few quarters.

In turn the industry, which has already kept itself prepared for this upcoming boom, must make the most of it. It must not lose focus on excellence while basking in the much deserved glory. The Machinist stood by you in the challenging times and will be again cheering for you in the Super Times too.

Well, we have just announced the 2017 edition of The Machinist Super Shopfloor Awards. And the Machie Trophy beckons you. We have seriously raised the standards in the last two editions. And this time will be no different.

Niranjan M

Editor & Chief Community Officer



Let's talk
PRECISION

THREADMILLS USA

- ▶ Improves chip evacuation in blind holes
- ▶ Evacuates chips faster, reducing tool deflection and providing straighter thread forms
- ▶ Increases tool life by keeping the cutting edge cool
- ▶ The thick core geometry maximizes the coolant hole



WATCH IT RUN



SCAN CODE

Coolant Through Solutions

**LONGER
TOOL LIFE &
GREATER
PRECISION**



**ALLIED MACHINE
& ENGINEERING**

Holemaking Solutions for Today's Manufacturing

Wohlhaupter India Pvt. Ltd.

An Allied Machine & Engineering Company

B-23, B Block Community Centre

Janakpuri, New Delhi - 110058

Phone: +91-11-41827044

Email: info.india@alliedmachine.com

www.wohlhaupterindia.in / www.alliedmachine.com



Automotive

Updates..... 18
 Electrifying the transport industry 48

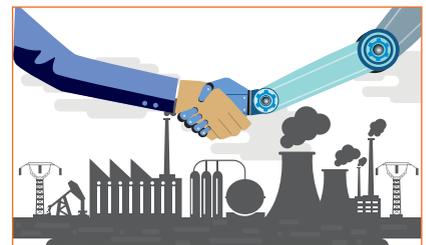
COVER STORY

Now or Never! 32



Imtex 2017

Bigger and better 52



Insight

Digitisation is a way forward 75

BUDGET

Income tax for smaller companies is reduced 40
 Editorial 6
 News 10
 Market: Indian manufacturing bounces back 14
 Event Calendar 16
 Appointments 22
 Interview: Exciting times! 26
 Human Resources: Workforce for the Industry 4.0 74
 IT in Manufacturing: Digitisation is crucial 78



Events

The ET Polymers Awards
 – Beginning of a new era 80

Where others stop, we continue...

TAW Indexable Drill

Designed for extreme sharpness and accuracy

Wave type cutting edge for superior chip control

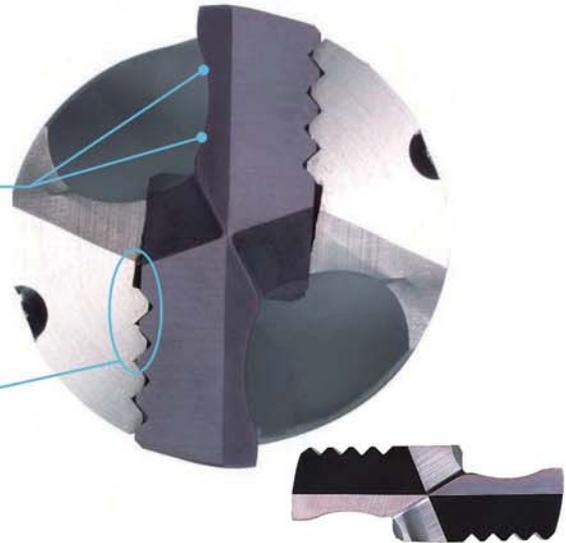
Wave cutting edge

The wave edge design achieves sharp peripheral edge cutting performance with a strong initial cutting point near the centre

Serrated insert clamping geometry

Unique serration geometry

Mitsubishi's unique serration structure allows high clamping accuracy to be maintained



Cutting edge shape



MVX Indexable Drill

High rigidity body produced by utilising the latest technology

Mitsubishi Materials releases its next generation indexable drill—MVX Series—for Steel, Stainless Steel and Cast Iron applications. The MVX series drill has many new design characteristics including a High Rigidity Body and Flute Design that enables efficient and reliable drilling up to 6xD for most diameters.

- Economical four cutting edge insert
- Wiper technology for best in class finish and size
- PVD and CVD grades/ breakers specifically designed for Steel, Stainless Steel and Cast Iron



MMC Hardmetal India Pvt. Ltd.
A Subsidiary of **MITSUBISHI MATERIALS**

H.O.: Prasad Enclave, #118/119, 1st Floor, 2nd Stage,
5th Main, BBMP Ward #11, (New #38), Industrial Suburb,
Yeshwanthpura, Bengaluru - 560 022, Karnataka, India.
Tel : +91 80 3080 7400 to 3080 7499
Website : www.mitsubishicarbide.com



TOTAL SOLUTIONS

DRILLING

MILLING

TURNING

THREADING & GROOVING



53 firms start 'Make in India' defence production

SINCE OPENING OF defence manufacturing for Indian private sector in May 2001, so far 342 industrial licenses have been issued to 205 Indian companies.

However, after launch of 'Make in India' Programme in September 2014, the Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP) have issued 116 Industrial Licences for manufacture of various licensable defence items.

So far 53 License Companies, covering 92 licenses, have reported commencement of production.



As per the current policy, industrial licence is valid for 15 years, which is further extendable up to 18 years. During the period, companies are required to commence their commercial production.

India becoming global hub in defence manufacturing



DEFENCE MINISTER MANOHAR PARRIKAR has said that the partnership between the DRDO and industries is transforming our country into a global defence manufacturing hub. The DefMin visited DRDO's Dr APJ Abdul Kalam Missile Complex during his visit to Hyderabad yesterday. "This synergy has provided the much

needed thrust for exporting our defence products globally. We are taking necessary initiatives in this direction and I am sure that our state-of-the-art Missiles and Weapon systems will garner the much needed interest in the global markets and generate foreign exchange," he said. Parrikar also pointed out that there is lot of knowledge and infrastructure base with the DRDO and the same needs to be tapped by the MSME and private industries, which in turn will lead towards the establishment of a self-reliant defence industrial ecosystem in our country. "Today, the industries are significantly contributing in the realization of various defence products with the know-how provided by the DRDO and few of them have even graduated as lead integrators," he added.

Big opportunities for Japan in India's energy sector

UNION MINISTER OF STATE (IC) for Power, Coal, New & Renewable Energy and Mines, Piyush Goyal has said that India's power demand is going to expand four fold in the next 15 years to become one of the largest energy markets globally.

It would open immense business opportunities for Japan in the sector

in India, hence making this bilateral engagement mutually beneficial for both countries, he said.

Goyal also said that India and Japan should cooperate on long term contracts for LNG with a defined cost of energy which would provide a stabilizing factor for the Renewable Energy thrust that India is currently giving.

AMS machines now MachineConnect enabled

ACE MANUFACTURING Intelligence Technology, a software company of Ace Micromatic group, announced that MachineConnect software will now be available on machining centres from AMS and grinding machines from Micromatic Grinding Technolo-



gies. L Krishnan, CEO, Taegutec India Pvt Ltd and Chandra Mouli, CEO, Starrag India Pvt Ltd graciously inaugurated machines with the software at IMTEX 2017. Key Features of MachineConnect include automated capture of machine stoppages, actionable production analytics and easy to use interface. Besides, it also automates collection of accurate and rich production data and machine parameters and offers faster, precise machine maintenance, using inbuilt breakdown, preventive and predictive maintenance workflows. The software serves as a 'Black-box' for machine parameters like feed, speed, power, RPM, etc. and is useful for operation history, analysing machine performance, or accidents. Also, the program enables to remotely compare and transfer CNC programs and ensure error-free production.



MOTUL

TECH

THE INDUSTRIAL LUBRICANTS DIVISION OF THE

MOTUL GROUP



**METAL WORKING
FLUIDS**

**SPECIALTY
LUBRICANTS**

**MAINTENANCE
LUBRICANTS**

**HIGH PRESSURE
DIE CASTING**

**QUENCHING
FLUIDS**



motul.com

Motul

119 boulevard Félix Faure
93300 AUBERVILLIERS - France
Tel: +33.1.48.11.70.30
Fax: +33.1.48.11.70.38

Atlantic Lubricants & Specialities Pvt. Ltd.
301, Ketan Apts., 233, R.B. Mehta Marg
Ghatkopar East, Mumbai 400 077
Tel: + 91 22 2501 1960/2501 1961
Fax: + 91 22 2501 1928



India Innovation Index launched in the country



TO MAKE INDIA an innovation-driven economy, NITI Aayog, Department of Industrial Policy & Promotion (DIPP) and Confederation of Indian Industry (CII) together launched a mega initiative “India Innovation Index” that will rank states on Innovations through country’s first online innovation index portal that will capture data on innovation from all Indian states on innovation and regularly update it in real time.

The India Innovation Index Framework will be structured based on the best practices followed in Global Innovation Index (GII) indicators and additionally by adding India-centric parameters those truly reflect the Indian innovation ecosystem. This initiative will be the point of reference for all international agencies to collect India’s up to date data points for global indices and analytic.

Inaugurating the portal, Amitabh Kant, CEO NITI Aayog said, “This portal will be a first-of-its-kind online platform where Global Innovation Index indicators and India-centric data from various states will be coalesced and disseminated and updated periodically. This will be a one-stop data warehouse and will track progress on each indicator at the National level and the State level on real-time basis. The access to this portal will be hosted on the NITI Aayog website, and NITI Aayog will update this data periodically.”

Boeing launches technology center in Bangalore

BOEING INDIA Engineering & Technology Center (BIETC) was recently inaugurated in Bangalore. This Center will work to support Hundreds of local Boeing employees – including Information Technology & Data Analytics, Engineering, Research & Technology, and Test. BIETC will leverage a talented pool of employees to increase productivity and long-term competitiveness to support Boeing’s engineering growth in strong global markets like India.

“When we look for regions of competitiveness for the company around



the world, we look at building cost, capability and market access advantages,” said Pratyush Kumar, president for Boeing India. “In India we see a true path towards a mutual partnership for success, and the launch of BIETC is a major step in that direction.”

India’s first international stock exchange opens



PRIME MINISTER NARENDRA MODI inaugurated India’s first international stock exchange - India International Exchange - at the Gift City recently. Modi has called it a ‘momentous occasion for India’s financial sector’. He shared that the project took shape in the year 2007 and the vision was to create a world class Finance and

IT zone for India, to provide services not only to India but the entire world. “In the year 2015, during the Vibrant Gujarat event, BSE signed an MoU with Government of Gujarat. Now, I am delighted to be here to inaugurate the new India International Exchange. It is an important milestone not just for Gift city but for India, in creating 21st century infrastructure,” he said. India International Exchange will trade in equity, commodities, currencies and interest rate derivatives in the first phase. Later, it will trade equity instruments of Indian and foreign companies. Masala bonds will also be available for trading here.

Pipeline to supply natural gas to auto OEMs in Gujarat

A PIPELINE to supply natural gas has been commissioned by Ace Pipeline. The 12” diameter carbon steel high pressure pipeline is designed and constructed using high strength pipe material, anti-corrosion system, the use of trenchless horizontal directional drilling technology for pipeline installation across roads and canals such as the Narmada Main Canal without causing

any disruption to traffic or flow.

It is equipped with valves stations for emergency shutdown of the pipeline in case of any contingency, SCADA system to monitor the pipeline round the clock. The entire pipeline has been subject to high-pressure tests by hydro testing and pneumatic testing to assure the quality of material and workmanship.

**GLOBAL
MANUFACTURING
LEADERSHIP PROGRAM**

MANUFACTURING LEADERS



ADITYA BIRLA GROUP



A WORLD OF
OPPORTUNITIES

THE GREAT ONES DON'T WAIT FOR SUCCESS. THEY CREATE IT.

GLOBAL MANUFACTURING LEADERSHIP PROGRAM

Empowering talent with diverse skills to develop multi-sectoral expertise.

Apply for the Aditya Birla Group's Global Manufacturing Leadership Program (GMLP) today!

Gain access to world-class evolving technologies and state-of-the-art R&D labs across our diverse range of sectors, including **Metals, Cement, Textiles, Pulp & Fibre, Mining, Fertilizers, Insulators, Carbon Black and Chemicals.**

In its 5th year, we are looking for passionate engineering professionals with 10-20 years of experience to take the Group's manufacturing prowess to the next level. GMLP provides a platform to high-performing, ambitious and mature manufacturing professionals who enjoy working in a challenging and supportive environment. GMLP members are handpicked and groomed to join the league of leaders at the Aditya Birla Group.

Minimum Eligibility Criteria: Candidates holding B.E., B.Tech degrees.



GET THERE FASTER.



Scan the QR Code to
apply now

PLANT PICTURE CREDIT: ADITYA ALUMINIUM, ODISHA

Apply at www.abgmlp.adityabirla.com

Aditya Birla Group: A USD 41 billion premium global conglomerate
36 COUNTRIES | 120,000+ EMPLOYEES | 42 NATIONALITIES



Indian manufacturing bounces back

Impact of demonetisation left behind; both new orders and output rise during January, says Nikkei India Manufacturing PMI



Indian manufacturing output increased during January on the back of rising order books. Greater production needs encouraged companies to purchase more inputs, but failed to generate jobs in the sector. On the price front, input cost inflation climbed to its highest mark since August 2014, while output charges were raised for the eleventh successive month.

Having deteriorated in December for the first time in one year, the health of India's manufacturing economy improved in the opening month of 2017. The headline Nikkei India Manufacturing Purchasing Managers' Index (PMI) was up from 49.6 to 50.4 in January. The main factors contributing to the above 50.0 PMI reading were growth of both new orders and output. Rates of expansion were only slight, but reversed the contractions noted in December. Anecdotal evidence highlighted a return to normal market conditions and a subsequent improvement in demand.

In contrast to the upturn in total new business, new export orders fell again. Having eased since the previous month, the rate of reduction was marginal. Intermediate goods was the bright spot in January, with rates of expansion in both new work and production outstripping those seen in the consumer goods sector. Meanwhile, investment goods dipped into contraction. Survey data pointed to an increasing degree of pressure on the capacity of manufacturers' operations as backlogs rose at a quicker rate than in December. In spite of this, companies kept their payroll numbers unchanged in January.

Holdings of finished goods decreased in January, amid evidence from survey

participants of orders being fulfilled directly from stocks. The rate of depletion was marked, and the quickest since last May. Concurrently, pre-production inventories declined slightly, but at a pace that was the fastest in over three years. Manufacturers attempted to replenish their input stocks by purchasing greater quantities of raw materials and semi-finished items in January. That said, the overall rate of growth was only slight and well below its long-run average.

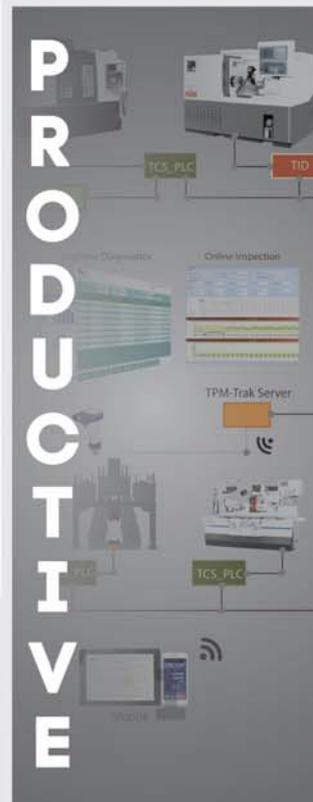
Rates of input cost inflation accelerated in each of the three tracked sectors, led by intermediate goods. Across the manufacturing economy as a whole, input cost inflation climbed to a 29-month peak. Where cost burdens rose, there were mentions of higher prices paid for metals, chemicals, plastics, textiles and paper. As part of ongoing efforts to protect margins, Indian manufacturers raised their own selling prices for the eleventh successive month in January. However, the rate of inflation remained only marginal.

Newly-released future output data, which have been collected since April 2012, showed a pick-up in manufacturers' confidence during January. Promotional activities and better economic conditions are anticipated to underpin production growth over the coming 12 months.

Commenting on the Indian Manufacturing PMI survey data, Pollyanna De Lima, Economist at IHS Markit and author of the report said, "The Indian manufacturing economy recovered from the one-off downturn that hit the sector in December following the withdrawal of high-value banknotes. January saw only modest increases in order books, production and buying levels, but the quick rebound will be welcome news to policymakers." 

"The Indian manufacturing economy recovered from the one-off downturn that hit the sector in December following the withdrawal of high-value banknotes. January saw only modest increases in order books, production and buying levels, but the quick rebound will be welcome news to policymakers. Improving confidence among firms bodes well for the outlook, with the expansion in manufacturing output likely to pick up pace in coming months. IHS Markit forecasts a 6.9% rise in GDP for FY16, with growth anticipated to accelerate to 7.4% in FY2017."

Pollyanna De Lima, Economist at IHS Markit and author of the report



Ace Micromatic Group

We thank you for visiting & witnessing
"Technology Creating Value"
at
Ace Micromatic Group Pavilion



salesmmt@acemicromatic.com

www.acemicromatic.net

THE LARGEST MACHINE TOOL GROUP IN INDIA



• MARK YOUR DIARY •

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

<p>CONEXPO-CON/AGG March 7–11, 2017 Las Vegas, NV (US) www.conexpoconagg.com</p>	<p>TIMTOS March 7–12, 2017 Taipei (Taiwan) www.timtos.com.tw</p>	<p>IESS - International Engineering Sourcing Show 2017 March 16–18, 2017 Chennai Trade Centre, Chennai www.iesshow.in</p>	<p>Automotive Engineering Show March 21–23, 2017 New Delhi www.aes-show.com</p>
<p>ACMA Automechanika New Delhi 2017 March 21–24, 2017 New Delhi http://acma-automechanika-newdelhi.in.messefrankfurt.com/newdelhi/en/exhibitors/welcome.html</p>	<p>ProMat 2017 April 3–6, 2017 Chicago, (US) www.promatshow.com</p>	<p>AMTEX 2017 April 12–15, 2017 Mumbai www.amtex-expo.com</p>	<p>Hannover Messe April 24–28, 2017 Hannover (Germany) www.hannovermesse.de</p>
<p>BLECH India April 27–29, 2017 Mumbai www.blechindia.com</p>	<p>INTEC 2017 June 1–5, 2017 Codissia Trade Fair Complex, Coimbatore www.intec.codissia.com</p>	<p>Delhi Machine Tool Expo August 10–13, 2017 New Delhi www.mtx.co.in</p>	<p>EMO Hannover 2017 September 18–23, 2017 Hannover www.emo-hannover.de</p>





**MACHINE
AUTOMATION**



**FACTORY
AUTOMATION**

Experience the
Extensive Spectrum
of Automation Solution!



**PROCESS
AUTOMATION**



Automation for a Changing World

Industrial Automation

Delta's innovative technology and extensive product offerings provide a total solution for various Industrial Automation applications. Delta specializes in providing solutions customized to the specific requirements of the customers, to meet the ever growing challenge of delivering innovative, energy efficient and smart automation solutions.

Discover the ways to secure your business and to enhance competitiveness with Delta Industrial Automation!

www.deltaelectronicsindia.com | automation@deltaww.com



DELTA
Smarter. Greener. Together.



Magna opens new seating headquarters

Magna International Inc. recently announced seating business has moved into a new, state-of-the-art headquarters in Novi, Michigan. The facility, located at 30020 Cabot Drive, includes three floors and 180,000 square feet of space. Approximately 450 employees will work at the building with room for future growth, including functions such as accounting, sales & marketing, purchasing, human resources and engineering.

“It’s exciting to begin the next chapter for Magna Seating at our new home, which has been built to suit the needs of our employees and customers for years to come,” said Mike Bisson, president of Magna Seating. “Thank you to all the hard-working people, both within Magna and in the State of Michigan, Novi and Oakland County communities, who helped make this vision a reality. Our new space allows us to be flexible and



cost-effective with the ability to seamlessly communicate globally through the use of intuitive technology.”



Hyundai India ties-up with Pusa Institute of Technology, New Delhi

Hyundai Motor India Ltd recently inaugurated Hyundai Professional Development Center at Pusa Institute of Technology, New Delhi, a polytechnic institute. Speaking on the occasion, Y K Koo, MD & CEO - Hyundai Motor India Ltd., said “We are very happy about this association with Pusa Institute of Technology as Hyundai is a Responsible Corporate Citizen and advocates creating constant resource pool of skilled ‘Service Advisors’ for Automobile Service Industry. As a Caring manufacturer, it’s our duty and responsibility to continue such initiatives to benefit the industry and society on the whole.”

The new curriculum will expose Automobile trade students to modern automobile technologies thereby increasing the opportunities of employability and career prospects. The new syllabus and practical training at dealership will add yet another dimension to the existing syllabus supported by HMIL. The programme will benefit Polytechnic colleges in creating skillful professionals for the Indian Automotive Service Industry.

Tata Motors introduces new sub-brand – TAMO

As a core element of its transformation journey ‘FutuReady’, Tata Motors has presented its new Passenger Vehicle strategy and introduced its new sub-brand – TAMO. It will act as an incubating center of innovation towards new technologies, business models and partnerships in order to define future mobility solutions.

TAMO as a new, separated vertical will operate in the first step on a low volume, low investment model to provide fast tracked proves of technologies and concepts. TAMO will act as an open platform to network with global startups and leading tech companies, to get access to trends, innovations and solutions, for the design of exciting future products and services. For the rapidly changing automotive environment, TAMO will transform the experience of interfacing and interacting with customers and the wider community. TAMO will provide a digital eco-system, which will be leveraged by Tata Motors to support the mainstream business in the future.

Speaking on the announcement, Guenter Butschek, MD & CEO, Tata Motors, said, “The success of our transformation journey ‘FutuReady’ is measured by our vision and depends on our ability to deliver on our comprehensive strategies for our business units. Our game plan addresses six themes – topline improvement, cost management, structural improvements, customer centricity, new mobility solutions and organizational effectiveness.

How our robots see an apple



For delicate handling and high precision

MITSUBISHI ELECTRIC adds delicate to the list of dull, dirty and dangerous jobs for robots! From fruit and food packing where any bruise or blemish impacts the bottom line to the handling of thin SiC wafers in the electronics industry and the packaging of pharmaceutical products, MITSUBISHI MELFA robots perform not only with high speed and high precision, but also as if each item is made of the finest crystal. Combining high-speed robot motion and delicate precision handling by the ideal gripper for your needs, our turn-key robot solutions robotize the handling of fragile products and can deliver significant increases in both the quality and quantity of production output. With MITSUBISHI ELECTRIC Factory Automation, you and your customers enjoy all the fruits of your labor.



MITSUBISHI ELECTRIC INDIA PRIVATE LIMITED

FACTORY AUTOMATION AND INDUSTRIAL DIVISION (FAID)

EL-3, J- Block, MIDC, Bhosari, Pune - 411206, Maharashtra, India

Phone: +91 020 27102000

www.mitsubishielectric.in/fa/factory-automation.php



Scania expands operations in Thailand

Scania has identified Thailand as one of the key markets in Asia and is expanding its industrial and commercial presence in the country. A new assembly facility for trucks and bus chassis as well as a manufacturing facility for truck cabs will be established in the Bangkok Metropolitan Region, including staff for production, logistics and purchasing as well as research and development. The total investment is EUR 21.2 million and operations are scheduled to start in 2018.

In addition, regional headquarters will be established in

Thailand to support Scania's distributors in Asia and Oceania in developing business in their markets.

"The new establishment will bring all industrial and commercial functions in Scania even closer to our customers in Asia in general and in Thailand in particular," says Ted Göransson, Project Director for the new establishment. "By increasing our local presence we will be able to quickly respond to customers' demands and make sure that we provide the best transport solution for each customer."

General Motors, Honda JV to make hydrogen fuel cell



General Motors Co. and Honda have announced establishment of the auto industry's first manufacturing joint venture to mass produce an advanced hydrogen fuel cell system that will be used in future products from each company.

Fuel Cell System Manufacturing, LLC will operate within GM's existing battery pack manufacturing facility site in Brownstown, Michigan, south of Detroit. Mass production of fuel cell systems is expected to begin around 2020 and create nearly 100 new jobs. The companies are making equal investments totaling \$85 million in the joint venture.

Honda and GM have been working together through a master collaboration agreement announced in July 2013. It established the co-development arrangement for a next-generation fuel cell system and hydrogen storage technologies. The companies have integrated their development teams and shared hydrogen fuel cell intellectual property to create a more affordable commercial solution for fuel cell and hydrogen storage systems.

"Over the past three years, engineers from Honda and GM have been working as one team with each company providing know-how from its unique expertise to create a compact and low-cost next-gen fuel cell system," said Toshiaki Mikoshiba, chief operating officer of the North American Region for Honda Motor Co., Ltd. and president of Honda North America, Inc.

Hitachi Automotive & Honda to manufacture Electric Vehicles

Hitachi Automotive Systems, Ltd., and Honda Motor Co., Ltd., have signed a Memorandum of Understanding (MoU) aiming to establish a joint venture company for the development, manufacture and sales of motors for electric vehicles. The two companies now will conduct formal discussions regarding the establishment of the new company.

Since Hitachi Automotive Systems first started selling motors for electric vehicles in 1999, it has been refining its technological and product capabilities to develop high-output, lightweight and compact electric vehicle motors. The company has delivered a high volume of these motors to vehicle manufacturers in Japan and throughout the world, and has earned high praise throughout the industry for the performance of these products and its production technology.

Pricol opens new plant in Pune

Pricol Ltd, a leading manufacturer of automotive components, has recently inaugurated its high-efficiency plant built across 6.58 acres in Phulgaon, Pune. The state-of-the-art manufacturing plant aims to generate an annual revenue of Rs. 220 Crore in the next two years, up from the current annual revenue of Rs120 Crore, thus contributing to Pricol's 2020 vision. Vikram Mohan, Managing Director, Pricol Ltd said, "While India continues to emerge as a global auto hub, one of the cities that has contributed towards this growth is Pune. Pricol's new Greenfield plant in Pune, will not only cater to the requirement of the growing Indian market, but further strengthen our position by serving as a key manufacturing unit for Pricol's global operations."

"Lean and unique capabilities of the plant will not only increase our efficiency but also create a synergy in manufacturing and leveraging the latest technologies, which Pricol aims at. The new state-of-the-art high quality manufacturing plant is a major milestone in our journey and we look forward to an exciting future with its establishment," Mohan added.

CERATIZIT HIGHLIGHTS - MORE THAN A BRAND

Cutting Solutions by CERATIZIT is a top-class brand of the CERATIZIT GROUP. Our brand promise is supported by a **strong and creative partner** who has only one goal; to achieve the best for you together!



Head Office & Works, India
CERATIZIT India Pvt. Ltd.
Plot 56, Uluberia Industrial Growth Center
PO: Birshibpur \ Howrah - 711316 \ India \ www.ceratizit.com

CERATIZIT India Round Tool Solutions Pvt. Ltd.
(Formerly GW Precision Tools India Pvt. Ltd.)
Plot 124-A, Bommasandra Industrial Area, Anekal Taluk \ IN-Bengaluru 560099 \ India
www.ceratizit.com

Cobra Carbide India Pvt. Ltd.
54, Bommasandra Jigani Link Road \ Industrial Area Phase IV \ Bangalore - 560 099.



BMW GROUP INDIA APPOINTS VIKRAM PAWAH AS PRESIDENT

Vikram Pawah (45) has been appointed as the President of BMW Group India effective March 1, 2017. Pawah brings more than twenty five years of international experience both in the automotive and non-automotive industry. He started his career at Jay Engineering Works, India and has held multiple leadership positions within Honda Cars in India and Australia. Most recently, he was the Managing Director of Harley - Davidson India.

Having completed his assignment, Frank Schloeder (42) acting President, BMW Group India will return to BMW Group Headquarters in Germany, where he will assume the position of Head of Business Steering - Luxury Class. During his assignment of over 3 years, Schloeder has held the position of Director Marketing, where he effectively steered the BMW brand in India. In his tenure as acting President, BMW Group increased both its sales and market share in the Indian luxury car segment. "India is a growing market with great potential for mobility products and services. With his broad experience in the automotive industry and his country specific know-how, Mr. Pawah brings excellent preconditions to strengthen our position in the Indian market. We would like to thank Mr. Schloeder for his remarkable accomplishments and wish him the best for his new role," said Hendrik von Kuenheim, Senior Vice President, Asia Pacific and South Africa, BMW Group.



MATTHIAS ZINK IS CEO AUTOMOTIVE AT SCHAEFFLER AG

Matthias Zink (47) has assumed his position as a member of the Executive Board of Schaeffler AG as of January 1, 2017. He is as Co-CEO Automotive responsible for the business divisions Transmission Systems, Automotive Aftermarket and Research and Development for the Automotive division. Matthias Zink will succeed Norbert Indlekofer (59) who left the company on December 31, 2016 at his own request.

Matthias Zink studied mechanical engineering at the University of Karlsruhe. His key area of study was automotive engineering. After his degree in 1994 he started working as a test engineer at the Schaeffler brand LuK in Bühl, Germany. In subsequent years, Matthias Zink has held various leadership positions before becoming responsible for the Clutch Systems Business Unit in 2006. After leading the business unit successfully for six years, he assumed the position as President of Schaeffler Automotive Asia/Pacific in China in 2012. In 2014, Matthias Zink transferred back to Germany to become President of the Transmission Technologies Business Unit. In July 2014, he was appointed President of the Transmission Systems Business Division.

Georg F. W. Schaeffler, Chairman of the Supervisory Board of Schaeffler AG, said: "We are delighted to have appointed Matthias Zink to the Executive Board of Schaeffler AG. Mr. Zink is a long-standing employee of Schaeffler and a renowned expert in transmission systems. He will play a decisive role in the further development of our offering into the direction of electric mobility."

NEW HEAD FOR BASF AUTOMOTIVE OEM COATINGS BIZ

Dr. Thomas Kloster took over the position as head of the Automotive OEM Coatings Solutions Europe business unit at BASF's Coatings division effective December 1, 2016. In this position, he succeeds Dr. Martin Jung who oversees the integration of Chemetall after the successful acquisition of the business. Kloster studied Management of Information Systems at the University of Mannheim/Germany and the University of Waterloo in Ontario/Canada. He received his PhD in Business Administration from the University of Mannheim. In 2001, he transferred from the consulting company McKinsey & Company to BASF. After holding different positions in the fine chemicals and construction chemicals segment – in Shanghai/China and elsewhere – Kloster served as Vice President, Strategy, for the BASF group in Ludwigshafen/Germany.



starrag

Starrag Group

Engineering precisely
what you value

Berthiez
Bumotec
Dörries
Droop+Rein
Heckert
Scharmann
SIP
Starrag
TTL
WMW



60%

reduced delivery times to
secure short term orders.

20%

reduction in unit costs
thanks to reduced
investment costs.



Solutions for
On-Road Vehicles

www.starrag.com



STEFAN STEENSTRUP IS NEW DORMER PRAMET PRESIDENT

Stefan Steenstrup has been appointed as the new President of global cutting tool manufacturer, Dormer Pramet. Stefan, previously the company's Global Sales Director, took over from Fabrizio Resmini, who retired as of 1 January 2017.

Having worked for the Sandvik Group for the last 20 years, Stefan has held various senior positions after initially joining Dormer as technical specialist. In 2007, he became managing director of Dormer Italy, before moving into the company's global management team.

Stefan was previously director of Business Development at Dormer Pramet following the merger of Dormer and Pramet Tools in 2014, becoming Global Sales Director a year later. Originally from Denmark, Stefan, aged 46, will continue to be based in Milan, Italy.



N. CHANDRASEKARAN: TATA'S NEW EXECUTIVE CHAIRMAN

The Board of Directors of Tata Sons has appointed N. Chandrasekaran as Executive Chairman. Chandrasekaran shall take charge from February 21, 2017.

The Board of Tata Sons said, "Chandrasekaran has demonstrated exemplary leadership as the Chief Executive Officer and Managing Director of Tata Consultancy Services. We believe he will now inspire the entire Tata group to realise its potential acting as leaders in their respective businesses, always in keeping with our value system and ethics and adhering with the practices of the Tata group which have stood it in good stead."

Chandrasekaran was the Chief Executive Officer and Managing Director of Tata Consultancy Services since 2009. A Tata lifer, he had joined the company in 1987. He was appointed as a Director on the board of Tata Sons on October 25, 2016.

PRAGUN JINDAL KHAITAN TO INVEST IN AI BASED START-UPS

Pragun Jindal Khaitan, MD of Jindal Aluminium Ltd (JAL), one of the largest aluminium extruder in India, has recently announced his plan to invest in AI focused start-ups. Over the past two years, the positive upsurge in start-ups focussed on AI based technology has encouraged JAL to fund start-ups focussed on developing technologies that automate and improve the efficiency of manufacturing operations.

JAL is looking to invest even up to Rs. 30 cr, if it deems it an unique investment opportunity. It is interested in AI based start-ups that are focussed mainly on two areas - streamlining the manufacturing operations or in helping to improve B2B customer relations; along with start-ups which can enhance corporate services like HR and auditing/fraud detection.



FARO NAMES KATRONA TYRRELL CHIEF PEOPLE OFFICER

FARO has appointed Katrona Tyrrell as Chief People Officer (CPO). She will report directly to Simon Raab, Ph.D., FARO's President and CEO. Tyrrell will advise the senior leadership team as it works to scale FARO's vertical sales organisation while maintaining and strengthening FARO's entrepreneurial culture, employee engagement, and career development. As CPO, she will guide all aspects of human resources for the company, including Human Resources business partnering, talent management and Human Resources Information Systems.

"Our culture is a fundamental component to what makes our company special and high-performing," said Simon Raab, Ph.D., FARO's President & CEO. "We created the CPO role specifically to bolster this important foundation. Strength in this area of our business allows us to succeed in everything else we do and is essential to propel our growth. Katrona's extensive background and experience building, maintaining and leading talent.

Precision, control, power



Simple motion control for elegant solutions

By combining iQ-F controllers, MR-JE servo systems and GS display technology users can experience superior cost-performance benefits without the stress of hours of set-up and trial and error. Easy configurations, simple motion programming, automatic optimization, vibration suppression and system tuning are complemented by elegant graphics.

Mitsubishi Electric's "Simple Motion Solutions" enable you to resolve complex systems easily.

MITSUBISHI ELECTRIC INDIA PRIVATE LIMITED

FACTORY AUTOMATION AND INDUSTRIAL DIVISION (FAID)

EL-3, J- Block, MIDC, Bhosari, Pune - 411206, Maharashtra, India

Phone: +91 020 27102000

www.mitsubishielectric.in/fa/factory-automation.php





Exciting times!

The Freudenberg Group has ambitious growth plans and has set its sights on expanding its activities further as market opportunities arise, says **Georg Graf**, Regional Representative of Freudenberg India

By Niranjan Mudholkar

Q First of all, congratulations on taking charge. How does it feel to be in this position at a time when things really brightening up in the Indian market?

My predecessor Dr. Jörg Matthias Großmann in this role as Freudenberg's Regional Representative in India has laid a solid foundation for Freudenberg's operations in India. Freudenberg is a global, family-owned company with a long term history of successful entrepreneurship, a deep sense of commitment to society and future viability. I look forward to help the company shape its future in the Indian subcontinent.

Freudenberg is into manufacturing and from this perspective we live in exciting times in India. The Indian Government is promoting manufacturing with a target to increase the share of manufacturing from 14 percent in 2014 to 25 percent in 2022 in Indian GDP. India has the second largest popula-

tion in the world and would have the youngest population by 2020. Currently in India more than 12 million people entering the workforce each year and this is requiring the creation of new jobs. I am convinced that only the manufacturing sector can create these jobs. Young people migrating from rural to urban centres will increase the pressure on our society but empowering these young people will also be the basis to drive the GDP growth in the future.

Q How was the last financial year (FY) for Freudenberg Group companies in India in terms of turnover and overall growth? How are things in the ongoing FY? Are you happy the way the Group is progressing in India?

We can look back at a successful year. We had set ambitious goals for our group companies in India and we achieved them. By end of 2016, we have met our sales and earning targets. Our projects are running as planned. India supports the group goals to be one of the most innovative, broadly-diversified global technology groups.

Q What factors have contributed to the Group's success in India?

Freudenberg's strategic acquisitions have supported Indian op-



Turbo charged performance.

Quick
delivery

Trusted
for years

Best-in-class
products



▲ CNC Rotary
Production
System



▼ Tilting
Rotary
Table



▲ CNC Rotary Table



Engineering Excellence. Exactly.

New Delhi: +91 93122 21276 | delhi@ucamind.com

Pune: +91 93701 47332 | ucampune@ucamind.com

Ahmedabad: +91 98252 15740 | gujarat@ucamind.com

Chennai: +91 72999 98290 | chennai@ucamind.com

Bangalore: +91 93422 53905 | bangalore@ucamind.com

+91 80 40744777, marketing@ucamind.com



erations a lot. Also, the implementation and anchoring of our global brand in the organisation has made us more visible in India. We have advanced Sustainability as a driver of innovation. Success for Freudenberg means total success. Our CSR projects in India showcase our global and regional commitment to our responsibility for society.

Q Any major investments that you have done in the last one year? Anything planned for the near future?

On a group level, we will continue to look into business opportunities which could arise globally – and India is an important player in this context. We will grow wherever there is an opportunity for growth in defined segments. That means we will grow more quickly in the growth regions of the world than in certain established markets. For the long-term, we will strive for a balanced presence in the Americas, Europe and Asia. In this way, we want to become more independent from regional developments or currency exchange rate fluctuations.

Within the context of its growth strategy, Freudenberg invests continuously in India. Two completed investment projects in Mysore and in Basma with a total amount of more than Rs290 crore underscore Freudenberg’s long-term commitment to India. We will see more such development plans in 2017 too.

Q How would you analyse the Indian economic situation vis-a-vis the businesses that you are present in this market? Are you looking to further diversify?

The complexity of our environment is increasing. New technological developments call for new solutions – From electro mobility and the challenges of autonomous driving to advanced concepts for renewable energies and the implementation of Industry 4.0. Customer demands are changing even faster due to technological progress.

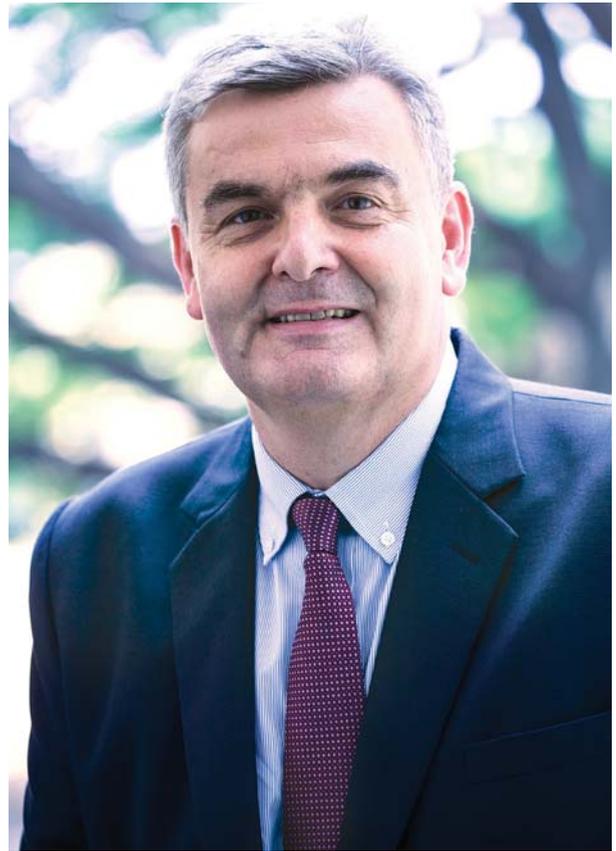
We can read in recent statistics released by the World Bank and the IMF, that India’s growth forecast for financial year 2016-17 has been trimmed (from 7.6 percent) to 7 percent and 6.6 percent, respectively. A number of political and economic factors, such as the demonetisation move, the Centre-State dispute over GST law, upcoming elections in five States, have raised expectations from the Government in many ways.

I feel the Government finds itself in a very delicate situation, as the economy demands a helping hand which is likely to compromise the Government’s other targets such as fiscal deficit targets.

On the Indirect Tax side, we hope for a fast implementation of the revised GST law. India and the manufacturing sector need a common Indian market.

Q Freudenberg has also entered the Indian electrical vehicles and wind energy sectors. What are the new developments in these areas?

The breakthroughs in e-mobility are taking longer than we all of us have expected. The German government’s ambitious



“We continue to believe that e-mobility is an important future market and we are working at full speed on solutions for mass production.”

objective is still a long way off. With the 12,363 newly-registered electric cars in 2015, the total number of electric cars registered in Germany since 2003 has risen to 33,000 (Source: Statistical 2016). There is still a long way to go to reach the nearly 1,000,000 cars that are necessary to hit the German government’s target.

We continue to believe that e-mobility is an important future market and we are working at full speed on solutions for mass production.

Battery technology plays a key role. Freudenberg is already involved in this business with the production of separators for nickel-metal-hybrid batteries for hybrid vehicles, and in the development of separators for lithium ion batteries. With sealing technology, we also offer additional important products.

The environment is one of the key focus areas of our product and solution development. Our products increase efficiency, improve longevity and sometimes even help maintain hygienic premises across our Business Groups. We have invested in Reverse Osmosis, Wind Energy and Solar in some of our factories to ensure we minimise our exposure to the environment.

PROFIMAT MC

Highly efficient grinding centre for any application –
whether precision, internal or external cylindrical grinding



- 6-axes grinding centre
- Y- and Z-axes speed: up to 16 m/min
- X-axis speed: up to 40 m/min
- Maximum acceleration: 2 m/s²
- SIEMENS 840D Solution Line
- Stainless steel enclosure
- Automatic tool changer
- RazorTec®

www.blohmgmbh.com



**BLOHM**
KÖRBER SOLUTIONS



Q How important is the role of innovation? Tell us about your plans to develop India as research and a development hub for the Group?

Innovation is vital for the future success of the Group. We are persistently endeavouring for breakthrough and incremental innovations. In 2015, for instance, Freudenberg invested 4.2 percent (previous year: 3.8 percent) of revenue in research and development (R&D).

To further reinforce innovation, we are upgrading technological know-how competence in the region. All the R&D centers are run by our Business Groups, and we ensure that we are close to our customers. In India, for instance, we maintain state-of-the-art R&D centers with qualified local expert teams in Mysore (Klüber Lubrication and OKS, Chem-Trend), Mohali (Sigma Freudenberg NOK and Vibracoustic) and Pune (EagleBurgmann). The EBI Design Center provides services worldwide.

Our products and solutions are also developed to serve Indian weather conditions of dust and extreme heat. For example, one of our brands OKS has launched “Heavy Duty Wheel Bearing Grease”. The product offers a new dimension of reliability for Indian Roads. It has been developed to ensure excellent performance, a long life and a long service life of up to 100,000 km. It is a high performance grease designed for the lubrication of wheel bearings in trucks, buses, commercial transport vehicles and construction equipment.

Q How is the Freudenberg India Entrepreneurial Leadership Development (FIELD) programme progressing?

The Freudenberg Group has ambitious growth plans and has set its sights on expanding its activities further as market opportunities arise. Therefore, Freudenberg constantly will continue to build on our talent management and team diversity.

Talent management is essential for us and therefore, we try to retain and develop our talent within the company. We have made outstanding headway with our global talent management process, organizing global and national talent dialogues and interactions and highlighting cross-sector development standpoints for possibilities. We also have country-specific programs in key regions such as the Indian subcontinent. From my viewpoint, the challenge lies in retaining today’s tal-

ent rather than a dearth of talent.

Also we are engaged in training the Indian associates to the level of international standards through our skill development schemes for employees and potential employees.

Freudenberg started its FIELD program (Freudenberg India Entrepreneurial Leadership Development) in 2006 with the aim of training and developing Freudenberg’s future managers in the areas of Sales, Operations and Finance. The participants of the program are mainly recruited from the Indian Institutes of Management, Indian School of Business, The National Institute of Technology and Industrial Engineering and The Institute of Chartered Accountants of India. The program

provides cross-functional training for six to nine months in Freudenberg companies within or outside India. This is followed by an assignment with one of the Freudenberg India companies. In this phase, participants take on their first job responsibilities and start building a career.

FIELD aims to attract ambitious graduates with a problem solving attitude, excellent communication and listening skills, the ability to work in a multi-cultural environment and with a high degree of mobility.

Many of the candidates so far have progressed well within the organisation and gone ahead to take up international assignments. We continue to hire FIELD candidates and groom them for leadership roles.

“Currently in India more than 12 million people entering the workforce each year and this is requiring the creation of new jobs. I am convinced that only the manufacturing sector can create these jobs.”

Q You have been in India for almost a decade now? How’s been the experience for you on the personal level?

I generally joke that if I had met Christopher Columbus, I would point him in the right direction to India and accompany him around this incredibly interesting country. I do like the vibrancy of the country and its people. I have learnt and absorbed a lot from this country and the people. The most exiting personal experience is to see my two sons growing up in India. They have spent more time at school in India than in their home country. They are global citizens by now and still remember well their German roots and childhood. I would wish that lots of Indian children would have the same opportunity for their lives: To add foreign culture to their wonderful Indian culture. I could imagine these children would be able to add value to India and to the global world as responsible citizens. 



GLOBAL PRODUCT NOW FOR INDIAN CUSTOMERS



CIMSTAR[®] 501

***Cutting & Grinding Fluid For
Medium To Heavy Duty Applications***

- Semi Synthetic Micro-fine Emulsion
- Suitable for all ferrous & non ferrous metals
- Designed for Use in Soft Water (0-200 ppm)
- Low Foaming Property
- Chlorine and Sulphur free



AUTO & AUTO COMPONENTS

BEARINGS

AEROSPACE



CARBORUNDUM UNIVERSAL LIMITED



murugappa

3rd Floor, Parry House, No. 43, Moore Street, Chennai - 600 001. Phone: 044 30006161, Fax: 044 30006191,
For Enquiries Contact : Gnanamani, Mob : 99406 55424, gnanamanin@cumi.murugappa.com, www. cumiabrasives.com



COVER STORY

Now or Never!

A cheerful **Kaher Kazem**, President and Managing Director, General Motors India, defies the challenging scenario as he endeavours for a magical turnaround for his organisation in the Indian market.

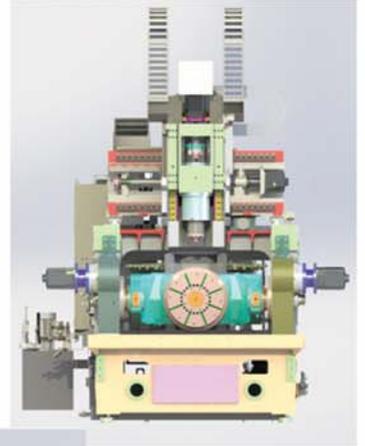
By Niranjan Mudholkar



Solutions for Complex Profile Geometries

MULTI AXES MACHINING CENTERS

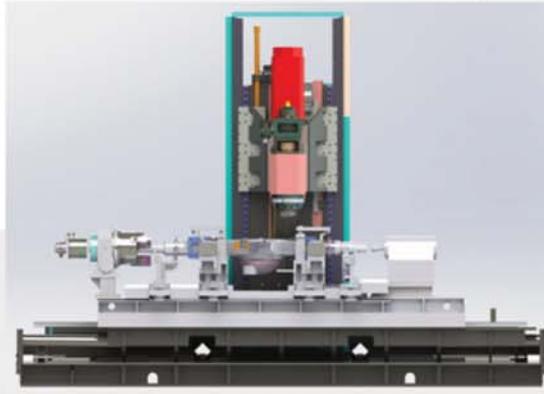
Five Axes
Vertical Machining Center



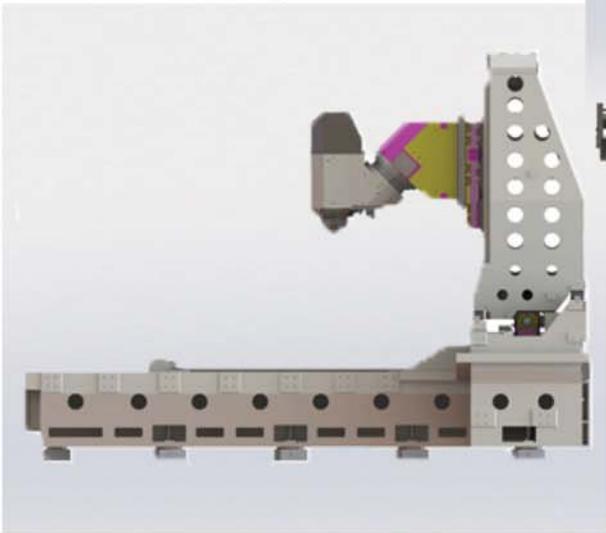
» **Reduced lead time** » **Enhanced efficiency** » **Improved tool life**

It combines Multi operational dynamics with rigidity to meet high precision machining requirements.

Traveling Column
Vertical Machining Center - Multi Axes



Moving Column
Horizontal Machining Center- Five Axes



Blisk



Medical Implants



Fuel-system
(Manifold)



Pelton Wheel



Impeller Profiles



Banjo beam | Rear Axle

WITNESS THE CUTTING EDGE TECHNOLOGY

Toll Free: 18004253332

www.bfwindia.com

BFW

Bharat Fritz Werner



It's been about 20 months since General Motor's Global CEO Mary Barra made an announcement that the Company will put US \$1 billion (about Rs6,400 crore) in new investment in India. The investment plan also included launching of 10 new domestically manufactured vehicles. However, the journey towards achieving a complete turnaround in the Indian market has remained an uphill task for the Company and the investment plans have been put on hold as of now.

The man in charge of things for General Motors (GM) in this country, Kaher Kazem, President and Managing Director for the Indian operations, remains realistic and positive. "We have put on hold these investments while we conduct a full review of our future product portfolio, to ensure we are operating with the right products in the right segments. As with any investment GM makes across the globe, we need to ensure it is positioned to generate appropriate shareholder return."

And why do we call him positive? "Meanwhile, we have confirmed that the new Chevrolet Beat and the Chevrolet Essentia will go into production in 2017," he shares. Of course, he also adds that GM continues to believe in the potential of the Indian market for Chevrolet. "However, if GM is going to make significant investments, we need to be certain that they will generate significant shareholder value," he reasserts.

It's been one year since Kaher has taken charge at General Motors India. So how's been

the journey for him on the personal level? "It has been a great journey for me all through these years in General Motors and I have been enjoying working in various countries at various levels. My role at General Motors in India is to lead our team to grow with a focus on sustainable business performance. We continue to learn and evolve our business strategy to ensure GM India can support GM's global business objectives," he says.

Kaher understand that the biggest task in his hand right now is to rebuild the Chevrolet brand in India. And he knows exactly what he needs to do to accomplish that task. "For me, building the Chevrolet brand is a consistent journey of being focused on and delivering high quality vehicles that are relevant to the markets in which we operate, and are backed by a world-class customer experience."

"We ended the year with positive momentum in domestic sales in the fourth Quarter, despite the challenges of demonetisation, and continued to significantly grow our export business, more than tripling exports vs the prior year."

The overall automotive industry was hit by the demonetisation initiative during November and December of 2016. GM India, however, came up with a sterling performance on the exports front. "We ended the year with positive momentum in domestic sales in the fourth Quarter, despite the challenges of demonetisation, and continued to significantly grow our export business, more than tripling exports vs the prior year."

Kaher is quick to add that GM India supports the Indian Government and welcomes the initiatives taken towards a cashless digitised economy. Any specific expectations from the Government? "While we will always welcome



Inside the Talegaon plant: Reducing cost at the manufacturing level will be the key to produce competitive vehicles, particularly for the Indian market.

ELECTROCHEMICAL DRILLING – MAKE QUICK WORK!

✓ SIMPLER ✓ MORE STABLE ✓ FASTER ✓ MORE VARIABLE ✓ LOWER COST



←
**ELECTROCHEMICAL
DRILLING**
PRODUCES ABSOLU-
TELY NO BURR OR
DRILLING CAPS

HIGHLIGHTS

- + Drilling produces no burr or drilling caps. This means no deburring – a crucial advantage for machining components which are difficult to access.
- + The material is not heated by the ECM process which means no negative effects on its microstructure and no micro-cracks.
- + A lot of ECM boreholes (20 or more) can be drilled at the same time; short cycle times and lean processes are a matter of fact. The feed rate can be up to 5 mm/min.
- + The process is suitable for hard and soft machining. The material hardness does not affect the feed rate.
- + The service life of the drilling cathodes is very long, even for hard materials. The tools suffer almost no wear.





Government support for our industry, the key is to ensure we have the right business model that is sustainable despite external factors, including foreign currency, policies and fluctuating oil prices. As with any market in which we operate, we do seek regulatory certainty and transparency," he adds.

The GM India Talegaon plant celebrated the 100,000 vehicle shipment of Chevrolet Beat to Mexico recently. Kaher ensures that a GM vehicle built anywhere in the world meets the same quality standards, which is evident with the way the Chevrolet Spark (*Beat is badged as the Spark outside India*) has been accepted worldwide. "With the consummation of our highest quality cars in key markets like Mexico, Peru, Central America and other Caribbean countries, GM India team is all set to ascend its export journey to the other markets namely Africa and Latin America." GM India exports numbers have ascended from 943 units in 2014 to 100,000 units till Feb 2017. The Beat is available in more than 70 markets worldwide. In 2016, a total of 69390 units were shipped from Talegaon plant, which is a quantum leap over the previous record of shipment.

Throughout his career, Kaher has also worked in many different markets like Australia, Thailand and Uzbekistan.

"Productivity improvements have also led to a lean supply chain. GM India has been successful in reducing the material inventory in pipeline by optimising stock on hand, achieving better lead times from suppliers, having a more efficient logistics routing and better utilisation of the available space."

Going Green Globally

General Motors achieved a record number of landfill-free facilities worldwide in 2016, exceeding its commitment four years early. The company now operates 152 global facilities that recycle, reuse or convert to energy all waste from daily operations. These 52 non-manufacturing sites and 100 manufacturing sites contribute to GM's top and bottom lines by driving efficiencies, generating revenue and saving money. "We are committed to manufacturing cars and trucks for our customers in a safe and responsible way," said Alicia Boler Davis, GM executive vice president Global Manufacturing. "While we continue to increase the reuse of by-products, our vision is to eliminate waste by applying the most advanced manufacturing processes and technologies in our plants globally," she added.

"We view sustainability as a business approach," said John Bradburn, GM global manager of Waste Reduction. "We look at ways we can grow and strengthen our business for the long term, and that often means reducing our environmental footprint while maximizing social benefit."

About a third of GM's total landfill-free sites are technical centers, warehouses and offices. Landfill-free sites added this year are in Asia, Africa, North America and South America. They include the engine, parts distribution center and stamping operation in Talegaon, India.

How different does he find the Indian market compared to the other global auto markets? "India is a distinctive market in itself and has unique preferences; however markets are no longer isolated, so General Motors designs cars for the world."

Kaher understands that the preferences in the Indian market continue to evolve at a very fast pace – as they are in a number of the export markets in which GM operates. "This is



GM India Talegaon plant celebrated the 100,000 vehicle shipment of Chevrolet Beat to Mexico recently.



HEIDENHAIN

How much variety do rotary encoders have to provide?

Your individual wishes are not just "small fry" for us. HEIDENHAIN now offers for small axis heights what has long been available for large axis heights as well: rotary encoders with accuracy grades for standard requirements or for very high control loop performance. The new small multiturn completes the diversity of our rotary encoders. The overall length and outside diameter of the "small" encoder are identical with the optical version. So you only need one mechanical motor variant and can decide at the end whether you want a rotary encoder with standard or high-end control quality. That saves time and money. And you have the optimal solution for any requirement.



Multiturn rotary encoders

HEIDENHAIN OPTICS & ELECTRONICS INDIA PRIVATE LIMITED

Citilights Corporate Centre, #1, Vivekananda Road,
Off Spurtank Road, Chetpet, Chennai 600031, India
Phone: +91 44 3023 4000, Web: www.heidenhain.in
Email: sales@heidenhain.in; service@heidenhain.in

angle encoders + linear encoders + contouring controls + digital readouts + length gauges + rotary encoders



why we are reviewing our future product portfolio, to ensure we are operating in the right segments across all of our markets. Chevrolet Beat is a perfect example of how we design a global car but tailor it for local needs. Although, Beat began as a car specifically for the Indian market, its popularity made it suitable for export to other markets as well.”

Another key announcement made during CEO Barra’s last visit was about the consolidation of GM India’s manufacturing in a single location in India at Talegaon to support the long-term sustainability of its business in a challenging emerging market. Accordingly, the Talegaon plant drives the manufacturing business of GM in India. General Motors India began production at the Talegaon facility in 2008. “The current base capacity at our Talegaon manufacturing facility is capable up to 150,000 units per annum. We have been significantly increasing the utilisation with our export program,” shares Kaher.

Of course, the plans to shut down the Halol (Gujarat plant) are very much on. Kaher confirms: “As we have said previously, we intend to cease manufacturing vehicles at the Halol factory and consolidate our vehicle manufacturing at Talegaon. We have been examining a number of options for the site, including sale. Recently, we confirmed that discussions with SAIC on the sale of Halol are progressing well. The two parties will continue to work with Governments to secure the necessary approvals. We will share any progress at the appropriate time.” Meanwhile, in a tweet posted on January 19, 2017, the Competition Commission of India (CCI) announced that it has approved ‘SAIC Motor HK Investment Limited’s acquisition of assets of General Motors India Private Limited’.

Reducing cost at the manufacturing level will be the key to produce competitive vehicles, particularly for the Indian mar-

“Preferences in the Indian market continue to evolve at a very fast pace – as they are in a number of the export markets in which we operate. This is why we are reviewing our future product portfolio, to ensure we are operating in the right segments across all of our markets.”

ket. So what is GM India doing on that front? Kaher states that GM has made significant investments towards local manufacturing and R&D in India, with a strong focus on quality, innovation, localisation and improving manufacturing efficiency. “At our Talegaon manufacturing facility, we are making world-class vehicles for India and the world. Our manufacturing sites utilise the Global Manufacturing System with a strong emphasis on ‘Built-In-Quality’ approach. With the customer at the center of our decision making process, we offer the best quality vehicles to our customers in domestic as well as export markets.”

In line with its focus of consolidating GM India’s position as a strong manufacturing hub, the Company increased automation and productivity initiatives in 2016, which helped it achieve a 38 percent improvement in efficiency, and has been recognised by GM regionally and

globally. “This improvement has supported us to meet exponential growth in demand, in a short span of time. Productivity improvements have also led to a lean supply chain. GM India has been successful in reducing the material inventory in pipeline by optimising stock on hand, achieving better lead times from suppliers, having a more efficient logistics routing and better utilisation of the available space.” While General Motors has quite a few car brands in its portfolio, it is happy with having only the Chevrolet brand in India. “Chevrolet is GM’s largest global brand and we are not considering bringing further brands to the market,” Kaher confirms.

And his personal vision for GM India? “Driving sustainable profitability in India is the key. We need to ensure that GM India is contributing to GM’s global business objectives. We do this by continuing to focus on our customers keeping them at the center of everything we do, delivering the high quality vehicles they expect and backing this up with a world-class customer experience,” he signs off. 



Seconds ahead

The best for your lead –
top technologies, precision machining centers and turnkey solutions for your success

Whether automotive, aerospace, engineering, medical or precision engineering – the CHIRON precision machining centers shorten processing times, produce excellent surfaces, and compress your manufacturing process into a small space; saving you up to 75% on resources. Visit us and see for yourself how CHIRON machining centers and automation solutions can maintain your lead!



Wide range of machining centers: from entry-level model to complete system

chiron

**CHIRON India Machine Tools
Private Limited**

#33, Naseer Affinity, 1st Floor
Miller Tank Bund Road, Kaveriappa Layout
Vasanth Nagar, Bangalore – 560 052

Phone: +91-80-4905 6490

Fax: +91-80-4905 6450

rajesh.ghashi@chiron-india.com

www.chiron-india.com



Income tax for smaller companies is reduced

Beneficial for the companies with annual turnover up to Rs. 50 crore

Presenting the General Budget 2017-18 in Parliament, the Union Minister for Finance and Corporate Affairs, Arun Jaitley said that the income tax for smaller companies with annual turnover up to Rs. 50 crore is reduced to 25 percent in order to make MSME companies more viable and also to encourage firms to migrate to company format. As per data of Assessment Year 2015-16, there are 6.94 lakh companies filing returns of which 6.67 lakh companies fall in this category and, therefore, percentage-wise 96 percent of companies will get this benefit of lower taxation. This will make our MSME sector more competitive as compared to large companies. The revenue forgone estimate for this measure is expected to be Rs. 7,200 crore per annum.

Furthermore, Jaitley said it is not practical to remove or reduce MAT at present. However, in order to allow companies to use MAT credit in future years, he proposed to allow carry forward of MAT up to a period of 15 years instead of 10 years at present. Minimum Alternate Tax is at present levied as an advance tax. Although the plan for phasing-out of exemptions will kick in from 1.4.2017, the full benefit of revenue out of phase-out will be available to the Government only after 7 to 10 years when all those who are already availing exemptions at present complete their period of availment.

The Government announced several Measures for Stimulating Growth in the budget proposals for 2017-18. A concessional with-holding rate of 5 percent is being charged on interest earned by foreign entities in external commercial borrowings or in bonds and Government securities. This concession is available till June 30, 2017. The Finance Minister proposed to extend it to June 30, 2020. This benefit is also extended to Rupee Denominated (Masala) Bonds.

The Government gave income tax exemptions to Start-Ups with certain conditions last year. For the purpose of carry forward of losses in respect of such Start-Ups, the condition of

The Government announced several Measures for Stimulating Growth in the budget proposals for 2017-18. A concessional with-holding rate of 5 percent is being charged on interest earned by foreign entities in external commercial borrowings or in bonds and Government securities. This concession is available till 30.6.2017. The Finance Minister proposed to extend it to 30.6.2020. This benefit is also extended to Rupee Denominated (Masala) Bonds.

continuous holding of 51 percent of voting rights has been relaxed subject to the condition that the holding of the original promoter/promoters continues. Also the profit linked deduction available to the start-ups for 3 years out of 5 years is being changed to three years out of seven years.

In order to give a boost to banking sector, Jaitley proposed to increase allowable provision for Non-Performing Asset from 7.5 to 8.5 percent. This will reduce the tax liability of banks. He also proposed to tax interest receivable on actual receipt instead of accrual basis in respect of NPA accounts of all nonscheduled cooperative banks also at par with scheduled banks. This will remove hardship of having to pay tax even when interest income is not realised.

Considering the wide range of use of LNG as fuel as well as feed stock for petro-chemicals sector, the Finance Minister proposed to reduce the basic customs duty on LNG from 5 to 2.5 percent.

In order to incentivise domestic value addition and to promote Make in India, he proposed to make changes in Customs & Central Excise duties in respect of certain items in his speech. Some of these proposals are also for addressing duty inversion. 

Maximize potential.

Create added value.

HANNOVER MESSE

Everything
about Industrie 4.0
and the energy system
of the future at
one place!

24 – 28 April 2017
Hannover • Germany
hannovermesse.com

Polska 
Partner Country 2017



Deutsche Messe

Get new technology first





Roadmap for SMEs' development!

The Machinist presents the industry's reaction on the Union Budget 2017-18



FOCUS ON INFRASTRUCTURE DEVELOPMENT

Budget 2017-18 has laid greater emphasis on rural population, the underprivileged, infrastructure development and digital economy. India has been viewed as one of the most unequal societies in terms of economic growth and distribution of income. This budget tries to narrow the gap between rural and urban India. By allocating a greater amount to transportation, airports and highways, the focus will be greater on infrastructural development. This will help the auto sector's growth during the long-term. The total allocation for rural, agricultural and allied sectors is Rs. 1,87,223 cr, up 24 percent from last year, which is hugely positive. The Finance Minister has hailed the clearance of GST related constitutional amendment

bill and implementation of demonetisation as Tectonic policy initiatives. Even though no major indirect tax related changes have been made in the budget on account of the ensuing GST regime, Mercedes-Benz is hopeful that the government will take necessary steps to spur the growth of the luxury car industry, and help bring down the price of luxury cars. We hope GST will help recover the momentum that the auto industry in general, and luxury car industry in particular, lost in 2016.

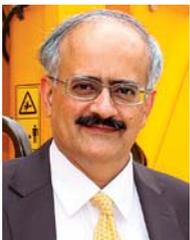
■ **Roland Folger**, MD & CEO, Mercedes-Benz India

100% VILLAGE ELECTRIFICATION WILL BE BENEFICIAL FOR THE POWER INDUSTRY

The Union Budget's declaration of 100 percent village electrification by May 2018 will be beneficial to power distribution segment. Also, the plan to add 20,000 MW solar power will boost solar segment. Besides, the reduction in Income Tax from 30 to 25 percent for industries having turnover of < 50 Cr will be beneficial to MSME companies manufacturing power equipment & accessories.



■ **George Menezes**, Chief Operating Officer, Godrej Electricals & Electronics



WELL-BALANCED BUDGET FOCUSING ON THE MOST CRITICAL ASPECTS

It is a well-balanced budget focusing on the most critical aspects of the economy, such as infrastructure, agriculture and rural India. The budget 2017 will be remembered for many aspects, including this being the first budget wherein Railways Budget got merged too. The budget has managed to press key buttons that are necessary to bolster overall development of the Nation.

From earthmoving and construction equipment industry's perspective, we till now witnessed that the roads and highway sector leading the growth momentum, however to really create sustainable growth, other sectors needed attention. With this budget the focus has broadened and now includes sectors like railways, agriculture and real estate with emphasis on affordable housing. A record investment of Rs. 3,96,135 cr for infrastructure, 1.31 lakh cr for railways is a big boost to the economy and a step in the right direction. Thrust on agriculture sector with credit set at Rs. 10 lakh cr will aid country's all round development.

■ **Vipin Sondhi**, Managing Director & CEO, JCB India Ltd.



Probe Z-Nano



-  **Tool Measurement**
-  **Hardwired**
-  **Wear-Free**
-  **Linear Working Principle**
-  **Breakage Detection**
-  **Length Measurement**
-  **Axes Compensation**

Reliable. Precise. Economic.
High Performance. Blum.



Radio Probe TC60



-  **Radio transmission**
-  **Multidirectional**
-  **Wear-free**
-  **Contour measurement**
-  **Mass production**

Fast. Precise. Economic.
High Performance. Blum.



A TRULY WORKMAN AND BUSINESS-LIKE BUDGET

Post demonetisation, rural landscape had come under stress along with the SMEs and the informal sectors of the economy and needed a boost. Though the Budget has used a little elbow room, pegging the fiscal deficit at 3.2 per cent for 2017-18, it has rightly chosen to traverse the path of fiscal consolidation by limiting the market borrowing. It would certainly help keep inflation in control. The macro credibility of the Indian economy has been kept intact.

Abolition of the Foreign Investment Promotion Board is a great signal to the foreign investors about furthering of reforms and ease of doing business in India. A boost to the digital economy by way of stepping in telecom infrastructure would bring in more transactions in the formal sector

The focus on investment in infrastructure would fill in the gap created by subdued investment from the private sector. Coupled with lower interest rate regime, we expect the demand creation to pick up.

■ **Sunil Kanoria**, *President, ASSOCHAM*

POSITIVE STEP TOWARDS DEVELOPMENT OF THE MSME

The reduction in income tax to 25 percent is a positive step towards development of the MSME sector and enhance their production capacities. Machine tool industry is the backbone of MSMEs. The Indian machine tool Industry has around 1000 units engaged in the production of machine tools, accessories/ attachments, subsystems and parts. Of these, around 25 in the large scale sector account for about 70 percent of the turnover and the rest are in the MSME sector and this sector stands to benefit a lot from this budget. The ministry's move therefore will eventually give an uptick for the machine tool industry business.

The customs duty reduction from 7.5 to 2.5 percent on three critical components (CNC systems, ball screws and linear motion guides) has been extended to all CNC machine tools under HSS code 8456 to 8463. This will have a direct bearing on the machine tool industry and enhance its development. The setting up of the next phase of 'Skill Strengthening for Industrial Value Enhancement' (STRIVE) at a proposed budget of Rs.2,200 Cr in 2017-18 and 100 India International Skill Centres across the country will ensure availability of skilled manpower for the industry.



■ **V. Anbu**, *Director General and CEO, IMTMA*



POSITIVE SENTIMENTS WILL BE RESTORED

Considering the unfavourable environment for the auto industry on the whole due to demonetisation we had all pine highest ever hope with the union budget. The good news for the sector is that the GST will go as scheduled as the government has taken two tectonic policy initiatives—passage of GST Bill and demonetisation. GST implementation is positive for the auto sector on the whole. We are certain that positive sentiments will be restored as it bears good tidings for electric vehicle industry and the sector overall.

■ **Ayush Lohia**, *CEO, Lohia Auto Industries*

DIGITALISATION TO BRING IN TRANSPARENCY

Sufficient thrust has been given for the sectors across transport, infrastructure development including rail road, highways, PMGS program, etc. Reduction in the holding period for long term capital gain from three years to two years and advancing the base year for calculating the indexation for cost of acquisition from 1981 to 2001 is very much welcome and could provide a boost to the real estate sector. Furthermore, significant emphasis on digitalisation to bring in transparency and to reduce corruption is a move in the right direction. The Income tax rebate given to promote MSME sector is also a very good decision. Some steps to incentivize savings and investments could have been provided for.



■ **Anand Sundaresan**, *Chairman, Schwing Stetter Sales & Services India*

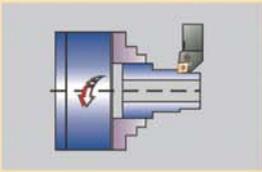
PMT Machines Limited

• Pune • Halol

CUSTOMISED SOLUTIONS

CELEBRATING 50 YEARS

CNC Turning



SC-8K
GANTRY LOADER



SC-14
BIG BORE LATHE



SC-25
CNC HEAVY DUTY LATHE

CNC Internal Grinding

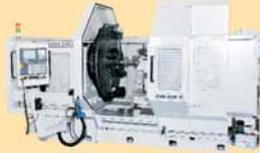
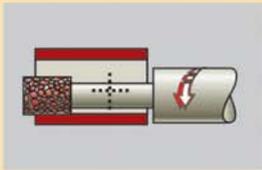


FIG-200 SPL CNC
BIG BORE GRINDER

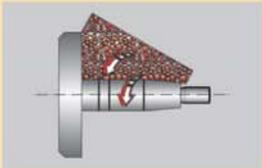


FIGT-300 CNC
FOUR STATION TURRET



FIGE-150 CNC
ID / OD GRINDER

CNC Cylindrical Grinding



AWH-1500 CNC
LONG SHAFT GRINDER



AWH-2000 CNC
HEAVY DUTY GRINDER



SWH-400 CNC
AUTO LOADING

Surface Grinding



SG-106 CNC
CREEP FEED GRINDER



SGR-60
ROTARY GRINDER



SG-63
HYDRAULIC / PLC

Automats



A15/25

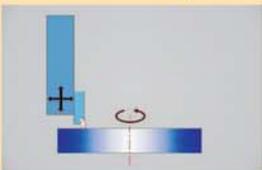


TD36
AUTOLOADING



A42/60

Vertical Turning Lathe



VIG-500 CNC
VERTICAL INTERNAL GRINDING



VC - 60C
1.5 M



VC - 75C
TURNMILL (2.5 M)

Built To Last

Pune : Tel : +91-20-27426219 to 23 • Fax : +91-20-27426231/35 • E-mail : rd@pmtmachines.com, marketing@pmtmachines.com

Halol : Tel : +91-2676-246786/87 • Fax : +91-2676-246788 • E-mail : cb@pmtmachines.com, mkt.brd@pmtmachines.com • website: www.pmtmachines.com

Pune : 9960693354; Mumbai : 9821713400; Delhi : 9810401815; Bangalore : 9845026905; Chennai : 9840896822; Coimbatore : 9840366822; Jamshedpur : 9934119234; Vadodara : 9662503927



RENEWABLE ENERGY SECTOR IS IGNORED

As a professional stakeholder body, we are not too happy with the budget 2017 as there is nothing concrete on the renewable energy sector, considering it is one of the growing sectors in the country. The Government has completely overlooked the wind energy division. The sector is in a developing phase and needs attention from the government as we are facing various issues. Service tax could have been rationalised and at least some state level reforms and policies should have been introduced that could have helped us in our road plan for the goal of achieving 60GW by2022.

■ **Sarvesh Kumar**, *Chairman, Indian Wind Turbine Manufacturers Association (IWTMA)*

TRANSFORM, ENERGISE AND CLEAN INDIA

The overall agenda of ‘Transform, Energise and Clean India, for 2017-18 is very well reflected in the initiatives announced in the Union Budget 2017-18. It is encouraging to see that the government has allocated Rs 3.96 lakh cr to the infrastructure sector. Moreover, granting infrastructure status to ‘affordable housing’ is a commendable move. We expect this investment in infrastructure to be a significant enabler of economic growth. Technology will play a pivotal role here – in urban planning, construction management, project delivery - helping deliver more scalable, sustainable, and resilient civil infrastructure. We are also delighted to see the support for the growth of MSMEs and SMEs.



■ **Pradeep Nair**, *Managing Director, Autodesk India & SAARC*



ACTIONABLE ROADMAP FOR THE IMPLEMENTATION OF GST

We welcome the Union Budget for 2017-18 year. It continues to build on some of the large initiatives rolled out last year, and is also a pro-manufacturing budget with favourable announcements for the MSME sector coupled with the vision of India being a global electronics manufacturing hub. The continued focus on, and the inclusion of an actionable roadmap for the implementation of GST is heartening as this will enable India to become ‘one market’, improving ease of doing business immensely. This will have a multiplier effect on the manufacturing sector. The various initiatives around skilling and education such as setting up of India International Skill Centres and expansion of Pradhan Mantri Kaushal Kendras will provide the necessary boost to several sectors, especially those in fledgling/ new age industries. Niche sectors such as robotics, for instance, will benefit hugely from such programs propelling India to her rightful place on the global technology map.

■ **Samay Kohli**, *CEO and Co-founder, GreyOrange*

A MIXED BUDGET

For Refractories, which are the backbone for core manufacturing sector like steel and cement, increase in expenditure allocation, particularly in Railways, Highways and Housing should help build demand. I was expecting more for manufacturing sector in terms of reforms and some specific measures to safeguard domestic manufacturing from cheaper, unreliable imports and that has not happened. Overall, it is a mixed budget.



■ **Sameer Nagpal**, *CEO - Refractories, Dalmia Bharat Group*

A MIXED BUDGET

“With the government emphasising on job creation and education, the Union Budget 2017-18 seems to have moved in the right direction. The Model Shops and Establishment Bill and setting up 100 international skill centers will tremendously boost employability of the youth. This increased focus towards creating jobs and skilling will help many first time job seekers to enter the labour market. Amongst sectors, Textile and Tourism industry will witness larger employment opportunities in months to come. Further tax reduction for companies with revenue of less than Rs.50 crores will also help generate employment.”

■ **Ashok Reddy**, *Managing Director, TeamLease Services*

Open automation network technology leader - CC-Link IE

The only open gigabit ethernet ready for e-F@ctory and Industry 4.0

CC-Link IE is the only open gigabit Ethernet available today and proven in demanding applications. So, why gigabit?

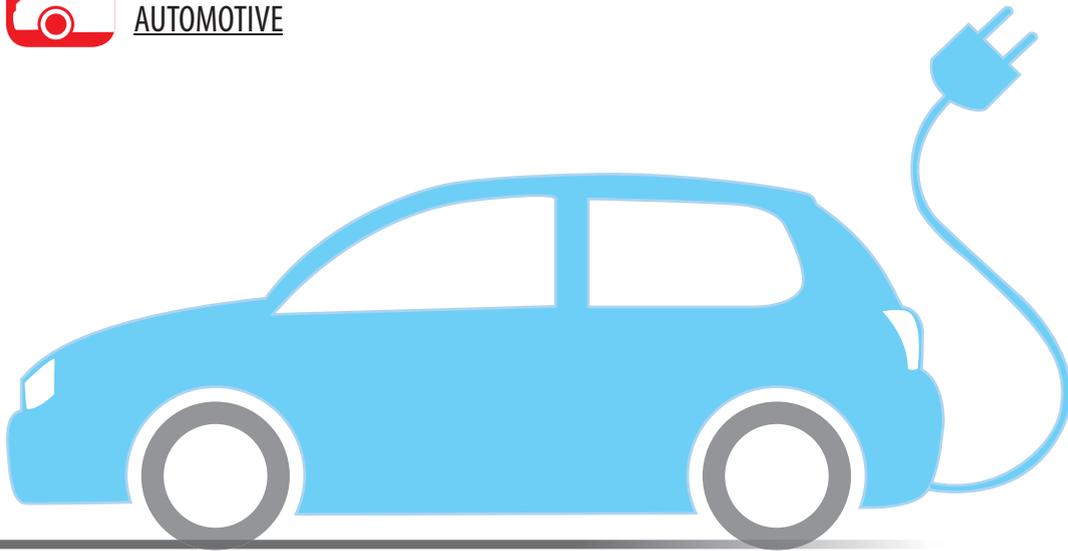
- Maximum bandwidth for Industry 4.0 & e-F@ctory applications
- Open development & product support
- SLMP technology reduces time to market



CC-Link IE is supported by leading automation vendors such as:



Note: All third party trademarks are property of their respective owners and acknowledged



Electrifying the transport industry

Gradually, electric vehicles are gaining importance in the country. On this backdrop, here is an overview of present and future of the electric transport.

By Swati Deshpande

Over the past decade, India's cities have been witnessing an increasing trend in motorisation. This rapid motorisation also has increased the awareness towards reducing vehicular pollution and shifting towards cleaner engines and alternative technologies. "In this context electric buses can play a positive role, as there are several benefits associated with the shift from conventional diesel buses to electric buses in terms of reduction in local pollution, noise and fuel consumption," says T. Venkataraman, Senior Vice President-Global Buses, Ashok Leyland.

Agreeing to the point, Nishant Arya, Executive Director, JBM Group mentions, "Electric vehicles have more advantages compared to conventional mode of transport. There is a

zero guilt factor to start with as it conserves the environment. The initial investment one makes in an electric vehicle can be recovered in the form of cost saving in a limited period. If production of electric vehicles is promoted well, there will be benefits of economy of scale and the initial cost will come down for the end user."

Government's support

"Considering the environment factor, few states in India have already started expressing interest towards adopting green technologies for reducing vehicular pollution and have taken initiatives towards piloting such vehicles in their fleets. Ashok Leyland is in active discussion to take things forward towards this direction. In places like Himachal Pradesh and Maharashtra, the State Transport has shown keen interest plying 100 percent battery operated Electric Buses, which is pioneering urban transportation landscape in India. Ashok Leyland's target market segments are mostly in the Tier 1 metro city circuit's and staff transportation. Other than these, the company also continues to focus on other suitable applications for adopting electric vehicles such as heritage sites, rural areas, hill stations, airports, IT firms and educational institutions," Venkataraman informs.

"The union government's ambitious programme of Faster Adoption and Manufacturing of (Hybrid &c) Electric Vehicles (FAME) under National Electric Mobility Mission plan (NEMMP) aims at converting at least 20 percent of total bus industry to be electric by 2020 is expected to act as a catalyst to this movement," he further adds.

Seconding the same, Arya states "It will be appropri-

Circuit series by Ashok Leyland

The circuit series by Ashok Leyland is country's first Made in India, 100 percent electric bus. This zero-emission vehicle is created by Ashok Leyland specifically for Indian road and load conditions and will be offered on multiple platforms. This series can tackle varied topography, gradients, and usage conditions. It is integrated with fire detection and suppression system (FDSS) and can travel approx. 120 km on a single charge. It is built on a simple, mass-market platform that will enable the operator to cater to customers in city centres with minimal operational and maintenance costs. The buses are manufactured in Alwar, Rajasthan and Viralimalai in Tamil Nadu but the company has the capability to manufacture in all the seven plants. Currently, the bus costs between Rs 1.50 cr to 3.50 cr.

Computed Tomography (CT) with Traceable Metrology

ZEISS Metrotom



// RELIABILITY
MADE BY ZEISS



Some parts that can be measured with ZEISS Metrotom

3D X-Ray Measurements for Quality Assurance

- Measuring and inspecting hidden structures non-destructively
- Complete 3D capture of a work piece, makes it possible to compare CAD models
- Destruction free defect analysis
- Easily measure the unseen

Carl Zeiss India (Bangalore) Pvt. Ltd.

Plot No. 03, Jigani Link Road, Bommasandra Industrial Area, Bangalore 560 099
Phone: 080 4343 8102

E-mail: info.metrology.in@zeiss.com

www.zeiss.co.in / imt





ate to say that CNG was a revolution in public transportation and electric is the next phase of green revolution. Long life lithium-ion batteries coupled with fast charging solutions (plug-in/pantograph) are making electric vehicles increasingly feasible for everyday usage across various applications. For JBM, in the case of our electric bus ECOLIFE, the technology is adaptable to the city bus operation depending on demographic and geographic conditions.”

“The electric bus technology has matured to an advanced stage for commercial adoption which is further established by increasing worldwide sales data. While, China, Europe and America contribute to over 99 percent of the worldwide sales, India is expected to be a major market by 2020. The operating conditions in India such as road conditions, weather, monsoons and traffic will be taken into consideration during design and adaption of EV technology to ensure maximum reliability and quality,” Venkataraman notes.

Challenges

“There are challenges in the form of higher capital cost for manufacturing, batteries are expensive. A better ecosystem that supports usage of electric vehicles needs to be put in place. The government can bring about a policy on setting up of charging stations. These charging points can be in the form



ECOLIFE by JBM Group

ECOLIFE, a 100 percent electric bus that was unveiled by JBM Group in association with Europe’s largest bus manufacturer Solaris Bus & Coach is a holistic transport solution that addresses a whole range of challenges in the Indian public transportation domain -- from the need for more sustainable transport to the problem of air pollution in cities, to the need for longer-lasting batteries.

ECOLIFE also contains features of JBM CITYLIFE buses like Vehicle Health Monitoring System, Passenger information system (PIS), Electronic Braking System, Independent Front Suspension, Rigid Rear Suspension, Wheelchair Ramp, Kneeling Mechanism, and Emergency Exit Doors. We are talking to state transport authorities, government business institutions, and schools & colleges to adopt the zero-emission technology.



Electric vehicles offer the fastest way to reduce our carbon footprint given the amount of travel we do daily. The government is aware of this and that’s why we see a new target of making India a nation that travels 100 percent on electric vehicle by year 2030.

Nishant Arya, Executive Director, JBM Group



Considering the environment factor, few states in India have already started expressing interest towards adopting green technologies for reducing vehicular pollution and have taken initiatives towards piloting such vehicles in their fleets.

T. Venkataraman, Senior Vice President—Global Buses, Ashok Leyland

of pantograph or plug-in charging. The government can be the largest buyer of electric vehicles and that will lead to economies of scale for the industry. This will, in turn, also lead to setting up of charging stations across the country,” Arya adds.

“However, to sustain electric mobility, it is a necessity and a challenge to incline the infrastructure. It will be easier for electric buses if the infrastructure is brought in place, firstly because the routes are from point to point and secondly, they can be charged at depots. Electric buses can be used as a supplement to diesel vehicles during peak hours,” Venkataraman notes.

Looking at the bright side, Arya concludes by saying, “Electric vehicles offer the fastest way to reduce our carbon footprint given the amount of travel we do daily. The government is aware of this and that’s why we see a new target of making India a nation that travels 100 percent on electric vehicle by year 2030. I can confidently say that all stakeholders now accept the fact that electric is the way forward.” 

Your Partner in the Automotive Industry



TYROLIT in India | +91 80 23121811 | sales-metalprecision@tyrolit.co.in

A Company of the SWAROVSKI Group
www.tyrolit.com





Bigger and better

With the construction of new hall, IMTEX was even bigger in size this year compared to its earlier editions. Here is a glance at IMTEX 2017.

Eighteenth edition of IMTEX was held at the Bangalore International Exhibition Centre (BIEC) from January 26, to February 1, 2017. Along with it, BIEC also celebrated milestone of completing 10 years at IMTEX 2017.

This edition was bigger this time and was held in six halls at BIEC covering a gross area of 66,000 sq mtr. A newly constructed hall of 17,500 sq mtr was inaugurated on the opening day of the exhibition. Manufacturers, suppliers, researchers and trade associations from almost 22 countries (Australia, Austria, Belgium, Brazil, China, Czech Republic, France, Germany, India, Israel, Italy, Japan, Korea, Serbia, Singapore, Spain, Switzerland, Taiwan, Thailand, The Netherlands, United Kingdom and United States) participated in the seven day long exhibition.

The group participation came from China, Czech Republic, Germany, Italy, Spain, Taiwan and United States. Over 1000 exhibitors participated in the exhibition.

Indian Machine Tool Manufacturers' (IMTMA) flagship event and South East Asia's largest exhibition on metal cutting technologies was inaugurated by Siddaramaiah, Chief Minister of Karnataka, at the BIEC. Girish Shankar, Secretary (HI), Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, Government of India; D.V. Prasad, I.A.S., Additional Chief Secretary, Commerce & Industries Department, Government of Karnataka; and Dr. Naushad Forbes, President, Confederation of Indian Industries (CII). Jamshyd N. Godrej, Chairman - Exhibitions, IMTMA; P.G. Jadeja, President, IMTMA; P. Ramadas, Vice President, IMTMA; and V. Anbu, Director General, IMTMA also presided over the inauguration. On the occasion, the IMTMA-Premier

Outstanding Entrepreneur Award in memory of Vinod Doshi was given to Milind Kelkar and Mohini Kelkar, GrindMaster.

Speaking at the inauguration, Dr. Naushad Forbes, President, CII. "As technology becomes a formidable enabler in manufacturing it is imminent to incorporate it in all aspects of manufacturing. The machine tool sector has huge responsibility and scope to make Indian manufacturing successful and therefore Industry needs to leverage not only its design capabilities but also ICT, Automation, Industry 4.0, as well as innovation," further added Dr. Forbes.

To further provide impetus to machine tools industry



"We almost have almost 1,100 exhibitors in this IMTEX 2017, out of which 45 percent are foreign companies, so it's an international event in true sense. As compared to 2015, this edition has grown both in terms of size and participation. That shows the growth and demand that we have for IMTEX today."

V. Anbu, Director General and CEO, IMTMA

What do you need to Measure?

Delivering world-class test & measurement tools with the accuracy, reliability and versatility you need to tackle your most challenging jobs

Check out the
NEW FLIR Test
and Thermal Cameras!



Images used for illustrative purposes only.

For more details call us on: +91-11-4560 3555 or write to us at flirindia@flir.com.hk

FLIR Systems India Pvt. Ltd.
1111, D Mall, Netaji Subhash Place, Pitampura, New Delhi - 110034
Fax: +91-11-4721 2006 | Website: www.flir.in



The World's Sixth Sense®

EXTECH™

BY FLIR

Measure with Extech



MultiMeters | Clamp Meters
Thermometers | Airflow Meters
Light Meters | Sound Meters
Water Quality Meters | Tachometers
Humidity Meters | Moisture Meters
Video Borescopes and More!

www.extech.com

45th Celebrating Our
Anniversary

For more details call us on: +91-11-4560 3555 or write to us at flirindia@flir.com.hk

FLIR Systems India Pvt. Ltd.
1111, D Mall, Netaji Subhash Place, Pitampura, New Delhi - 110034
Fax: +91-11-4721 2006 | Website: www.extech.com





IMTMA is working closely with NITI Aayog and DHI in giving shape to the future technological initiatives and R&D efforts for the machine tool industry.

Speaking on opportunities for machine tools sector P. G. Jadeja, President, IMTMA said, “The Aero-Defence sector presents an attractive growth opportunity. To tap this IMTMA has launched an initiative and formed the Aero-Def Group to bring our members closer to this important customer segment and work out development and marketing strategies.”

Throwing light on this edition of IMTEX 2017, V. Anbu, Director General and CEO, IMTMA said, “We almost have almost 1,100 exhibitors in this IMTEX 2017, out of which 45 percent are foreign companies, so it’s an international event in true sense. As compared to 2015, this edition has grown both in terms of size and participation. That shows the growth and demand that we have for IMTEX today. This is a great platform that allows live demonstration of the product and exhibitors and visitors can have the discussion over how best to put them to use. So in all, this is a great eco-system.”

For sectors such as auto components, automobiles, aerospace, defence, railways, power, capital goods, consumer goods, space technologies, etc., the show was open windows to witness and learn future technologies in metal cutting machine tools. With Make in India initiative gathering pace manufacturing has come into spotlight once again and IMTEX 2017 served as a catalyst to push this further.

Besides being a trade fair, IMTEX 2017 featured various activities for the benefit of the manufacturing industry:

International Seminar on Machining Technologies

To highlight the evolving trends in metal cutting industry, globally, in conjunction with IMTEX, IMTMA scheduled an ‘International Seminar on Machining Technologies’ on January 25, 2017. The objective of this seminar was to present

the latest technological developments in machining which users can adopt in their production process successfully. Through this seminar IMTMA intended to cover the more pertinent aspects of metal cutting processes, its requirement in the manufacturing industry and the technology gaps that can be bridged. International experts shared their experiences and latest developments. The one day seminar covered key technology areas related to machine tools and machining, workholding, tools and tooling, metrology & controls, CAD/CAM and grinding & finishing processes.

Reverse Buyer Seller Meet

IMTMA and EEPIC India jointly organised this meet during IMTEX 2017. Dealers, distributors, potential buyers and few key media persons from many countries

will be invited to the exhibition.

Expo Platform

A networking platform and management system for events that allowed visitors and exhibitors to register, gain access to floor plans and product catalogues, manage their schedules, market successfully, create analytics, secure full control of data, establish contact through mobile apps, etc. It allowed visitors to generate their own badge.

i2 Academia Pavilion

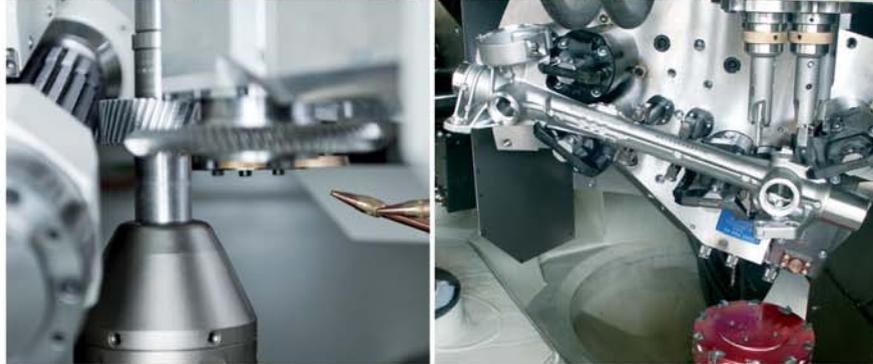
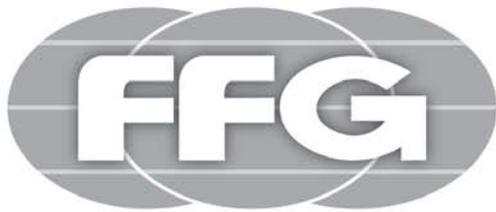
The i2 Academia Pavilion at IMTEX 2017 had participation from around 40 institutions including IITs from all over India. These institutions got an opportunity to present their innovative research projects on metal working industry through display of posters and take part in award winning competitions. The i2 Academia Pavilion helped academia participants to update themselves with the current scenario in the machine tool industry, particularly the latest technologies in machine tool building. Industry on the other hand gets an opportunity to network with the academia and pick their products/technology for commercial usage.

Connect

Students could avail this opportunity to gather more knowledge of the opportunities by interacting with industry experts. About 600 students from both mechanical and electrical engineering streams participated in Job Connect during IMTEX 2015.

Jagruti

A programme to familiarise engineering students with the machine tool industry and the technological happenings in this industry segment. 



FFG – Your Smart Production Solution

The renowned machine tool brands of FFG are your expert partners for virtually any manufacturing task, based on an extensive, long-standing expertise in milling, turning and gear making applications. From single machines to turnkey solutions – our experts will develop your smart solution: Machine tools and production systems, designed from intelligent components and new digital services, which give you a maximum of flexibility and scalability.



MAG India Industrial Automation Systems Pvt. Ltd.

Bangalore, India | www.mag-ias.com | sales-india@mag-ias.com | phone number: +91 80 4067 7000 | fax +91 80 4160 0777



“It’s been great show. Lot of customers have been very excited about the announcement of Allied acquiring Wohlhaupter. We believe that the synergy between Allied and Wohlhaupter is leapfrogging us by ten years. With a unified and bigger team, we will be now closer to the customer. Being closer to the customer with our application engineering support is going to allow us solve their problems in a better and faster way. So we are excited.”

■ **Steven Stokey**, *Executive VP, Allied Machine & Engineering Group*

“The year 2016 has been the best year ever since Heidenhain started its subsidiary in India. We are quite happy with the way things are going and we are quite hopeful about the future. We have been participating in Imtex now for several years and this has been probably the best show so far as far as the customer response is concerned. We have had some very productive discussions with the visitors at the show.”



■ **Jayanthram AP**, *MD, Heidenhain India*



“The last one year has been very successful for our Group. Studer and Walter have done quite well. The other brands are still getting to know the market. Overall, we are very positive. Imtex has been very successful and there has been marked improvement over the previous edition of the show. If we are to go the customer feedback at our stall, 2017 will be an absolutely brilliant year.”

■ **Philippe Selot**, *Manager Marketing-Communication, United Grinding Group AG*

“This time we are launching a product called hyperMILL MAXX Machining, which is a recent development. We are focusing more on reducing the cycle time of finishing with the design of the new cutters and new designing technologies. You can save up to 90 percent of cycle times in manufacturing activities. Compared to the previous shows, this year’s Imtex has been very good.”



■ **Aravindhan Somasundaram**, *Sales Manager – Key Accounts, Open Mind CadCam Technologies India Pvt Ltd.*



It’s been a wonderful year for us as we have sold almost 100 machines across the country. This is our seventh Imtex and it’s a very good show. It’s a great platform for the buyers and sellers of machines and software. We displayed some very innovative machines at the show and they have all received great response from our customers.”

■ **Amit Salunkhe**, *National Sales Manager (India & South East Asia), ZOLLER India Pvt. Ltd.*

“There has been 40 percent growth in this Imtex compared to the previous edition. The show itself has received excellent response from business visitors. Everybody is excited due to the ‘Make in India’ initiative of the Government and the overall investment is very positive in the country this year. We have launched two new products at this show targeted as import substitutes. We are also coming up with a new facility adjacent to our existing facility to meet the growing market demand.”



■ **P. Ramadas**, *MD, Ace Manufacturing Systems Ltd, & IMTMA Vice President*

INTEC 2017

INTERNATIONAL MACHINE TOOLS & INDUSTRIAL TRADE FAIR

1st - 5th JUNE 2017

CODISSIA Trade Fair Complex,
Coimbatore

Organised by



CODISSIA
Intec Technology Centre



CONCURRENT EVENTS



Exhibitors Profile

- Machine Tools and Accessories ♦
- Fabrication Machinery and Equipments ♦
- Instrumentation & Automation ♦
- Industrial Consumables ♦
- Material Handling Equipments and Machinery ♦
- Metallurgical Plant and Equipments ♦
- Precision Tools, Cutting Tools, Dies & Moulds ♦
- General Engineering ♦
- Hydraulics and Pneumatics ♦
- Machinery for Process Industry ♦
- Foundry Equipments ♦
- Pumps and Fittings ♦
- Industrial Electrical and Electronics ♦
- Textile Machinery and Equipments ♦
- Factory Cleaning & Pollution Control Equipments ♦
- IT Consulting and Service Providers ♦

17th Edition



1st - 5th JUNE 2017

Platinum Supporter



Diamond Supporter



Gold Supporter



Silver Supporters



Official Banker



Conference Partner



Mobile : 99655 15182 | 75025 22000 | 75029 22000 • E-mail : intec@codissia.com

**Stall
Bookings
Open**



“This Imtex has been one of the largest shows ever in the history of Imtex. Jyoti had the biggest booth in this show and we displayed 26 technology products catering to a wide range of industries. For example, Indian market is opening up for hardware manufacturing and we are equipping ourselves to take up this opportunity. So we have displayed two products for this industry as well.”

■ **P. G. Jadeja**, MD, Jyoti CNC Automation Ltd & President – IMTMA

“Year after year the number of footfalls has been growing by 20 percent at Imtex and accordingly our stall size has also increased. The quality of customers has also been increasing. Business has been quite good for us in the last year as we are fairly diversified in terms of the sectors that we cater to. In the Indian market, we are now looking at a major transition with the combination of Indian made products and German made machines. Our aim is to make the cost per part for our customer as economical as possible.”



■ **A N Chandramouli**, MD, Starrag Group India



“We are known for innovation whether it is automotive lubricants or industrial lubricants. We give a technological platform to our customers to save money on the overall cost of machine as well as through improved productivity and reduced power consumption. The response at Imtex has been very good with the right kind of visitors.”

■ **Yatendra Kumar**, Business Head Motul Tech India

“The response has been fantastic at Imtex. Our strength is technology and we believe in staying ahead of competition. Many people think that HARTING is all about connectors. Of course, we are experts in that segment but we have many other products as well like RFID solutions. We are now moving towards digitalisation and Industry 4.0. Our mantra is doing more with less.”



■ **Girish Rao**, CEO & MD, HARTING India Pvt. Ltd.



“Imtex is big event for us and it shows how India is developing in terms of the manufacturing industry. Our focus is on the automotive and mass production industry where every cycle time counts. With technology mix we try to provide the optimum solution to our customers. Our customers have complete trust in us that we will give them the complete solution.”

■ **Andreas Zieger**, Managing Director, EMAG India

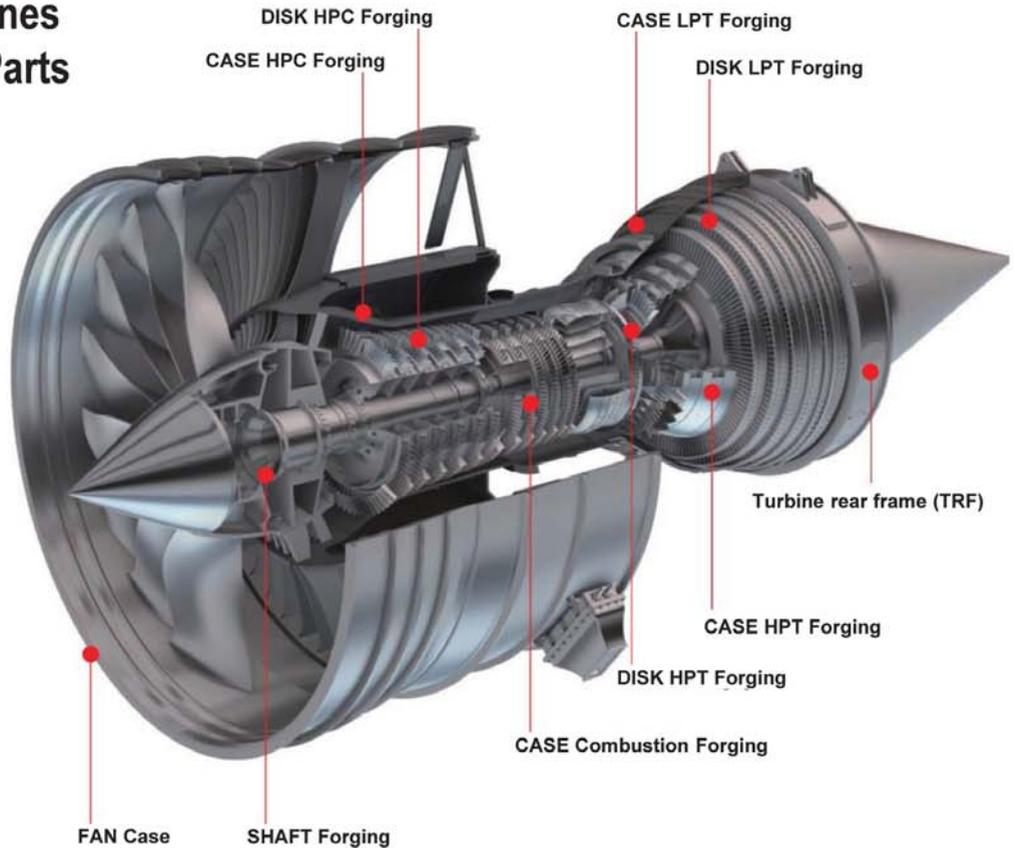
“There has been a good crowd at our stall and it has been an excellent opportunity for us. As far as our Group is concerned, right from the beginning, we have been designing our own machines. Our designs are aimed at Indian requirements and Indian price points. Also, we source most of our components from India. We also make a lot of parts ourselves to make it competitive in the market.”



■ **Shrinivas G. Shirgurkar**, Managing Director, Ace Designers Limited.

Materials for Aerospace Engines and Structural Parts

Materials for aerospace engines and structural parts, such as landing gears, must be durable to withstand high-temperature, high-pressure combustion gases, high-speed revolutions, or repetitive heavy loads for an extended period of time. Therefore, such component materials must be highly reliable and durable. Our materials for aerospace components are highly acclaimed and trusted thanks to our special melting technologies and manufacturing processes that have been nurtured over the years.



Tool Steel for Manufacturing Facilities



SLD-MAGIC™ Cold Work Tool Steel



DAC-MAGIC™ Die Cast Tool Steel



Steel for Plastic Tools HI-PM™ & CENA™ Series

HITACHI METALS (INDIA) PVT. LTD.

Plot No. 94-95, Sector-8, IMT Manesar, Gurgaon 122050, Haryana, INDIA

Tel: +91-124-4124800; Fax: +91-124-2290015

puneet.gupta@hitachimetals.co.in / tarun.rastogi@hitachimetals.co.in / sunil.subudhi@hitachimetals.co.in

www.hitachi-metals.co.jp/e



Our booth was full of customers right from the day one of the exhibition. As a result we are very happy with the show. We have host of new products displayed at IMTEX 2017. In fact, everything displayed on our booth is new. Having range of new products at the beginning of the year, we are very optimistic about growth in the rest of the year. Although demonitisation has affected the manufacturing industry on temporary basis, on medium on long-term basis, it will turn out to be a right move for the manufacturing industry.

■ **Praful Shinde**, *Head - Sales & Marketing, BFW*

Our booth at IMTEX was built on the theme of Industry 4.0. The way market is moving nowadays, Industry 4.0 is going to be a key player for all manufacturing sectors in the time to come. We would like to support the industry in this shift towards the latest advancement and hence we displayed products on the said theme. Since India is a global player in the manufacturing market, the response of visitors towards Industry 4.0 at the booth was very encouraging.

■ **S. M. Sood**, *Managing Director, MARPOSS India Pvt. Ltd.*



IMTEX has always been fascinating event for igus. Our company started operations in India in IMTEX in 1998 at New Delhi. Now in 2017, igus' booth had always been busy and we are happy with visitors' footfall. We displayed several new products and applications for the Indian automation industry. Broadly, the company deals with three major categories—cable management solutions, high flexible cable solutions, dry-tech polymer bearing. We had displayed all the applications in our booth.

■ **Antony P Kurian**, *Managing Director, igus India*

We are very please with the show and we have come with number of launches. Direct drive tilting rotary table is the newly launched product that we displayed at the exhibition. The entire table is designed and manufactured by us. We had also displayed some products related to IoT. As the whole world is moving towards IoT, India will also have to accept the new technology. Besides, it offers more productive solutions, information and helps the user save cost. Additionally, products and solutions related IoT are not too heavy for the customers' pocket, as a result, we are optimistic about the same.

■ **Indradev Babu**, *Managing Director, UCAM Pvt Ltd.*



Mag India displayed bouquet of products & solutions at IMTEX 2017. These solutions were mainly targeted at the automotive industry. Also, one of the highlights of the show was Industry 4.0 initiatives. We think that this initiative will get big response considering that our most of the customers have already taken their first steps towards integrated factories. We are also moving towards intelligent machines and our target is to reduce maintenance time drastically for the end customers. This has been an excellent show for us.

■ **Shashank M. P.**, *President, MAG India IAS Pvt. Ltd.*

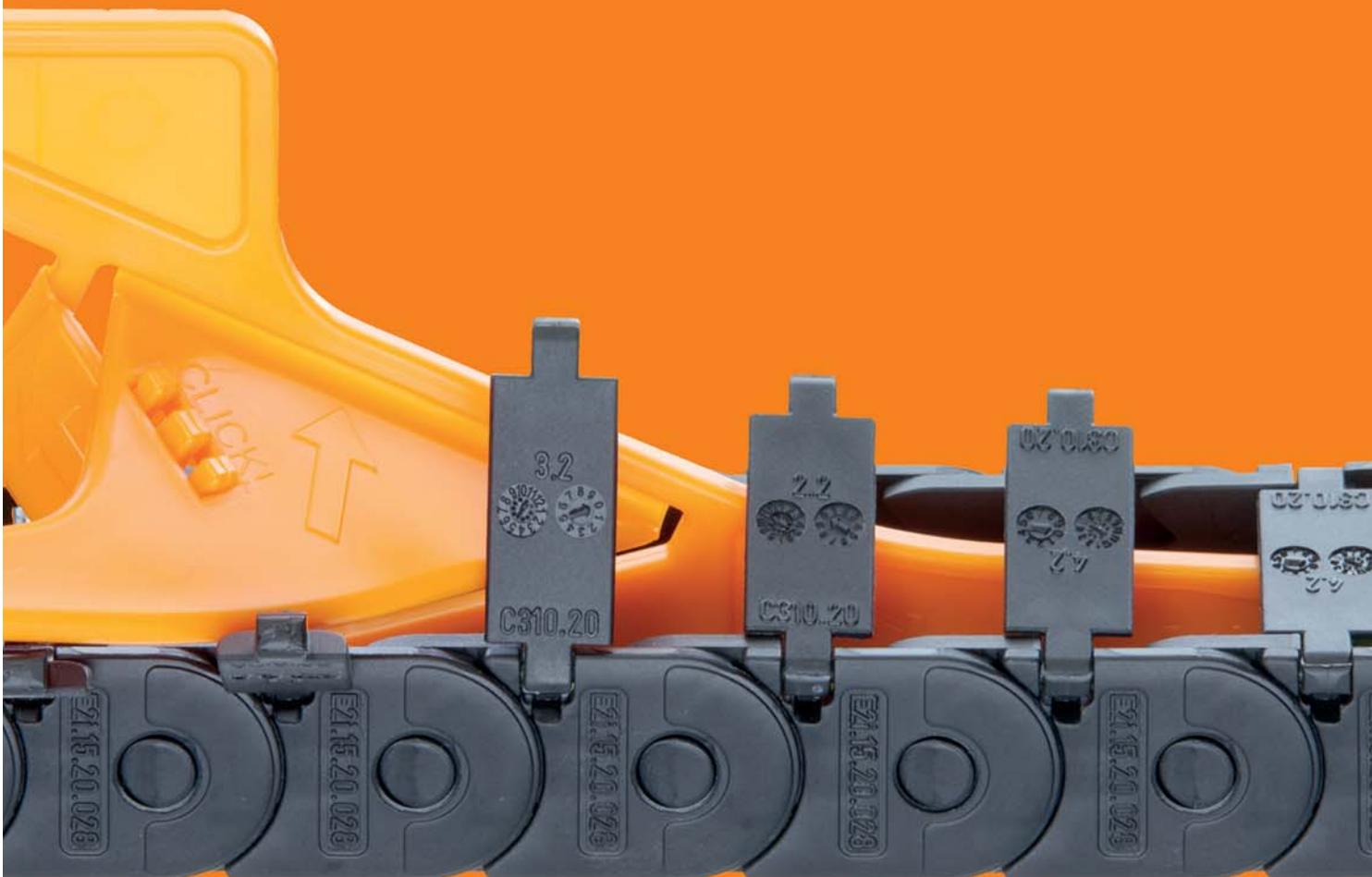
We displayed our ventricle twin spindle machining center that comes with integrated automation. A machining center of the CHIRON 08 Series is among the most versatile machine tools in the compact class. We had good footfall at our booth and had fruitful discussions with our customers and visitors. With this, we are hopeful about the growth of the automotive industry as it is the major industry we cater to.

■ **Rajesh Ghashi**, *Managing Director, Chiron India Machine Tools Pvt. Ltd.*



igus® the-chain ... moving energy made easy ...

1 m in 2 seconds



E2 micro e-chain® with opener

Small energy chain® for big challenges. Even stronger, more quiet, and durable than its predecessor. Fast and easy to open with free tool, included in delivery. Starting from 10 mm inner height. Configure and order online: igus.in/E2micro

igus® (India) Pvt. Ltd.

36/1, Sy. No. 17/3, Euro School Road,
Dodda Nekkundi Industrial Area - 2nd Stage
Mahadevapura Post Bangalore - 560048

Phone +91-80-45127800 Fax +91-80-45127802

igus®.in
info@igus.in plastics for longer life®



The Indian economy is experiencing some uncertain market conditions. However, manufacturing being a basic industry, it should be able to accept the same. The government is also supportive towards the manufacturing industry at the top level. However, often it takes time to percolate the top level thinking down. And I think although initiatives such as Skill India, Start Up India, etc., it may little more time to see its actual results.

■ **N.K. Dhand**, *Micromatic Grinding Technologies*

This IMTEX, we have several exciting solutions. We had a varied range of grades, chip breakers, tool holding systems, heavy duty turning systems, etc. Similarly, we had large display of grooving solutions as well. Depending on the customer's problem, we can offer them either a standard or customised solution. Hole making is a new area for us. We concentrated on it for last few years, and we have come with several new solutions for the same.



■ **L. Krishnan**, *Managing Director, TaeguTec India*



We are speciality manufacturing company. Our focus has been metal cutting fluids for the Indian metal cutting industry. This year, we presented our R&D strength in developing customised solutions for the market. At the same we have also displayed entire product segment display which can work with our concept of 'Total Fluid Solutions' for the manufacturing industry. We have also launched new range of products heat treatment industry, which has been fine tuned by our Korean team as per the demands of the Indian customers.

■ **Pallath Ravindran**, *Vice President, Tectyl Oil & Chemicals (India) Pvt Ltd.*

DMG Mori is doing quite good in Indian market. I am happy that Indian market is moving and growing. We had strong growth in 2016 and we are aiming to do even better in the year 2017. Indian market is maturing day by day and the beauty is that it is coming to a very productive level. With this, it has become very competitive on the global perspective. For Indian customer, we are offering solutions along with lot of different options suiting to the wide range of needs.



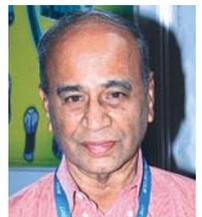
■ **Christian Thönes**, *Chairman, DMG Mori*



We are presenting some new solutions for the Indian market. One of them being MIRA ICE which has been developed for manufacturing of gears. It is mixture of precision and productivity. As machine tools and other equipment produced in India are state-of-the-art, India is rubbing shoulders with the global market. Hence, there is no need to develop solutions specifically for the Indian market as before. The solutions made for the global requirement suits the Indian market very well.

■ **Subrahmanya Kumar V**, *Country Sales Manager-India, Tyrolit India Superabrasive Tools Pvt. Ltd.*

We showcased different types of holding devices at IMTEX 2017. These devices are used in the wide range of industries. We have been participating in the exhibition since its inception. This is one the exhibitions that is important for us. Most of our customers visit this show and we are able to show our technological strength to them. With this, we are looking forward to expand our reach.



■ **P R Ramdoss**, *Ramm Precision*

**THE
NEXT
BIG
THING**

The Vision of Asia

2nd **amtex**[©] 2017

ASIAN MACHINE TOOL EXHIBITION
12 - 15 APRIL 2017, BEC, MUMBAI, INDIA.

PREMIUM MACHINE TOOL EXHIBITION

12 13 14 15 APRIL 2017

Bombay Exhibition Centre, Goregaon, Mumbai, India.



**BOOK YOUR
SPACE NOW!**

**CALL US @
+91 98450 89641**

**E-MAIL US @
info@amtex-expo.com**

Organised By:



Supported By:



Media Partners



www.amtexp.com



“The show has been extremely good. We were a little concerned about the new hall and the state of business in the country. But I am happy to say that the response has been enormously positive at Imtex. We have been swamped with the right kind of people. We displayed 32 machines and our focus has been on automation and Industry 4.0 and more education to the user industry.”

■ **TK Ramesh**, *CEO, Micromatic Machine Tools Pvt Ltd*

“We have grown double digits for the last two consecutive years. We have started a manufacturing facility in Aurangabad recently joining the ‘Make in India’ campaign. The aim behind is been to make state of the art Mitsubishi technology available to our customers at reasonable price with a reduced lead time. The response at Imtex has been very good with many quality customers visiting our stall.”



■ **Prashant Sardeshmukh**, *Director, MMC Hardmetal India*



“The displays at our Imtex stall reflect the trends in the industry as well as in the R&D institutes. We have always been a step ahead in technology. Every time you come to a Schunk booth you will see a new technology and our stall at Imtex has been the same. This year we have talked about Industry 4.0. Our products here have made it very interesting for the customers to understand the possibilities of Industry 4.0 and look at investments accordingly.”

■ **Satish Sadasivan**, *MD, Schunk Intec India Private Limited*

“Imtex has been a great ground for us and we have been participating every time. This year we have launched seven machines. Earlier, we used to be only a tooling company but now we also provide grinding machines, honing machines and even components. This Imtex gave us the platform to showcase this integrated approach. The diversification is driven by customer requirements.”



■ **Rajesh Khanna**, *Chief Executive, Wendt (India) Ltd*



“The STM brand is a co-manufacturing venture between S&T India and Manford Taiwan. We bring the world class Taiwanese technology to India by making it affordable. We displayed STM brand machines at Imtex, where we have been busy from day one. We had visitors coming with good projects and we have had some excellent discussions with many of them. We had a successful year for the STM brand in 2016 and with the kind of enquiries we have received at the show, we expect a very busy year ahead.”

■ **Nithyanandan Ramachandran**, *AGM – CNC Sales, S&T machinery (P) Ltd.*

“Adoption of robotics has been increasing in India. In fact, the number of robots displayed at this year’s has increased by almost 50 percent. We have a concept called e-F@ctory, where we fetch data from all products like robots, CNCs, and so on. We have an app which can be used on smart phones to monitor the robots. We are actually taking artificial intelligence to the next level as far as robotics is concerned. And, we have received very good response at Imtex.”



■ **Madhusudhanan**, *Sr. Manager – Robotics, Mitsubishi Electric*



Delivering Solutions

CE IE2/IE3

The Revolutionary Coolant Unit

The All-in-One Coolant Unit

YTH

From **NOP** Japan



Automatic self-cleaning Turbulence™ Filter



Double Cyclone Filter

SIMPLE SOLUTIONS NEVER EXISTED BEFORE!

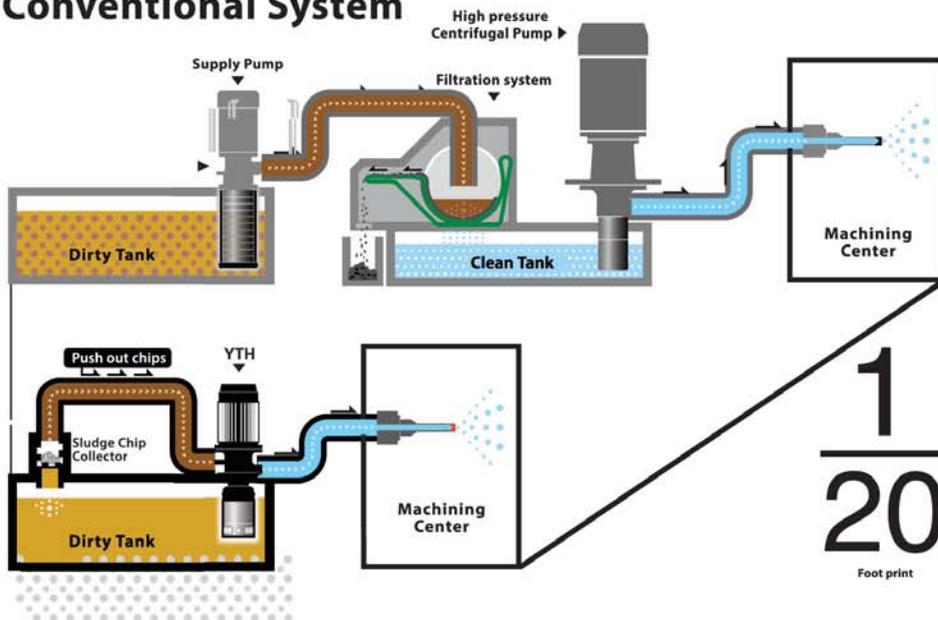
Various components of the coolant are all combined one:

Free from bothersome maintenance

- 1. NO supply pump
 - 2. NO filtration system
 - 3. NO clean tank
- ▶ No need to replace (or wash) filters frequently
 - ▶ No need to remove sludge and chips from dirty tanks
 - ▶ No need to halt machines during maintenance

Flow Pressure : 150/300 Lpm @ 55 mtr head and 12-24lpm upto 70 bar

Conventional System



Distributor :
Rajamane Industries Pvt Ltd.,
 Whitefield Road, Mahadevapura Post, Bangalore 560 048 India
 Ph: +91-80-43659000, Fax: +91-80-28524320
 Email : coolantpump@rajamane.com
 web: www.rajamane.com

NOP India:
Nippon Oil Pump India Private Limited
 317, Vipul Trade Centre, Gurgaon - Sohna Expressway
 Sector – 48, Gurgaon – 122 018, Haryana, India
 Tel: +91-124-405-6644
 e-mail: info-india@nop-group.jp





Making financing easy

Sunil Kapoor, CEO, Siemens Financial Services Pvt Ltd speaks about the Imtex 2017

Q How do you look at this edition of IMTEX? How was the visitors' response towards Siemens Financial Services' offerings?

IMTEX 2017 has been a great platform this year which enabled us to do what do best – interact with people and understand how we can add value to their business. We offered machine buyers a holistic solution of technology and finance from the house of Siemens by putting together joint offerings with all major OEMs in the machine tools industry. Our Smart financing techniques enable companies of all sizes to make good financing decisions and focus on improving working capital management, so as to use it as a key driver of success. Our special schemes and joint offerings were very well received by visitors.

Q Also, please tell us about any new announcements made at IMTEX 2017



Our Smart financing techniques enable companies of all sizes to make good financing decisions and focus on improving working capital management, so as to use it as a key driver of success. Our special schemes and joint offerings were very well received by visitors.

As Siemens Financial Services (SFS), we aim to make financing easy and accessible. With this intention, we launched several schemes in association with our OEM partners catering to SMEs and large corporates so that they may acquire new technology without compromising on their cash flows and making huge investments in capital assets such as equipment. SFS' customised loans and leases enable machine buyers to pick the best technology and the most suited financing solution to meet their specific requirement. Thus, making capex investments more cash flow-friendly. 

Shaping the future of manufacturing

Shailesh Prabhune, President, Sandvik Coromant India speaks to The Machinist at Imtex 2017. Below are the excerpts of the interview.

Q The Sandvik Coromant stall at Imtex 2017 was guided by the tagline 'Together we shape the future of manufacturing'. Tell us about it.

We have been known for our innovative work in the market and we have lived up to this tradition here as well. The buzzword around this year's Imtex has been Industry 4.0 accordingly we have introduced the CoroPlus platform. This is essentially a platform for digital manufacturing. That will help us to shape the future of manufacturing.



for India as well as for the machine tool industry. That is also the reason why the focus of Sandvik Coromant at Imtex has been on digital machining and we have received phenomenal response from our visitors.

Q How's been the business for you in the last one year?

The business has been very good. We see a lot of optimism at our customers. But I think it can be still better. I think India is slated for a big manufacturing growth and I

am very optimistic in that sense.

Q Do you also see 'digital' as the connect between 'Make in India' and Industry 4.0?

The Make in India initiative aims to put India as a competitive manufacturing economy on the global map. Having said this, with Industry 4.0 there is still scope to automate a lot of things on the shopfloor and to look at it from a completely different perspective. We as a leading brand in the field of metal cutting have a significant role to play to take ahead the journey both

Q Which industry segments do you see driving the growth?

Automotive is still growing and it will continue to grow. Other segments like aerospace, defence, wind energy and railways are also growing quite a bit. We see a lot of opportunities coming up in these segments. These are relatively small right now but they will grow faster.

Konecranes India partners with **CleanMax Solar,** for a Greener World.

As a world-leading group of Lifting Businesses, and serving a broad range of customers, including manufacturing and process industries, Konecranes has extended their outlook on sustainability in their business practices.

Their site at Pune runs on 730 kWp of renewable energy through CleanMax Solar.

India's #1 rooftop solar developer



asymmetrique/CW/NOV2016

KONECRANES
Lifting Businesses™



Radhika Bhadada
+91 8879540088
info@cleanmaxsolar.com
www.cleanmaxsolar.com



Autodesk & BFW tie up for the Future of Making Things way forward

At IMTEX 2017 Autodesk announced its strategic tie-up with Bharat Fritz Werner (BFW) to promote the Future of Making Things to the Indian Manufacturing community.

BFW is one of India's leading machine tool manufacturers & a one-stop shop for metal-cutting solutions with a comprehensive product range from the smallest CNC turning center to the largest CNC based Special Purpose machines. The customer-centric motto at BFW is 'Enabling Progress' and the emphasis has always been on delivery superior value-based manufacturing technologies to Indian customers to broad-base the manufacturing eco-system across the country.

Speaking on the occasion Rajesh Agte, Vice President – Standard Products & Business Development remarked, "We see our strategic tie-up for 3 & 4-axes CAD / CAM software with Autodesk India, as our effort to provide completely integrated products to customers, for which we are prepared to go the extra mile. BFW will be introducing a host of innovative machining platform in the coming days; and our partnership



"BFW will be introducing a host of innovative machining platform in the coming days; and our partnership with Autodesk will add the extra edge in enhancing our value to our customers"

Rajesh Agte, Vice President – Standard Products & Business Development

with Autodesk will add the extra edge in enhancing our value to our customers" Pankaj Gauba, Head – Digital Manufacturing Group – India & Middle East mentioned, "A tie up with BFW couldn't have come at a better time. BFW has a great footprint in the Indian SME market and Autodesk is glad to partner with BFW to provide best of breed CAM software at an affordable price to their customers." 

New technologies at competitive price

Ronald D'Souza, CEO, PMT Machines Ltd speaks about the latest solutions

Tell us about your experience at IMTEX.

IMTEX is a platform where customers can interact with the exhibitors to find solutions to meet their machining needs. At the event we have been able to attract some customers from India and overseas. This is a great opportunity for the Indian machine tool manufactures to display new technologies at competitive price.

How do you think this show helps your business?

The customers are constantly looking for new machining solutions, which will enable them to maintain their technological edge and also find new ways to reduce the cost of their product. PMT products are customised as customers needs in. We are sure that the customers will find answers to their machining challenges in our products, which can be an import substitution for them.

Tell us about the company's offerings

Today PMT has its own design and development team for customising internal grinding machines to offer solutions



The customers are constantly looking for new solutions in machining which will enable them to maintain their technology edge and also find new ways to reduce the cost of their product.

to its customers in the area of bore, face and cone grinding of gears and bearings. The machines are built with finesse skill and quality control to offer process capabilities on the dimensional and geometrical tolerances. PMT offers a complete range of work holding fixtures made to precise accuracies to offer repeatability and consistency of the work clamping. 

EPPINGER

PRECISION GEAR SOLUTIONS



Since 1925

(A German Company, ISO Certified.)

Wide range of Planetary Gear Heads and Cycloidal Gear Boxes with Cutting Edge Technology

Planetary Gear Heads



PE Series



PF Series



PT Series



PEB Series

Cycloidal Gear Boxes



CYK



CYKM

Loose Gears



Spiral Bevel Gear Sets: Dia 457 mm x 12.7 module



Internal Gears: Dia 450 mm x 6 module



Hobbed Gears: Dia 500 mm x 12 module
Hardened & Profile Ground Gears: Dia 360 mm x 7 module



Servo Hypoid Spur Gear Boxes



Bevel Gear Boxes



Bevel Planetary Gear Boxes



Hypoid Gear Boxes



Special Gear Boxes



Custom Built Gear Boxes

CUSTOM BUILT / NON-STANDARD GEARS, GEAR COMPONENTS AND GEAR ASSEMBLIES

For more information, please contact:

EPPINGER TOOLING ASIA PVT. LTD.,

S.F. No.345/2A-2B, Kondampatty Village, Kinathukadavu Taluk, Coimbatore - 641 202.

Phone: 04259 - 304032, 33, 34. Mobile: +91 88700 13053 Fax: 04259 - 304018

E-mail: marketing@eta-tools.com, eppinger@dataone.in Website: www.eppinger-gears.com / www.eppinger.de

Hard Wired for Matchless Performance



Beyond Evolution

The Machinist visited Kennametal India Ltd's booth at Imtex 2017

By Niranjan Mudholkar

How's been your experience at Imtex?

Cordova: I am excited about all the energy. There seems to be many people in the booth and all are excited about new products and they are looking for the latest innovations. What's good to see is that everybody is upbeat about growth in India.

Sharma: The spirit of 'Make in India' is quite evident and we can see the upbeat mood of the industry. The number of visitors has grown and we saw a lot of quality visitors at our booth.

Please tell us the highlights of the Kennametal stall.

Sharma: With Kennametal, we have something called as 'Beyond Evolution', which is for the grooving platform. For the heavy machining segments like aerospace and energy, we have launches on HARVI, which is an end mill platform. We also have the Duo-Lock Modular Milling System. There is also a new machine launch with WIDMA, which is a PCD Grinder



(L to R) Chandrashekhar Sharma, VP-KMT Tooling & Machining Solutions Group, Kennametal India Ltd and Colleen Cordova, VP, Global Heavy Industries, Kennametal Inc. at spoke with The Machinist at IMTEX 2017

with multi axes, linear motors and the latest technology. Another big launch is the ceramic end mills for the nickel alloys to be used in aerospace. Kennametal is an absolute leader when it comes to applications like this.

Cordova: I am also very excited about our new PCD drill for aerospace segment. They do thousands and thousands of holes and we have cut the time by more than 50 percent with this innovation. The end mills are used in engines and the PCD drills are used in CFRP skins.

How do you view the potential in the Indian manufacturing segment?

Cordova: Yes, it holds a lot of promise. I am particularly quite thrilled about the aerospace segment. They are launching big agreements where the big global players are going to play important roles and Kennametal is well-positioned to support them for tooling.

Renewed focus

The Machinist visited WIDIA India (Kennametal India Ltd) at Imtex 2017.

By Niranjan Mudholkar

Tell us something about WIDIA from the global perspective?

Broetz: Kennametal acquired WIDIA in 2003. Over the last few years, several companies have been added to the WIDIA portfolio including Hanita, which is now WIDIA-Hanita -- a global market leader in aerospace milling. Then we have also added Manchester and Circle to the portfolio besides other acquisitions. Last year, Kennametal decided to once again carve out WIDIA as a standalone business segment for which I am responsible globally. We have great plans for the brand. With strong investments, WIDIA stands very strong in milling, in end milling and in hole-making. You will also see a lot of changes from WIDIA over the next two years. We have received very good feedback from customers to the renewed WIDIA brand. Our customers feel that we are focussed on the WIDIA portfolio. And in turn, we want to be fast, agile and easy to do business with. We want to focus on the companies that have need to grow quickly. Specifically in India, we want to work with the aerospace industry which will see significant growth.



(L to R) Alexander Broetz, President WIDIA Business Segment (Kennametal Europe GmbH) and Prashant Shetty, Director Commercial - WIDIA India (Kennametal India Ltd)

What are you showcasing at Imtex?

Shetty: Well, we are showcasing the entire range but we also have some new launches. We are talking to our customers about the new turning portfolio, which is the Victory Brand. We have just launched the indexable milling VSM Series of cutters and inserts. In our services segment, we have added the Tool Box to our range, which is like a one-stop shop for our customers. Importantly, we have also launched our cloud based digital platform NOVO. We see the focus shifting to digital primarily because the customers want to do the job on their own now. It saves time and effort. NOVO is very easy to use and it helps the customer to decide upon the right tools and accessories for his application. And We are there to provide expert advice because we understand machining very well. 



The hallmark of **PERFECTION** and **PRECISION**



**COLLETS • FEED FINGERS • CNC COLLET CHUCK • SLEEVES • ARBORS
• FIXTURES • ALLIED PRODUCTS**

Ramm Precision Products Pvt. Ltd., has been satisfactorily meeting the need for tool holding devices since 1969. We are one of the pioneers in the field of manufacture of Work Holding and Tool Holding Devices like CNC, Automatics, Turrets, Milling & Grinding Machine collets, CNC collet Holders, Sleeves, Arbors, Fixtures and Feed Fingers. We are producing standard, special and highly precision products to meet different needs of different customers. We are in this field for more than 45 years. We also manufacture special collets etc., customized tool holding solutions for special needs as per customer's drawing/Sample.



RAMM PRECISION PRODUCTS (P) LTD.,

142, Nava India Road, Peelamedu, Coimbatore - 641 004. India.

Phone : +91 422 2566489, 2563801, 2563495

Email : sales@rmcollet.com Website : www.rmcollet.com



Complete solutions for welding robots

For the quick replacement of energy chain systems on welding robots, the motion plastics specialist igus offers fully assembled dress-packs. Easily adapted to the customer standard, these complete solutions can be connected quickly and easily to the robot and therefore minimise production downtime. Customers can rely on reliable 'all-in-one solutions' from igus.



tems as well as different hose manufacturers or cable cross sections." It is also possible to have the cables harnessed directly by igus according to 24 manufacturer standards with original plug connectors.

Complete carefree packages for industrial robots

The new dress-packs from igus guarantee a quick replacement of the energy supply. For further applications

Time plays a very important role in automated plants, such as for automotive production. If production stops, every minute counts. Pre-assembled systems help to keep maintenance and assembly work as low as possible. For this reason, the motion plastics specialist igus now offers ready-to-install standard dress-packs for welding robots. These packs consist of a three-dimensional triflex R energy chain from igus, completely filled with chainflex cables and hoses for supplying energy, data and media. "Due to the large number of enquiries for retrofit in existing plants, we decided to develop this standard dress-pack for welding robots," explains Jörg Ottersbach, head of the robotics industry at igus. "They can be adapted to the customer's individual requirements, for example, you can choose between different bus sys-

for industrial robots, igus offers both customer-specific advice and an easy-to-use online configurator. With the 'QuickRobot' the right solution from over 2,000 options can be selected and ordered with just a few clicks by specifying the robot manufacturer and the model series. On request, igus supplies suitable retraction systems to guide the energy chains with constant tension to the end of the robot arm, and also offers the installation at the customer's site on request. Since igus produces all components of the energy chain system from a single source, its reliability can be guaranteed. The company igus is the only supplier on the market capable of providing a 36-month guarantee on all chainflex cables from igus due to the ideal coordination of chains and cables.

High-performance machining with maximum safety

The SCHUNK high-performance hydraulic expansion toolholder TENDO Aviation was developed especially for demanding applications with a requirement for mechanical tool locking, e.g. in the field of aviation and aeronautics. For tools with a standard Weldon shank, the integrated pull-out protection ensures form-fit clamping of the oriented tool and prevents micro creep movements.



toolholders whose run-out precision diminishes over time. It prolongs the life of the tool cutting edge, and increases the tool life travel all while producing brilliant surfaces. Also, the even load profile increases the life of the spindle and spindle bearing.

Especially efficient

SCHUNK TENDO Aviation needs no additional peripheral equipment, which can be expensive. The clamp-

Benefits of two clamping systems

SCHUNK TENDO Aviation combines the strengths of hydraulic expansion technology with those of Weldon mountings: the impressive features include permanently high run-out accuracy, perfect vibration damping and quick tool changes with the use of an Allen key. Even jobs with demanding tolerances can be maintained with high precision. The potentials of the tool and the machine can also be fully utilised. SCHUNK TENDO Aviation enables a maximum torque transfer with continuously high precision and process stability. It offers advantages over traditional Weldon mountings and heat shrink

ing diameter is flexible and can be reduced by means of intermediate sleeves, which allows the same toolholder to be used for different shank diameters. Unlike ER collet chucks or heat shrink mountings, the affordable high-end toolholder is resistant to dirt, and features a low-maintenance design. To increase the life of the toolholder while ensuring maximum process stability in sensitive processes, the precision toolholder can be inspected by SCHUNK Service in performance checks and optimised, if necessary. It can be used for machining of turbine blades or fuselage frames in the aviation industry, turbochargers rotors and steering wheels in the automotive industry and titanium- or nickel-based alloys in metal processing.



Pushing Performance

har-flexicon[®] 2.54

Sturdy on the PCB.
Flexible in your application.

Try HARTING eCatalogue now
www.eCatalogue.HARTING.in

Flexible, rapid connection
of single wires using
push-in technology

Minimal 5 mm installation height
and pole counts of 2-12

Active Latching

Small 2.54 mm pitch

Suitable for fully automated mounting
and SMT reflow soldering

Opportunity to use the
best original products way
better than copied ones

A trusted brand with
70 years of experience
in the industry

Use of high precision
technology for better
performance

Loaded with
reliable and robust
connectors

Miniature rapid-connection SMD PCB connection technology.

Our har-flexicon[®] printed circuit board connection system is the perfect answer to the miniaturization trend in device design. It enables the flexible, field-installable rapid connection of individual wires with push-in-spring-cage as well as a stable SMT surface mount. In addition to the 1.27 mm series we've now expanded the har-flexicon[®] lineup to include PCB connectors and terminal blocks in 2.54 mm pitch – expanding the versatility of your applications as well.

Find out more by calling +91 44 435604 15 or writing to in@HARTING.com

Also find our presence on:      

www.HARTING.in

Ref : HA 338



People | Power | Partnership



Workforce for the Industry 4.0

Demand for employees in the mechanical and electronic controls engineering sector may rise even more. However, many new skills will be required.

Industry 4.0 is an application of IoT principles and technologies in the manufacturing and Industrial environment. In my view, that essentially means bringing together IT, web and cloud based technologies with production and process engineering in order to achieve benefits by exploiting new ways to improve manufacturing. It's basically moving another level up from the ongoing development of automation and lean manufacturing.

The biggest concern currently is the lack of a different kind of expert know-how needed to implement Industry 4.0 projects. One of the colleagues summarised it neatly: "The success of Industry 4.0 projects depends on IT experts and engineers speaking a common language. Only by working together can we find the perfect solution."

In the short term, the trend toward greater automation will displace some of the often low-skilled labourers who perform simple, repetitive tasks. Demand for employees in the mechanical and electronic controls engineering sector may rise even more. However, many new skills will be required. At the same time, the growing use of software, connectivity, and analytics will increase the demand for employees with competencies in software development and IT technologies, such as mechatronics experts with software skills. This competency transformation is one of the key challenges ahead.

Automation and productivity

Productivity improvement is one of the major benefits from Industry 4.0 solutions. Industry 4.0 involves the use of advancements in communication and information technology to increase the degree of automation and digitisation of production, manufacturing and industrial processes. Much of the technology for Industry 4.0 is already in place, and through the smart use of pilot projects and step-by-step iterative changes in manufacturing platforms and operations, we can determine the best ways to make Industry 4.0 deliver on the promise it offers

During the next five to ten years, Industry 4.0 will be embraced by more companies, boosting productivity across

all manufacturing sectors. Productivity improvements on conversion costs, which exclude the cost of materials, will range from 15 to 25 percent. When the materials costs are factored in, productivity gains of 5 to 8 percent will be achieved. These improvements will vary by industry. Industrial-component manufacturers stand to achieve some of the biggest productivity improvements, upward of 20 percent

Skills required for engineers

What's needed most is for IT experts to gain insight into essential production processes so they are able to identify how software solutions can best improve performance. For this reason, we are training IT experts in lean production and the Bosch production system principles.

Big Data: There is an urgent need of specialists who are not only familiar with products and production lines but are also able to analyze huge quantities of data. There are new job opportunities who would use existing data to gain additional insights that are not yet available in many places (e.g. correlations between individual steps in the production process) and to forecast future trends on the basis of historical data (e.g. malfunctions, scrap rates). This suddenly gives production planners the ability to proactively prevent problems instead of constantly being derailed by unforeseen problems and the urgent solutions they require.

One of the key aspects of Industry 4.0 thought process / guiding principle for us is to put more focus on the people who work in industry. All solutions we have created are being developed follow this principle. For example, data analytics is automatically looking for patterns in the data from production lines and then generating notifications for the production planner; instead of he having to proactively monitor production data. Engineering skill sets would be clarified in coming years, but soft skills would emerge as an important aspect of engineers. Collaboration among different disciplines is of paramount importance in Industry 4.0. 



"The success of Industry 4.0 projects depends on IT experts and engineers speaking a common language."

The author is Gaur Dattatreya, Vice President and Head of Business Unit, Robert Bosch Engineering and Business Solutions

Digitisation is a way forward

What makes shopfloor really super is constant upgradation. The current trend of digitisation will help the companies achieve productivity as well as environmental compliance

By Dieter Klinke

Be it the Internet of Things (IoT), Industrie 4.0, or smart manufacturing, the impact of new technology will see manufacturing computerised – with production lines featuring smarter, more connected and more complex machines.

Today almost every product made is modeled, tested and ‘produced’ in a virtual environment. As a result, product development time has been dramatically reduced while product quality continues to rise. Similar to what CAD, CAM and CAE did for the product development world; product data management (PDM) and product lifecycle management (PLM) emerged and allowed us to harness the massive amounts of data that are now generated by product development. The resulting information is turned into a common source of knowledge that is then effectively distributed at precisely the right moment to the specific set of users who need it.

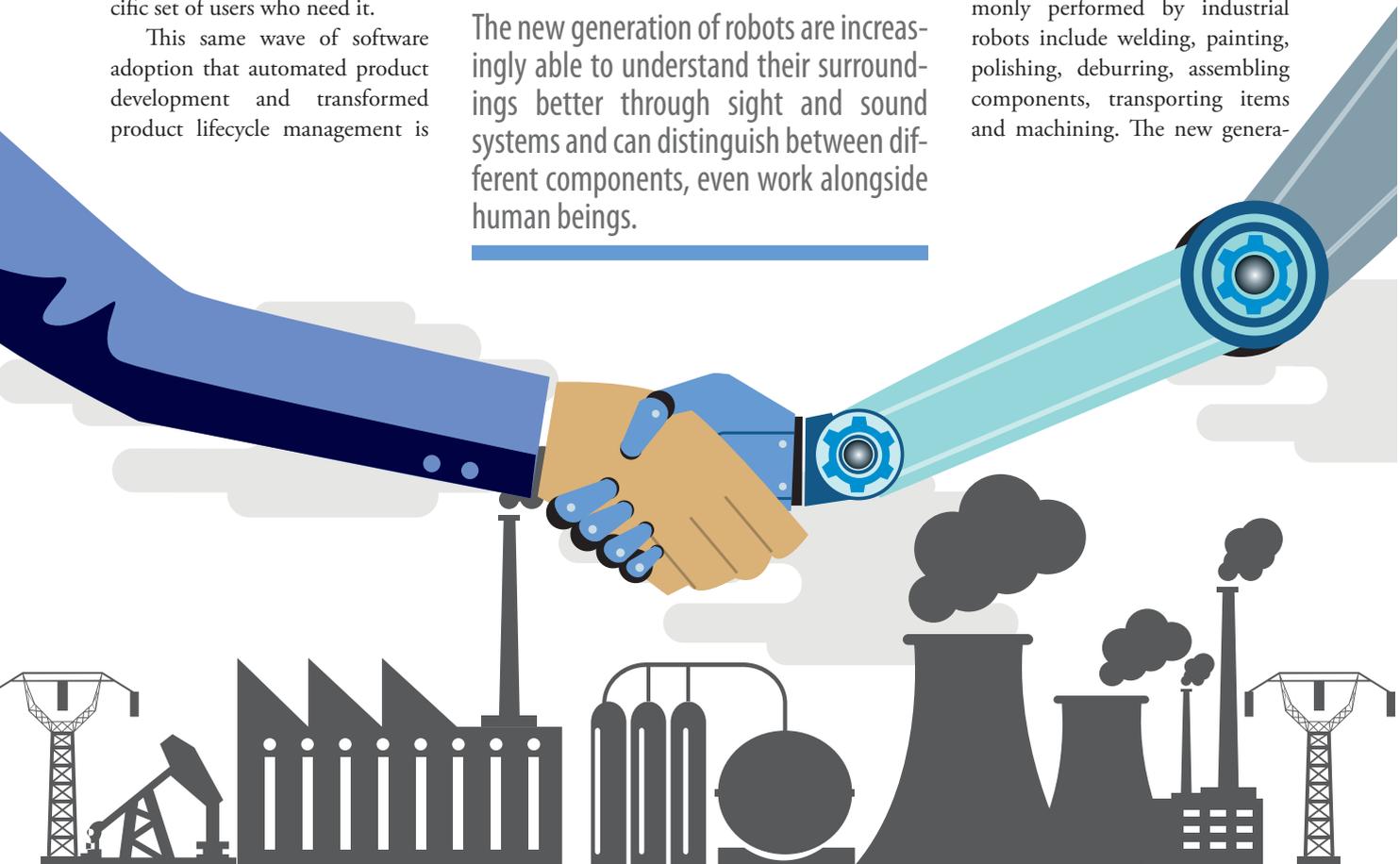
This same wave of software adoption that automated product development and transformed product lifecycle management is

now taking hold in manufacturing and on the shop floor. Automation and robotics are re-defining shop floor dynamics in Asia.

In 2013, almost 98,807 industrial robots were shipped to Asia, 17 percent higher than in 2012 - the highest level ever recorded. Statistics from the same source also highlight that China became the largest producer of robotics in 2013, selling 36,560 units. Between 2008 and 2013, the compound annual growth rate (CAGR) of robot supplies to Asia (including Japan) was about 8 percent on average and total supply of industrial robots in China increased by 36 percent per year on average in the five consecutive years. With the industry’s increased awareness of the business benefits of automation, installation of industrial robotics is expected to increase across Asia from 689,349 units in 2013, to 1,107,600 units at the end of 2017.

Today, shop floor tasks commonly performed by industrial robots include welding, painting, polishing, deburring, assembling components, transporting items and machining. The new genera-

The new generation of robots are increasingly able to understand their surroundings better through sight and sound systems and can distinguish between different components, even work alongside human beings.





Using a Product Lifecycle Management (PLM) solution, adherence to regulations can be ‘bolted’ directly into the product lifecycle; compliance of all specific rules, including local rules and interpretations, is therefore greatly facilitated and the risks of non-compliance by any of the contributors involved, regardless of whether they are inside or outside the company - are reduced without compromising innovation and speed.

tion of robots are increasingly able to understand their surroundings better through sight and sound systems and can distinguish between different components, even work alongside human beings. To sustain successful robotic applications, shop floors need well-trained and highly skilled engineers to operate robotic simulation processes, offline programing and robot maintenance. The successful implementation of robots can help in visualising and predicting operational results with a heightened degree of certainty. Not to mention increased job satisfaction for employees due to smart, efficient and accurate results.

In addition to robotic installations on the shop floor, factories are implementing several other automation models by employing programmable logic controllers (PLC). PLCs help in controlling robots, machinery, equipment, switches and alarms – they manage data communications among these elements to minimise human intervention, hence reducing human errors. The virtual commissioning model, in which factories replicate the behaviour of a physical manufacturing environment with a software system, has numerous benefits for manufacturers including savings in labour, energy costs and improved product quality, accuracy and precision.

Best-in-class manufacturers have begun to adopt digital manufacturing at a rapid rate as they look for ways to increase the productivity of their manufacturing systems, while also decreasing the amount of time required to commission them. It all comes down to adoption and integration. As more companies adopt the software, the more manufacturing organizations experience the benefits that it has to offer. As this adoption happens, there is a stronger pull for even tighter integration of all the automated systems, further increasing productivity and accelerating the rate of adoption even more.

Digital manufacturing can help manufacturers increase productivity and efficiency. Other areas include manufacturing facility design and optimisation, where significant gains can be achieved in terms of production efficiency, or quality management, where further improvements can be made in the

identification, analysis and sharing of critical product quality data across your enterprise.

Challenges facing shop floor like control distribution of manufacturing plan data, meet regulatory compliance constraints on traceability and feedback production issues to manufacturing planning are becoming more complex.

Environmental standards

Compliance to environmental standards norms is no longer considerable as an option, a sort of ‘courtesy’ that a small group of enlightened entrepreneurs and company owners reserve to the environment. It has, quite rightly, become a requirement for production companies as well as an increasingly important parameter of choice for customers and end users, be they companies or individuals.

Each manufacturer should now be able to prove, at any time, it had complied with rules that, even if agreeable in most cases, are complex, constantly evolving and applied differently by country according to different interpretations and levels of attention. In fact, for some regulations and in some countries,

The successful implementation of robots can help in visualising and predicting operational results with a heightened degree of certainty. Not to mention increased job satisfaction for employees due to smart, efficient and accurate results.

non-compliance can result in fines or penalties that in some cases may be levied against the CEO of the company.

Using a Product Lifecycle Management (PLM) solution, adherence to regulations can be “bolted” directly into the product lifecycle; compliance of all specific rules, including local rules and interpretations, is therefore greatly facilitated and the risks of non-compliance by any of the contributors involved, regardless of whether they are inside or outside the company - are reduced without compromising innovation and speed.

For example, the same automated tools that ensure compliance with contract requirements, or marketing demands, can be used to ensure that the entire company ecosystem is aware of environmental regulations and relevant dispositions for a particular product. And this awareness can take place while products are in the design phase, at the beginning of the product lifecycle. In this way it is possible to avoid the pursuit of development projects that result in “green” products in appearance only. It also helps avoid expensive remedies to make products eco-friendly after they have already been designed or, worse yet, after they have entered the manufacturing phase. 

The author is Director-Marketing Campaigns Asia Pacific at Siemens Industry Software Ltd

MARPOSS 4.0

THE SMART FACTORY TOGETHER

ERGONOMIC
DESIGN

INTERNET
OF THINGS

REAL TIME
SECURE DATA
TRANSMISSION

SWITCH ON-OFF
COMMANDED
BY GUIDED
SEQUENCE

iWave2

WIRELESS HANDLE

The innovative **Marposs iWave2** wireless handle with its integrated colour display and ergonomic design is the perfect partner for any dimensional inspection requirement in today's flexible workshop. **Marposs Communication Software** gives the user the opportunity to connect **i-Wave2** to any computer for data collection.

Marposs is the partner you need to make **Industry 4.0** a working reality.



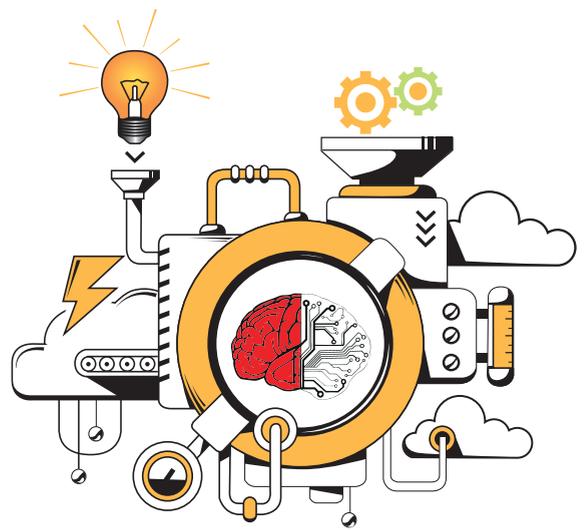
MARPOSS

www.marposs.com



Digitisation is crucial

Implementation of the appropriate ERP solution has enabled his organisation with automation of material and production planning which gives it a competitive edge, says **Dinesh Nandan Jain**, Group CFO, Vikas Group



By **Niranjan Mudholkar**

Q Give us a brief background about Vikas Group’s manufacturing capabilities and capacities.

With over three decades of experience in the automotive industry, the Vikas Group has successfully established itself as a prominent player in the auto component Industry of the country. The Group has been able to successfully partner with leading companies around the world and has been amongst the first to bring in products and technologies, relevant to the times.

The Group has a diversified portfolio of products like:

Automotive Air-Conditioning (Compressor, HVAC & Hose Pipes), Heat Exchangers (Condenser, Heater Core, Evaporator, Oil Cooler, Radiator), Emission After Treatment



“We have successfully achieved user-independent and system-generated reporting. We now have single practice across all plants and operation. Setting up of new plants and establishments takes very less time now and there is clear visibility on entire operation/reports.”

Systems (Catalytic convertor assemblies with substrate, coating & canning operations), precision machined components (Exhaust Manifolds, Flywheels, Differential Case, Compressor parts and laser fractured connecting rod), Iron Casting Component (For Brake System, Engine System, Transmission System), non-ferrous castings and non-ferrous extrusions of special profiles.

With focus on technology and constant endeavour towards operational excellence, the group has been able to develop strong organisational capabilities in the respective areas in order to be future ready and embrace challenging situations. The Group has 11 manufacturing plants operational across India – Faridabad, Palwal, Pune, Neemrana and supplies products to customers across various segments of the automotive Industry, right from 2/3 wheelers, passenger cars, utility vehicles, commercial vehicles and off-road applications. The Group has also begun its foray into the non-Automotive segments as well and expects this business to grow substantially.

Q What are the key raw materials used and what kind of equipment do you plants have?

We are equipped with cutting edge technology and provide our customers with Aluminium Tubes, Fin, Aluminium Sheets, Raw Iron, Plastics raw. We have fully automated robotic machines and CNC machines across all the facilities to cater our production requirement.

Q What solution/s of Infor have you deployed and at which plants? And when was it done?

In 2007, we selected Infor as ERP partner for Sanden Vikas India Ltd. For configuration, implementation and user hands-on, it took nine months and in April 2008 we went live on Infor LN FP2 platform (Sanden Vikas Faridabad Plant). Since then, we have implemented the same solution to all three Sanden Vikas Plants and five Warehouse/Sales Office across India. After a successful implementation experience, the Group has chosen Infor as ERP partner for other group of companies. In 2012, we went live on Infor LN FP7 for Pranav Vikas India Ltd – in all three Pranav Vikas Manufacturing plant. Since then, business has been successful on Infor



LN Platform. In the next phase, Vikas group has decided to implement latest version of ERP LN in the group company - Ecocat India Ltd.

Q How easy or difficult was the implementation of the above solution/s?

Initially, we faced few difficulties related to change of management, initial master setup and reporting. When we started, we were receiving monthly financial and reconciliation reports by end of the following month but gradually it improved due to standardisation of SOP/Practice. With time, we were receiving reports on 10th of every month. Sanden Implementation has given lots of learning and 'Know How' of ERP implementation and practice. This helped us during deploying the Infor solution in Pranav Vikas; the entire implementation and user acceptance on Infor LN FP7 in Pranav Vikas took only six months for all three manufacturing plants. This implementation also helped streamline the Sanden ERP practice, which helped shift financial reporting from 10th to third of the month.

Q What tangible benefits have you derived through the above implementation?

We have successfully achieved user-independent and system-

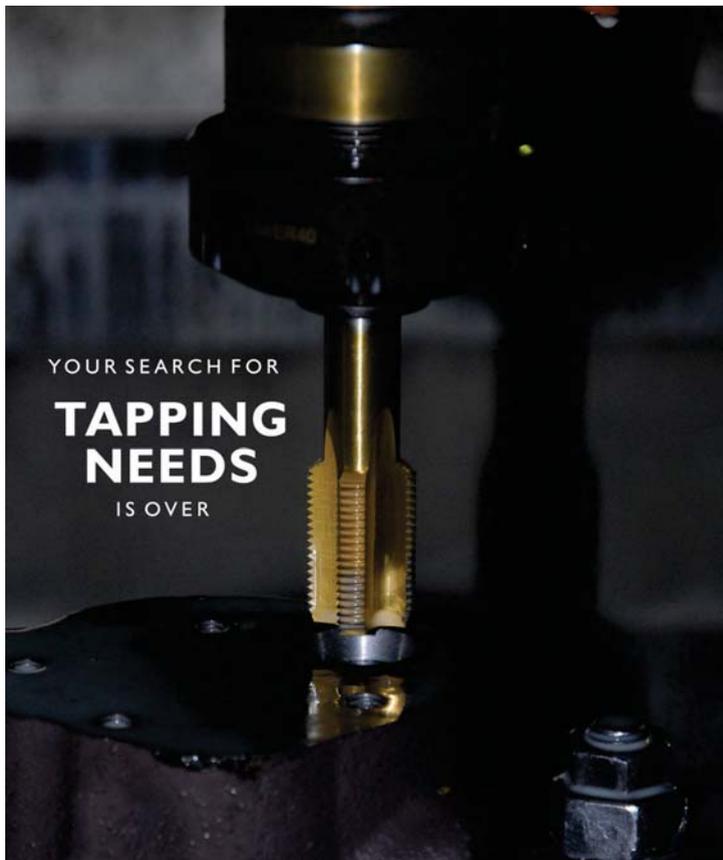
"We can now maintain single truth of information from bottom to top or top to bottom and focus more on analysis instead of keying in manual data. We realise digitisation is crucial for every organisation."

generated reporting. We now have single practice across all plants and operation. Setting up of new plants and establishments takes very less time now and there is clear visibility on entire operation/reports. We can now maintain single truth of information from bottom to top or top to bottom and focus more on analysis instead of keying in manual data. We realise dig-

itisation is crucial for every organisation and with the Infor software implementation; we are enabled with automation of material and production planning which gives us a competitive edge.

Q How will it benefit your customers?

We are happy to share that customer dispatch failure is zero after implementation of Infor. Due to minimum setup time of the ERP solution, we are capable of setting up our sales offices/warehouse in very less time (short notice of customer) compared to any of our customers' business partners. We have been able to help customers in implementation of JIT/KANBAN. Apart from this, the solution helps in quality improvements, response time on new product development, financial settlements, bank reconciliations and product tracking to child level. 



EMKAY TOOLS

B-27 & B-27/1, M.I.D.C., Industrial Area, Hingna Road, Nagpur - 440 016 (India)
 Tel : 91-7104-237363, 237584 Fax : 91-7104-232862
 E-mail : hq@emkaytools.com | sales@emkaytools.com
 Website : www.emkaytools.com



Winners at ET Polymers Awards 2017

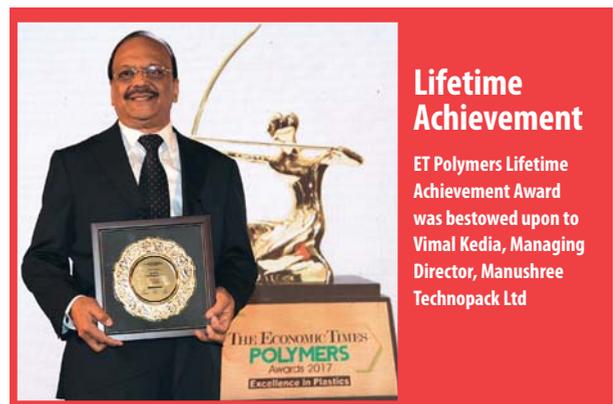
The ET Polymers Awards – Beginning of a new era

With the maiden edition of ET Polymers Awards, the magazine has created a much deserved award platform for the plastics industry.

By Swati Deshpande

The Economic Times Polymers (ET Polymers) magazine, a sister magazine of The Machinist, recently hosted The Economic Times Polymers Awards 2017 in Mumbai. The who's who of the plastics industry gathered under the single roof to celebrate the success of the winners. In the glittering ceremony, the awards were bestowed upon the winners who excelled in the use of plastics in the categories of automotive, agriculture, recycling, consumer durables, packaging and building & construction.

Besides rewarding the innovations, ET Polymers Awards also acknowledged contribution of the CEOs and industry leaders through People's Award. Anil Jain, Vice Chairman &



Lifetime Achievement

ET Polymers Lifetime Achievement Award was bestowed upon to Vimal Kedia, Managing Director, Manushree Technopak Ltd



The Economic Times Polymers Awards is a great initiative for the plastics industry. There was much need for such a platform for this industry, which encourages the industry. It is my pleasure that this is

being conducted concurrent with Plastivision India 2017.

Kailash Murarka, Chairman, Plastivision India 2017



India is a very unique market, which has extremely high volumes in all segments. Top being the smallest and bottom being the biggest. So, solutions which are made for North America or South America

may not be relevant in the Indian context. Here we saw a need to provide customers the solution, which works and fits in the requirements here.

Amit Puri, Director, Alok Masterbatches

THE ULTIMATE GUIDE TO PROFITABLE MANUFACTURING
MACHINIST

Super 
SHOPFLOOR 2017
Awards

2015 – WE CREATED A NEW BENCHMARK!

2016 – WE CREATED HISTORY!!



2017 – ???

STAY TUNED!!!

**NOMINATIONS TO OPEN SOON.
WATCH THIS SPACE FOR MORE INFORMATION.**



Globally the toy industry stood at \$85 billion in 2015 and is expected to touch \$100 billion by 2019. In India, this industry is very fragmented, which is why it is difficult to get accurate data. But approx., this

industry in India is around Rs. 1,000 cr. Out of which manufacturing of toys is around Rs. 600 cr. There is huge scope for this industry to grow.

Shrikant S. Bairagi, Chief Executive Officer, Prothom Industries India Pvt. Ltd.



Plastic industry comprises of two sectors - organised and unorganised. The organised sector does not get affected by demonetisation. In fact, in long run, the organised sector is expected to do

better in the demonetised economy. Unorganised sector has felt tremors of demonetisation to some extent. However, the government, with its industry-friendly policies, is helping both the sectors grow.

Robin Banerjee, Managing Director, Caprihans India Ltd

CEO, Jain Irrigation Systems Ltd was rewarded as CEO of the Year 2017 while Kailash Murarka, Chairman, Plastivision 2017 was recognised for his Outstanding Contribution to the Indian Plastics Industry. The Lifetime Achievement Award for the year was bestowed upon to Vimal Kedia, Managing Director, Manjushree Technopack.

Also, on the occasion, a CEO panel discussion on the theme of Indian Plastics 4.0 was held. Esteemed panellists, Shrikant S. Bairagi, Chief Executive Officer, Prothom Industries India Pvt. Ltd., Robin Banerjee, Managing Director, Caprihans India Ltd. and Amit Puri, Director, International Sales & Marketing, Alok Masterbatches touched upon current

Winners!

- Excellence in Automotive**
Faurecia Interior Systems India Pvt. Ltd., PPAP Automotive Ltd. and Mahindra & Mahindra Ltd.
- Excellence in Recycling**
Rudra Environmental Solution (India) Ltd. and Godrej & Boyce Manufacturing Company Ltd.
- Excellence in Building & Construction**
Sputnik, Mitsu Chem Plast Ltd. and Prince Pipes & Fittings
- Excellence in Packaging**
Manjushree Technopack Ltd., Triveni Polymers Pvt. Ltd. and Huhtamaki-PPL
- Excellence in Agriculture**
Automat Irrigation Pvt. Ltd. and Badve Engineering Ltd.
- Excellence in Consumer Durables**
Ariston Thermo India Pvt Ltd

Special Address



Plastics is one of the most important industries and it is growing with fast pace. Although global average of the consumption of the plastics is about 42 kg per capita but India is far behind compared to this- about 11 kg per capita. Also there is lot of growth not only for

new investments but also for growth and development. Best part of this industry is most of the units belong to the MSME sector. They create employment in very large number. Capital to employment ratio is best in the employment sector.

Amit Mohan Prasad, Investment Commissioner, Senior IAS, UP Government

and upcoming market trends in the domestic plastics industry. On the other hand, A Venkatrangan, Managing Director, Huhtamaki PPL Ltd. delivered a keynote address.

Industry Partner for The ET POLYMERS Awards was All India Plastics Manufacturing Association (AIPMA). The Masterbatch partner was Alok Masterbatches while DHFL was Finance Partner. ECON Machinery Pvt Ltd came on board as a Trophy Partner.

Industry Partner



Masterbatch Partner



Finance Partner



Trophy Partner



Tectyl®

Safe for Nature

**Eco-Friendly
Metal Working Fluids**

Value Beyond Experience

**Total Fluid Solutions
for Manufacturing Industry**

Product Segment

- Water Soluble Cutting Oil
- Neat Cutting Oil
- Rust Preventive Oil
- Metal Cleaners
- Forming Oil
- Heat Treatment Oil
- Hydraulic Oil / Industrial Oil
- Grease / Coating Wax



Tectyl Oil & Chemicals India Pvt. Ltd.

H.Q. : #508-509, ILD Trade Center, Sohna Road,
Sector 47, Gurgaon, Haryana, India
Tel : +91 12 4436 2931

www.tectylasia.com

FACTORY : No. 140/3, 4A,4B,4C,4D, Kiloy Village,
Sriperumbudur Taluk, Kancheepuram, Tamilnadu.
www.tectylasia.com/en

Global Network: Asia Pacific & South America

Uncompromised Performance



Extensive Sealing range for Aerospace Industry

Everytime you fly, you're probably relying on seals and airframe components from Trelleborg Sealing Solutions to help make your flight safe! Trelleborg's pedigree in developing and manufacturing seals for aerospace & defense industry goes back over 60 years, and the company is now the world's leading supplier of sealing solutions in the Industry.

With the world advancing to Space, Trelleborg Sealing Solutions strives to outperform the challenging requirement of the Industry, our compounds are suitable for the extreme working conditions and deliver **'Uncompromised Performance'**. Our innovative sealing range finds its place from air to space.

Why Trelleborg Seals?

-  Industry Leading Polymer Technology
-  Innovative Seal Designs
-  Increased Efficiency
-  Proprietary Compounds for Exceptional Performance
-  Surprisingly Low Maintenance Cost

Scan to know more about our Aerospace Products



Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has annual sales of SEK 30 billion (EUR 3.25 billion, USD 3.60 billion) in over 40 countries. The Group comprises five business areas: Trelleborg Coated Systems, Trelleborg Industrial Solutions, Trelleborg Offshore & Construction, Trelleborg Sealing Solutions and Trelleborg Wheel Systems, and the operations of Rubena and Savatech. The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on Nasdaq Stockholm, Large Cap.

Trelleborg Sealing Solutions India Pvt Ltd
#22/9, Beratena Agrahara
Hosur Main Road, Bangalore 560 100
Karnataka, India

Join us at

Panasonic recommends
Windows 10 Pro.

Panasonic



ROUGH



TOUGH



RELIABLE

20
YEARS
RUGGED SINCE 1996

TWO DECADES OF WORKING IN FLOODS, FLAMES AND FAR-OUT PLACES.

TOUGHBOOK

TOUGHPAD



Windows 10 Pro



Android



ATEX Zone 2 certified*



180cm shock resistant*



Water and dust
resistant (IP65)*



10.1" high brightness WUXGA
(1920x1200) display (up to 800cd/m²)



Up to 13 hours battery life



Flexible configuration port
(GPS, Serial port, etc.)



Lightweight design - weights approx.
starting 270g

FOR INDUSTRIES LIKE OIL & GAS, CONSTRUCTION, INFRASTRUCTURE, POWER, DEFENCE, GOVERNMENT, MANUFACTURING, PHARMA, PORTS AND OTHERS.



CF-31-13.1" (33.27 cm)



CF-54-14" (35.56 cm)



CF-20-10.1" (25.65 cm)



FZ-61-10.1" (25.65 cm)



FZ-M1-7" (17.78 cm)



FZ-B2-7" (17.78 cm)



FZ-X1-5" (12.7 cm)



FZ-M1-4.7" (11.9 cm)

Contact us: 1800 419 0373 | Website: in.panasonictoughbook.asia | E-mail: toughbook.marketing@in.panasonic.com

*Form & conditions apply



THANK YOU VISITORS FOR MAKING STM'S EXCLUSIVE RANGE OF MACHINE CENTRES A GRAND SUCCESS AT IMTEX 2017



TURNING SERIES

Turning Series high performance linear motion roller guide ways on both X and Z axis, aiming to satisfy customers who demand high productivities.



PRODUCTION SERIES

For high volume of components, machine is equipped with Rotary type Pallet Changer with reduced component handling time. Rotary pallet changer



STM INDIA PLANT

STM range of machine centres are a result of a co-production venture between S&T, India and Manford, Taiwan.



DIE MOULD SERIES

Compact high speed machine for die mould fine finishing requirements.

15,000 rpm Direct Drive Spindle



5 AXIS SERIES

5-axis machining center offers high speed, high accuracy, easy operation with reliable quality and less maintenance.



OC SERIES

For highly precision & quick grinding of components primary CNC grinders are the right choice. with hydrostatic guide ways. Palmart and s&t jointly offers the technology which is first time in india.



To know more about STM's range of machining centres call us at **98652 33855** or visit us at www.stengineers.com