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The official magazine of Indian Machine Tool Manufacturers' Association

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Ambassador of India to Germany, Ministry of External Affairs, Government of India

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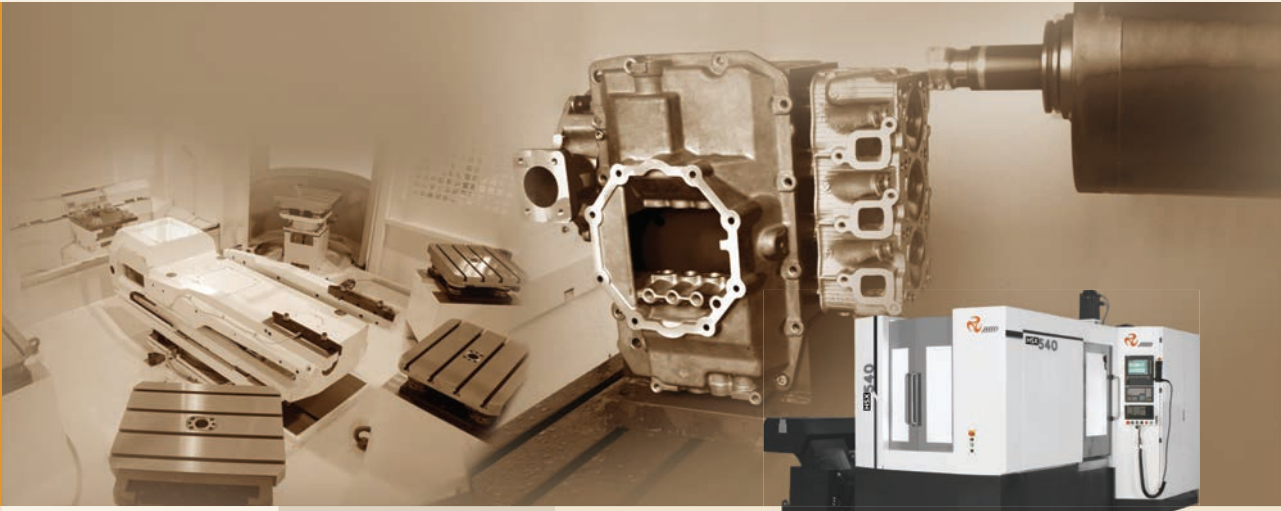
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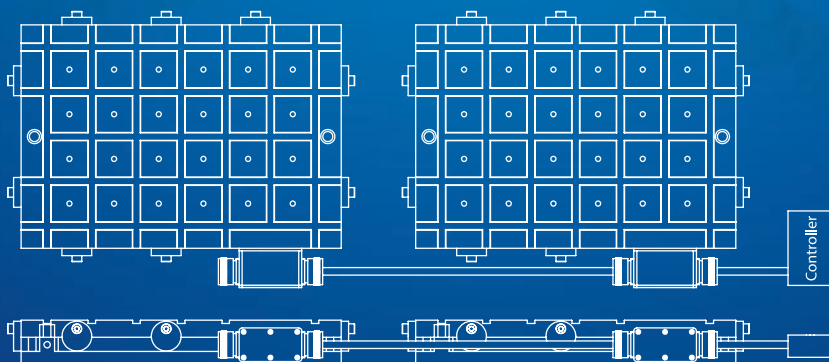
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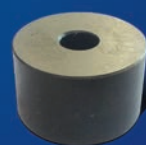
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The background image shows a large industrial plant with tall towers and complex piping. In the foreground, there are several large, horizontal, cylindrical storage tanks, some of which are marked with red numbers like "4" and "5". The scene is set against a dramatic sunset sky with warm orange and yellow hues.

Get Started Today!



L Krishnan
President, Indian Machine Tool Manufacturers' Association (IMTMA) and
Managing Director, TaeguTec India Pvt Ltd

Soaring to New Heights

Greetings!

What an IMTEX it has been! Let me share my happiness towards the industry's overwhelming response in making the biggest machine tool show in South and South-East Asia a record breaker. Over ₹15,500 crore worth of enquiries have been generated and more than ₹1,400 crore worth of orders booked during the seven day event. It has been a pleasant surprise!

The 17th edition of the Indian Machine Tool Expo had close to 89,000 visitors from over 24 countries including decision makers and high profile delegations from key industries and international associations alike.

Looking forward, the macroeconomic atmosphere in India is upbeat on recent developments and the current budget has been successful to bring cheers all around. Fiscal consolidation, expenditure control and quality of fiscal adjustments seem to sum up the 2015 edition. Creative augmentation in some areas and decisive shifts in others conform the budget to adhere to economic survey. With infusion into capex, we will hopefully see demand induced growth from the manufacturing, infrastructure, defence and automotive industries to a large extent.

As the Indian Machine Tool Industry is poised well to reap the benefits of this inclusive growth, your association is dedicated to take active lead in making India one of the top five machine tool hubs.

IMTMA once again extends its appreciation to everyone on the resounding success of IMTEX and Tooltech 2015. The current MMI edition features many facets of the exciting twin events!

Happy Reading!



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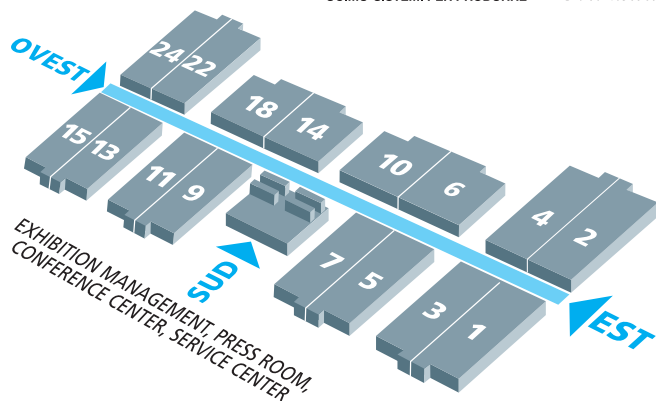
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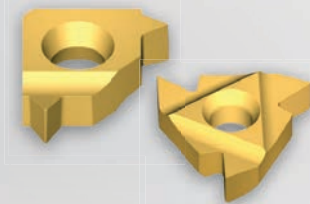
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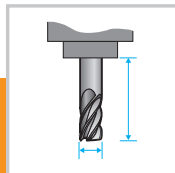
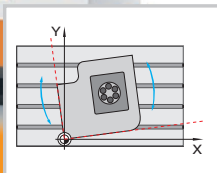
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Joining Hands for Cumulative Growth!

It's that time of year again when the world's best and latest industrial technologies are showcased at the world's biggest industrial fair—HANNOVER MESSE 2015. And this year, India is the partner country. Nine years ago, when India was the partner country for this esteemed trade fair, a large number of trade deals, joint ventures and investments were witnessed. This year too brings with it renewed excitement, as Prime Minister Narendra Modi's agenda for the country's progress was long awaited. The new government taking direction from Prime Minister Modi has set in place new initiatives and policies that showcase how India will be beneficial to all vested in progress and development.

We, Vogel Business Media India, are working with the Department of Industrial Policy & Promotion (DIPP) in order to bring to light the various offerings the country has, through articles, promotion material in the show daily at HANNOVER MESSE 2015. We are happy being entrusted with this opportunity as like always we bring to you, our readers, various articles on how collaboration and technology can help the industry grow.

Having said this, it is only right that we mention that our German Parent Company—Vogel Business Media GmbH & Co KG, has long been associated with this valued fair and the industry. It has been unceasingly reporting on and carrying technology articles that have benefitted all sectors of the industry for over 120 years.

We hope to continue this work for as long as we are given the privilege to contribute. In this background, I on behalf of Vogel Business Media, invite you, our honored readers, to attend HANNOVER MESSE 2015. Do visit us at the Vogel Business Media Booth at Hall 9, Stand F26.

We wish you a great read and a fabulous show!

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Mauka pe Chauka!

As Team India leaves its imprint on the ongoing mega-event—World Cup 2015 series with its stupendous success, the advertisement ‘Mauka Mauka’ is gaining huge reception from cricket fans across the globe. Cricket is certainly more than just a game for us; it is the common string that binds all Indians together in a patriotic sentiment. Hence, when India is the only team other than New Zealand to win each of its games in the group stage, it makes the entire country proud and spirited. The ‘Men in Blue’ have proved incredulously that talent surely enables to win games, but it is teamwork that facilitate in winning championships—and that no opportunity be wasted to reach the common goal—hence the echoed phrase ‘*Mauka pe Chauka*’.

Rightly emphasized by the famous business icon, Andrew Carnegie, teamwork is the ability to work together toward a common vision. It is the ability to direct individual accomplishments towards organizational objectives and enables common people to attain uncommon results. It is the individual commitment to a group effort, which makes a team, a company, a society and at large a civilization work.

“Coming together is a beginning. Keeping together is progress. Working together is success.”

—Henry Ford

In this context, it is significant to note that the ‘Make in India’ campaign that is designed to raise the global competitiveness of the Indian manufacturing sector will be successful only when the entire manufacturing fraternity works together to contribute to the country’s long term-growth. This campaign, which is making strides in the global arena, focuses on facilitating investment, fostering innovation, protecting intellectual property, and building the best-in-class manufacturing infrastructure. We can see all of these translating into reality

when we walk our talk of working together.

With India as a partner country in Hannover Messe 2015, it is time to showcase to the world that the strength of the team is each individual member and similarly the strength of each member is the team.

In this backdrop, it is significant to note that the Union Budget has put strong emphasis on ‘Co-operative federalism’ and empowerment of the States. The creation of National Institution of Transforming India (NITI) and acceptance of 14 Finance Commission’s (FFC) recommendation of substantially higher devolution of the divisible pool of Union taxes from 32 per cent to 42 per cent to States are landmarks in this direction. This Budget is slated to bring in high growth and faster development of different regions of the country contributing to the overall national growth.

On this positive note, I wish you all a happy read!

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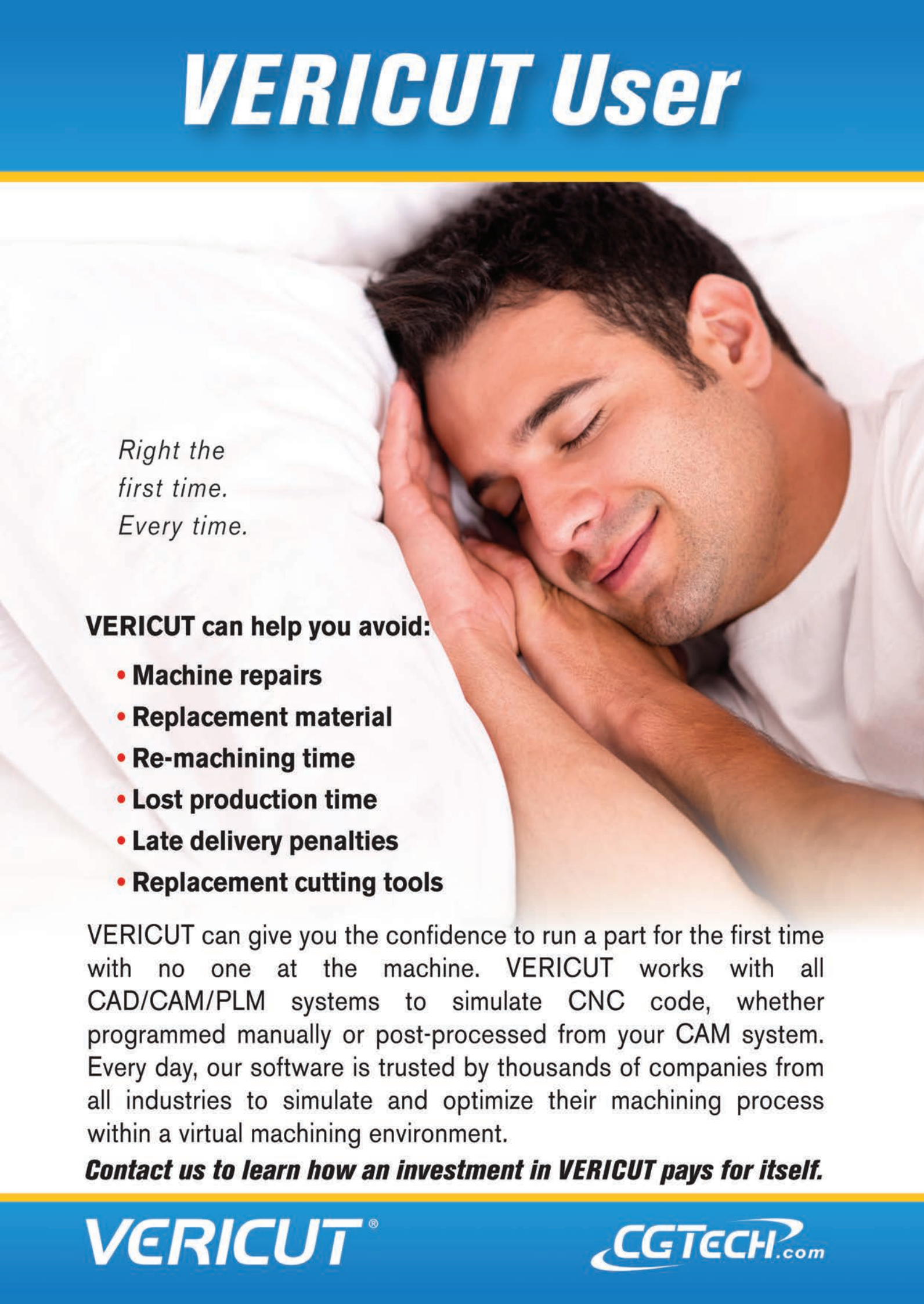
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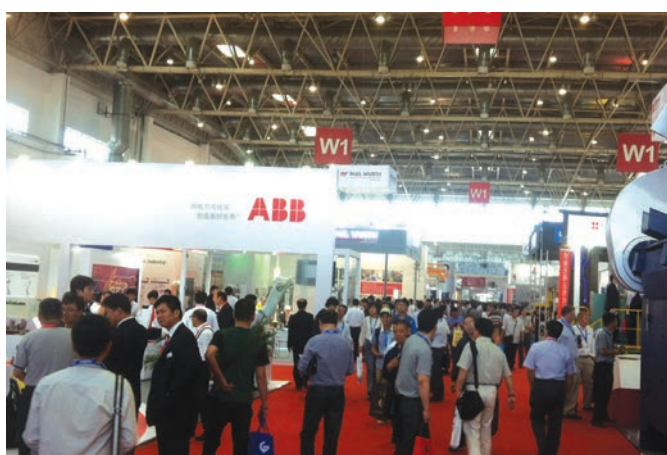
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Our Lean Selection speed reflects our own core values.

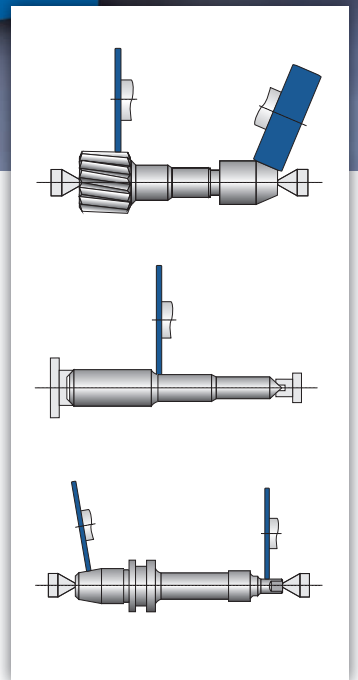
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Do You Know the Right Price for Your Machine?



"In order to achieve success, we must price our products to maximize profitability and still satisfy the buyer that he paid fair market value for the machine."

CEO, Micromatic Machine Tools Pvt Ltd,
TK Ramesh

Pricing issues affect everyone. All of us are buyers of many things in our day-to-day life and often buy the same things at different price points depending upon our requirements, circumstances, alternatives and urgency. Every buying-selling activity is an exercise in balancing value versus price. This sense of value is both tangible (actual product features) and intangible (derived/perceived benefits). If the value that I as a buyer attach to the product is about equal or more than the price being asked, I will buy it. If the price being asked is significantly higher or lower than the value I attach to the product, I will not buy. This is not an equation of absolute rupees, I may be willing to pay ₹200 extra for an attractive shirt design but may not pay the extra ₹2 for my usual brand of a disposable razor and may switch razor brands not because I cannot afford the razor, but because to me the brand of razor may not be worth the extra ₹2. Thus,

figuring out where the right price lies for your machine or brand is often a tough proposition.

Knowing where you stand

When you are selling machines or equipment that are in short supply, you can use the Machiavellian pricing strategy, which is a hard line approach to maximize profits and not to look at costs and have little regard to buyer satisfaction or feelings. This is a short term approach. And as most of us are in business for the long term and would like to have repeat customers, it is not the most likely route to take. In order to achieve success, we must be aware of the risks that come with poor pricing decisions. There are two main drawbacks that will be encountered—under pricing or over pricing. Therefore, it is very important to price our products to maximize profitability and still satisfy the buyer that he paid fair market value for the machine.

Understanding logistics

It is extremely important to first perfectly understand your costs, both product cost and support cost; then, you need to study and understand how much leeway you have in pricing.

This is an exercise to be done with consumers and determine sensitivity to prices within your machine category. A price elasticity study can answer this question appropriately. If you are selling a commodity machine with little differentiation between you and your competitor then you will not have much flexibility in price before the consumer switches to your competitor's product.

While price is very important, it does not take rocket science to try and compete on price platform, many have tried this game and none have truly succeeded from a long term perspective. The truth of this fact is that despite lower pricing, the known brands are preferred and growing. If it was only price, the lowest priced machines would have had the maximum sales; this is never the case!

Every aspect is looked at

Remember, everything communicates something to the customers about your company, product and brand. This is specially true for pricing.

The price you ask makes a statement about the value you are offering the consumer. Consumers do not shop for the lowest cost. They shop for the highest value, machines that deliver the most value (tangible value—machine specifications, features and performance and intangible benefits provided through support and services).

Being relentless in managing your product pricing is essential to the growth of your business. It is crucial to remember that the pricing of your products could be the difference between the success or failure of your business.

MMI

The views expressed by the author are personal and he can be contacted at rameshtkr@gmail.com

12th INTERNATIONAL MACHINE TOOLS EXHIBITION

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Enabling 'Make in India': IMTEX 2015 and Tooltech 2015 conclude on a high note

IMTEX 2015 which exhibited innovative technologies for increasing productivity and optimizing resource utilization is a great enabler of the 'Make in India' initiative and will fuel the growth of indigenous manufacturing.

Organized by the Indian Machine Tool Manufacturers' Association (IMTMA), IMTEX 2015 and Tooltech 2015 concluded on January 28, 2015. Held over a period of seven days, South East Asia's largest trade show had close to 1,000

exhibitors displaying over 1,500 'live' machines from 24 countries at the Bangalore International Exhibition Centre (BIEC), India's premier international exhibition-cum-conference facility in Bengaluru. This year marked the 17th edition of the Indian machine tool expo which was spread over 50,000 m². The event displayed state-of-the-art technologies and solutions across five halls, and was visited by around 89,000 industry professionals.

Source: IMTMA

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Enabling 'Make in India'



Inauguration

IMTEX 2015 and Tooltech 2015 was inaugurated on January 22 in the presence of various chief guests including Minister of State for Heavy Industries & Public Enterprises, Government of India, GM Siddeshwara; Minister for Higher Education and Tourism, Government of Karnataka, RV Deshpande; Chairman Exhibitions, IMTMA, Jamshyd N Godrej; President, IMTMA, L Krishnan and Vice President, IMTMA, PG Jadeja.

Apart from them, IAS, Additional Chief Secretary, Commerce & Industries Department, Government of Karnataka, K Ratnaprabha; Deputy Managing Director, EXIM Bank of India, Debasish Mallick; Former Chief Mentor, Confederation of Indian Industry & Founding Trustee, Ananta Aspen Centre, Tarun Das and Former Member Secretary, National Manufacturing Competitiveness Council, Ajay Shankar were also present at the inauguration.

At the inaugural ceremony, Godrej stated, "IMTEX showcases the latest technologies and solutions from the global manufacturing industry." Agreeing to this, Krishnan added, "IMTEX 2015 will be a great enabler of 'Make in India' and the exhibition will propel the Indian manufacturing sector towards



IMTEX 2015 in action!: The stalls at the exhibition hall buzzing with visitors.



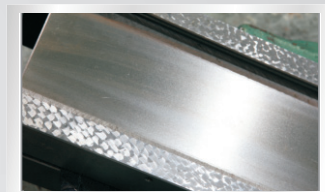
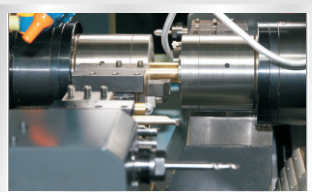
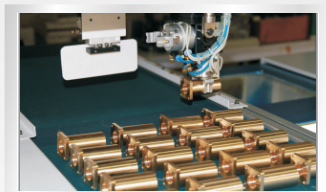
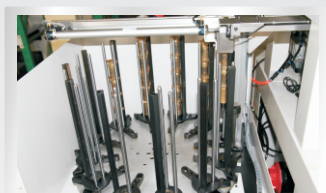
Founded in April 2000 and located in Xi' an Hi-tech Development Zone, Xi' an Kitamura Precision Machine Works Co., Ltd, branded XKNC, is the first domestic precision CNC machine tool manufacturer to bring in advanced foreign technology and manufacturing experience; it is also a Sino-Japan joint venture with national innovative and high technology accreditation.

The products are namely gang tool type, turret type, automatic drilling and milling machine, automatic cutting machine, NAGASHIMA Ultra precision Grinding machine, KIRA small VMC, OBOT robot & auto-loading project. Eight plus class a total of 60 specifications of products are extensively applied in communication, refrigeration, optical instrument, household appliances, medicine, automobile, motorbike, electronics, special electrical machine, and timepiece industry.

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Phone: +91-98-40236534 +91-44-26582694

Email: vaidy70@gmail.com

Xi'an Kitamura Precision Machine Works Co.,Ltd

Contact:Mr.Kenny Tel:+86 029-88452325 Phone:+86 187 1050 3635

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Skype:XKNC-kenny We-Chat:Kenny1573

Email:Kenny@xknc.net/kenny.xknc@aliyun.com

Web: <http://www.xknc.com/eng>

Alibaba: <http://xknc.en.alibaba.com/>



IMTEX 2015 AND TOOLTECH 2015

Provisional data shows that business orders generated at IMTEX 2015 may reach well above ₹1,434 crore. Also, about ₹15,690 crore worth of enquiries was generated alongside.



Diverse IMTMA publications were launched at the event.

productivity and quality. It will also help in making the Indian manufactured products globally acceptable.”

Ratnaprabha stressed on the significance of the machine tool industry. She mentioned, “The machine tool sector plays a vital role in the manufacturing industry. Hence, the Karnataka Industrial Policy has laid great importance on the machine tool industry and the state government will extend its support to it.”

Whereas, Deshpande addressed the gathering by saying, “Karnataka is a hub for the manufacturing industry and investing in the state will bring rich dividends to the industry.” In addition to this, Siddeshwara spoke about the various steps taken for the development of the manufacturing industry. He opined, “The state is in the process of setting up Karnataka’s first machine tool park in order to bring manufacturing efficiency with the assistance of cluster development.”

On the occasion, diverse IMTMA publications such as the ACMA-IMTMA Joint Study: Enabling Indian Auto Component Industry Competitiveness; IMTMA Productivity Digest 2010-2014; IMTMA Directory of Members, an information booklet on the Eleven Mega Platforms of Modinomics; and the IMTEX 2015 catalogue were also released.

The exhibition also witnessed a milieu of concurrent events such as the exhibitors’ night, distributor and dealer meets, technical conferences, association level interactions, IMTMA past presidents’ meeting, executive committee meetings, industrial visits, and demonstrations at the IMTMA Technology Centre.

Fervent business activities also transpired at IMTEX 2015 wherein dealer enquiries were solicited, trade leads were generated; technology transfers and partnerships were ventured into, amidst a lot of learning, information sharing in a business environment, thus culminating into a heightened euphoria for the gathered manufacturing industry.

Overseas participation

Covering an area of around 12,724 m², about four hundred and ninety-three overseas exhibitors participated at IMTEX 2015 and Tooltech 2015. The exhibitors originated from diverse countries such as Australia, Austria, Belgium, China, Czech Republic, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Korea, Serbia, Singapore, Spain, Switzerland, Taiwan, Thailand, The Netherlands, UK and USA. Overall, there were eight country pavilions from China, Czech Republic, Germany, Italy, Japan, Spain, Taiwan and the USA, hosting multiple companies and institutions under the same banner. The largest overseas participation was witnessed from Germany with 130 exhibitors.

Elaborating on the show, Director General, JETRO, Junya Tashior said, “Indians are becoming conscious about durable quality and are ready to spend money for the same. Due to this, Japanese companies are looking at the Indian market with a positive attitude. With FDI being allowed in many key sectors, we can see more and more Japanese companies entering the Indian market.” All these delegations had participated at IMTEX with a clear agenda of attracting

investments from the Indian companies.

Indian participation

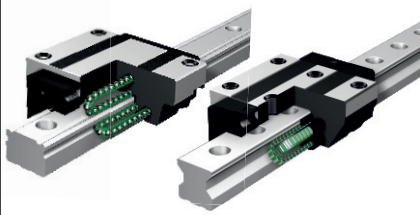
Four hundred and eighty six exhibitors from India displayed their technology solutions in a total area of around 18,182 m². The machines and accessories on display focused on key industries such as aerospace, defense, railways, automotive and auto components, medical engineering, construction equipment, IT and electronics, and many more. Talking about the latest edition of IMTEX, experts from Emerson Process Management had much to say, “IMTEX is a fantastic event that receives participation from local, national and international companies. This year, we found many fresh Indian players exhibiting numerous new and exciting machines at the event which will help us to save time and also reduce manpower. We also witnessed many innovative home-grown technologies that will showcase India’s caliber to the world.”

Industry delegations

Every year IMTEX receives business delegations from key industries such as the railways, defense, ordnance, aerospace, auto and auto components, etc. Some of the eminent industry delegations in 2015 included representatives from the Ordnance Factory Board, Ministry of Defense, BHEL, ACMA, South Eastern Railways, NAL, IMPL, Brahmos Aerospace, Defence Ministry, Integral Coach Factory, Tractor Manufacturers’ Association, ISRO Satellite Centre, Automotive Component Manufacturers’ Association, etc. Expressing his views about the show, Deputy Director

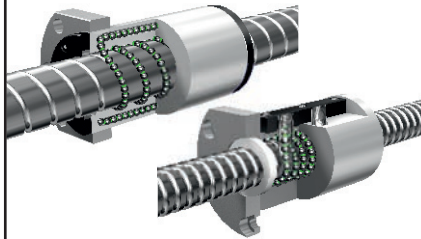
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● BANGALORE ● NEW DELHI ● CHENNAI ● HYDERABAD ●



This year marked the 17th edition of the Indian machine tool expo which was spread over 50,000 m².

General, Ordnance Factory Board, L Mohanty shared, "The Indian machine tool industry is growing and we are looking for effective solutions. IMTEX shows the capability of Indian machine tool builders; and seeing more solutions that can substitute imports is encouraging."

In a nutshell, IMTEX 2015 had over 20 delegations from public sector undertakings and more than 40 industrial delegations from the private sector visiting the show, these figures and their positive feedback stands testimony to the success of the show.

International association participation

International associations also made their presence at IMTEX 2015 and Tooltech 2015. Some of the key representations were from AFM-The Spanish Association of Manufacturers of Machine Tool; The Association for Manufacturing Technology, USA; China Machine Tool & Tool Builders' Association; CECIMO (the European Association of the Machine Tool Industries); Japan Machine Tool Builders' Association; KOMMA (Korea Machine Tool Manufacturers' Association); Svazu Strojírenské Technologie, Czech Republic; Taiwan Association of Machinery Industry; VDW (German Machine Tool Builders' Association); and the China Council for the Promotion of International Trade.

Export development endeavor

As an endeavor of IMTMA's 'Export Development Cell', to promote and boost exports from the country, a five company delegation of machine tool dealers visited IMTEX 2015. These companies are looking

forward to import machines besides trading with Indian companies. On the occasion, various plant visits were organized and it is believed that this initiative will promote the 'Make in India' initiative and foster trade relations between the Indian and international players from the machine tool industry.

Tooltech 2015

Tooltech 2015, a concurrent event was organized alongside the flagship event IMTEX 2015 to showcase the latest trends and technological refinements in the metal cutting industry from across the country and globe. Tooltech 2015 showcased machine tool accessories, metrology and CAD/CAM cutting tools, tooling systems and current trends in the tooling industry. It also unveiled the explicit range of cutting tools from the stable of the world's leading brands. A total of 261 Indian exhibitors displayed their products in an area of 6,072 m² while a total of 109 foreign exhibitors displayed their products in an area of 2,340 m² at the Tooltech 2015 exhibition.

Jagruti delegation

In order to orient young engineering students with emerging technological capabilities, especially in industrial technologies, and getting them acquainted with the actual manufacturing shop floor set-up through a plant visit to prominent machine tool companies, IMTMA hosted the 7th JAGRUTI – IMTMA Youth Program. This session was conducted from January 23–25, 2015 at IMTEX 2015 for a group of engineering students from across the country and about twenty-four students participated in it.

Business generation

The upbeat market sentiment was reflected in the number of orders and enquiries generated at this year's IMTEX. The current edition improved in terms of the number of enquiries generated and orders placed. Provisional data shows that business orders generated at IMTEX 2015 may reach well above ₹1,434 crore. Also, about ₹15,690 crore worth of enquiries was generated alongside.

Academia pavilion

A total of 25 institutions showcased their innovative research projects related to metal working at the Academia Pavilion at IMTEX 2015 from across India. Collaboration between the industry and academia offers mutual benefits as it facilitates innovation in the industry and at the same time ensures industrial relevance in academic research.

New initiatives

Many new initiatives were introduced at this IMTEX including Job Connect, Souvenir Kiosks, Safe Drive initiative, etc. All the initiatives were well received by the exhibitors as well as the visitors. Job Connect is an awareness program for fresh engineers visiting IMTEX. It was organized by IMTMA wherein experts from leading machine tool industries such as ACE Designers, BFW, CADEM, FANUC, Grind Master, Jyoti CNC, Kennametal, LMW, Makino, and TaeguTec held orientation sessions and also engaged with the budding engineers. Also, BIEC along with the Bangalore Traffic Department and the Traffic Warden Association organized the Safe Driver workshop for a period of five days commencing from January 23, 2015.

Back again in 2017

The phenomenal success of IMTEX 2015 and Tooltech 2015 was made possible by the strong presence of business visitors and decision makers from India and abroad, making it a truly pan-global event. Both the events undoubtedly mirrored the positive sentiments of the industry; this was evident from the number of enquiries generated and the volume of orders received by the participating exhibitors. Being exclaimed as one of the best shows both by visitors and exhibitors alike, IMTEX 2015 has raised the bar on the fronts of service and customer satisfaction. IMTEX (cutting technologies) will return in 2017 whereas, IMTEX Forming will be organized in 2016.

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WFL Technology Meeting 2015... again a 'firework of innovation'

Linz, Austria – WFL Millturn Technologies presented the latest machine models, along with the recent innovations in the areas of software and especially technology, at the Technology Meeting in Linz, Austria. The event was held from March 16–19, 2015, where

the company exhibited the entire spectrum of machinery, ranging from M35 to the M150 MILLTURN. With this high-tech-product portfolio, complex workpieces in nearly all sizes can be manufactured efficiently at low costs. Apart from this, multitasking machining from

A–Z in the production area, in-process technologies and innovative scientific talks in the field of manufacturing could also be experienced.

A state-of-the-art customer centre is also available to receive and host visitors. Along with this, a competence center, consisting of a measurement laboratory and an investment in the greatest possible Zeiss measuring machine model, has been established in order to bring measurement to the next level. It's rapid spare part availability has also significantly improved thanks to the extension and modernisation of the spare parts depot. Also, the overall office space has been enlarged in order to fulfil the requirements in accordance with the rising market success.

This innovation forum of machining presented a broad

range of technologies including ID-machining, gear cutting, hardening, additive manufacturing by means of a high-performance laser and surface treatment by machine hammer peening. Deep-hole drilling and complex ID-machining are among the best products introduced by WFL.

Another field of expertise include the company's different gear cutting techniques. Requirements, which years ago sounded like pure fantasy, are nowadays standard repertoire of complete machining. With complex applications, WFL especially emphasizes on user-optimised and economic solutions. And, at the same time, the company does not forget heavy machining and the efficient use of all turning-, boring- and milling-operations.

Source: WFL



The M120 Millturn landing gear introduced by WFL Millturn Technologies.

Junker Group receives technology award

Nordrach, Germany – Across the globe, renowned auto makers rely on innovative grinding technology from Junker. The grinding machine manufacturer is now the proud winner of the Shanghai General Motors Co, Ltd's (SGM) 'Leader of the Technology Award'. SGM confers awards on its best suppliers in a range of categories once every two years. The Junker Group is one of the two machine manufacturers from Europe to be among this year's winners. The award recognizes companies

that have continuously invested in the development of new, economical grinding machines for grinding a wide range of different car components such as crankshafts, nozzle pins, etc. The Technology Award was presented to CEO, Junker Group, Rochus Mayer in January 2015 at Boao, China.

The award was presented against the backdrop of a show that launched new car models. "We invest heavily in the development of new machines and technologies. This makes us particularly proud to have been distinguished with the award of 'Technology Leader' by one of the world's biggest car manufacturers", says a delighted Mayer.

Source: Junker Group



Junker, CEO, Rochus Mayer (third from the left) accepted the award from Shanghai General Motors.

DMG MORI receives orders worth €177.1 million

Bielefeld, Germany – With an order intake of € 177.1 million and 688 products sold – including major orders from the USA (€ +11.7 million), China (€ +10.4 million) and Japan (€ +4.9 million) – DMG MORI takes positive stock of the in-house exhibition that was held at Pfronten this year.

From February 3-7, 2015 the company has registered a record

number of 8,797 international trade visitors at Pfronten. About 59 per cent of the crowd comprised international and potential customers. The visitors explored innovative and trend-setting products. Four new CELOS apps and a CELOS PC version were presented for the first time at the venue. With its apps, CELOS control technology simplifies the process right from the idea to the finished product.

In total, 76 high-tech exhibits were presented over the 5,800m² floor area including four world premieres. The other focus points included system solutions for the automotive and aerospace industry, as well as for line production. With its additive manufacturing machine LASERTEC 65 3D, DMG MORI presented an innovative combination of additive and cutting machining.



Source: DMG MORI

Additive Manufacturing: With its additive manufacturing machine LASERTEC 65 3D, DMG MORI presented an innovative combination of additive and cutting machining.

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Implications of the Budget on Manufacturing



"The government's intent of speeding up implementation of the GST by 2016, to reduce corporate tax from 30 per cent to 25 per cent over the next four years and focus on infrastructure will lay a sustainable platform for growth in the future. Overall, the Budget is excellent in terms of building a strong social fabric, which is the need of the hour. A lot was expected from the 'Make in India' initiative. Besides reassurances like revival of growth, investment and job creation in domestic manufacturing, the way forward is yet to be clearly understood. There is a clear necessity to lay down criteria for the manufacturing sector to compete globally in terms of capability, regulation harmonization, high technology usage, emission control, safety and skill development. Skill development is no doubt the key for employability and sustainable supply of skilled manpower. The creation of this positive wave would also flow to other key industries. Let us wait for the Big Bang reforms next year."

**Vice Chairman & JV Partner,
Toyota Kirloskar Motor,
Vikram Kirloskar**



"Without going into the maths of income and expenditure, I see Budget 2015 as an enabler for the Make in India vision, as a commitment to make it easier to do business for foreign and Indian companies alike, and as a blueprint for the way forward for healthcare, education, and skill development. The Budget, if implemented as stated, is a precursor for 'Achhey Din'. This year's Budget also sets the agenda to make taxation more transparent; promises to simplify procedures and give time bound approvals to projects. We will also have a national market that is free of tax visa across every state border. It deepens the Make in India agenda by opening up the defense sector for joint ventures. Not only will this proposal lead to import substitution, but also have a massive impact on the development of technology and create a new design, development and manufacturing blueprint in India. How achhey, of course depends on how sincerely the government executes its plans. A Budget, after all, is a statement of intent, and not a guarantee of good implementation. So let's keep our fingers crossed."

**MD & CEO, Shriram Pistons,
AK Taneja**



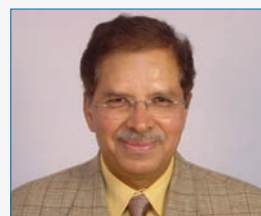
"This budget is a departure from the old, in the sense that the government plans to move away from the expanding subsidies. For example, tweaking MNREGA wherein that government proposes to make people earn wages under the scheme in the rightful spirit of 'Building India'. The Make in India proposal seeking investments by foreign companies wishing to obtain a slice of the investment cake will be a tremendous booster in terms of growth in manufacturing, manufacturing capability and investment in technology. The fiscal consolidation by rationalizing taxes including introduction of GST from the fiscal 2016-17 will ensure proper tax mobilization, leading to internationally competitive products to be made in India. The proposal to introduce the land acquisition act as modified will help unstick capital investments leading to further growth of the economy. Reduction in corporate tax from 30 per cent to 25 per cent for the four year period could have been done through increase in depreciation rates, for investment in capital goods which would have helped manufacturing industry, both up-stream and down-stream."

**Immediate Past President,
IMTMA and Chairman Miven
Mayfran Conveyors Pvt Ltd,
Vikram Sirur**



"The first full budget of the NDA Government for the year 2015-16 was announced amidst high expectations. This Budget gives us a sense of direction for the mid-term and addresses several structural issues limiting growth. The proposed spend of ₹70,000 crore in road/rail infrastructure will certainly stimulate demand. The proposed road map for reduction in corporate tax from the current 30 per cent to 25 per cent over the next three years starting next year will make country tax slab comparable to South East Asian countries. The 2015-16 Budget scores high on direction. Implementation of these ideas together with other reforms in relation to ease of doing business and land and labor law reforms should accelerate growth and stimulate the manufacturing sector. The states too need to act in a concerted way and in sync with the national direction to harness the full benefit of these measures."

**President, IMTMA and
Managing Director,
TaeguTec India Pvt Ltd,
L Krishnan**



"The Budget announcement has several new initiatives to promote investment in manufacturing such as infrastructure projects, easing of FDI in defence and railway production creating demand in the entire manufacturing value chain. To support easier implementation the government has announced several reforms in easier land acquisition, quick clearance of the necessary licenses. Above all government has announced a strong 'Make in India' initiative covering all facets of setting up and ease of doing business. Additionally the implementation of GST regime from April 2016 has given hope and comfort to the manufacturing industry. All these will certainly see growth picking up perhaps after three or four quarters, when many of the projects fructify. However in the immediate future there is no specific announcement whether in direct or indirect taxation to spur demand, except that with lowering of inflation, there are hopes of lower interest rates."

**Past President, IMTMA and
Managing Director,
Ace Designers Ltd,
Shrinivas G Shirgurkar**

The recently released budget has brought about a series of reactions. We talk to industry stalwarts on what this means for the manufacturing sector. Please log on to **modernmanufacturing.in** for the unabridged version of this article.

Compiled by: Nedra Pereira, Deputy Editor,
Vogel Business Media India
nedra.pereira@vogel.de



"The Union Budget for the year 2015–16 is a progressive and attempts to address several issues. The focus of the Budget was on growth, investment, and promoting the 'Make in India' campaign of the prime minister. Certainly, the Budget comes as a big push for investments. A concerted focus on getting the country's infrastructure back-on-track together with a roadmap in place to rationalize the tax regime as also simplify measures towards ease of doing business. The main highlight is the reduction in the corporate tax rate from 30 per cent to 25 per cent over the next four years, which comes as a structured relief to India Inc. The deferment of GAAR provisions by two years with prospective application and discarding DTC would provide more certainty on the tax regime on corporate restructuring exercise and business transactions. Increase in service tax rate from 12 per cent to 14 per cent can be viewed as a step-forward to the enactment of GST regime in India."

**Director General,
IMTMA, V Anbu**



"We view the Budget to be well positioned to straddle across infrastructure industry segments like steel, oil & gas, renewables, nuclear and cement industries, where power will play a vital role. Further, the announcement to set up five new Ultra Mega Power Projects is a very positive step and definitely strengthens the power value chain, right from clearances to execution. Also the GST regime, effective April 2016 is keenly awaited by the power electrical industry which will positively impact complicated tax issues and boost productivity and more business development. It is heartening to know that the government is consistently working on a pro-investment friendly environment. Certainly, the National Investment and Infrastructure Fund objective of ensuring an annual flow of ₹20,000 crore is a major step in this direction. Electrification by 2020 of the remaining 20,000 villages in the country, including by off-grid solar power generation, investment in infrastructure are solid initiatives."

**Director General, IEEMA,
Sunil Misra**



"The Budget has been a pragmatic one with adequate focus on development of the social sector as well as that of the industry and infrastructure. We are happy that the GST will be implemented by next fiscal; also the budget has measures to encourage the Micro, Small and Medium sector (MSMEs). Establishing of an electronic Trade Receivables Discounting System (TReDS) for financing of trade receivables of MSMEs, would help improve the liquidity in the sector. MSMEs constitute over 70 per cent of ACMA's membership and scaling-up the sector has been a challenge. Additionally, it has allowed 20 per cent additional depreciation on new plant and machinery as against 10 per cent, and enhancement of time limit for taking CENVAT credit on inputs and services from six months to one year. Further, reduction of rate of income tax on royalty and fees for technical service from 25 per cent to 10 per cent will enable technology absorption in the auto component sector."

**Director General, ACMA,
Vinnie Mehta**



"The recent Budget is investment-oriented, particularly in the area of infrastructure, and would increase the manufacturing capabilities of the country. The reduction in corporate tax to 25 per cent would ensure that Indian firms' tax liability is at a par with the ASEAN economies, while lowering of tax on royalty and technical fee is expected to help technology upgradation. Major emphasis has been placed on skill upgradation and the ease of doing business. The legislative framework being thought about in the grant of clearances would go a long way. Some of the initiatives such as the Mudra Bank for small and medium sized enterprises (SMEs) are well thought-out measures. However, the increase in service tax from 12 to 14 per cent could be a dampener as services and manufacturing are closely linked. Several manufacturing activities have inputs from the services. The Government's tax mop-up effort of over ₹15,000 crore could add to the economic cost."

**Executive Director,
EEPC India,
Bhaskar Sarkar**



"This has been one of the best Budgets in the recent past. Keeping in mind fiscal and other constraints it has done whatever a Budget can do to promote savings, investment, and hence growth. Fiscal deficit for 2014–15 have been maintained at 4.1 per cent of GDP and for even 15–16, it has been kept at 3.9 per cent only slightly higher than the 3.6 per cent of the GDP which had been thought of. The financial minister has promised to bring down the deficit to 3 per cent in three year time. Current account deficit for the current year is expected to be below 1.3 per cent of the GDP. To raise revenue excise duty rate will be increased from 12–12.5 per cent and service tax rate from 12.36 per cent to 14 per cent. In conclusion some may consider this a pro corporate budget but in reality it is a budget for growth, savings, industrial development and for the middle class."

**Past President, CII and
Chairman, Bajaj Auto Ltd,
Rahul Bajaj**

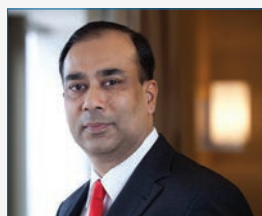
Implications of the Budget on Manufacturing

The recently released budget has brought about a series of reactions. We talk to industry stalwarts on what this means for the manufacturing sector. Please log on to modernmanufacturing.in for the unabridged version of this article.



"The Finance Minister, on February 28, 2015, presented a visionary and pragmatic Budget with a strong focus on reviving growth through investments. The Budget attempts to revive manufacturing growth by enhancing public spending, rationalization of taxes, focusing on ease of doing business, encouraging MSME and promoting entrepreneurship. It lays a strong emphasis on the public private partners, revamping the PPP model and encouraging greater investments by Central Government PSEs to revive and kick start investments cycle in the country. Micro and Small Scale industry comes out to be a top gainer in the Budget. The proposals to create a Micro Units Development Refinance Agency (MUDRA) Bank, with a corpus of ₹20,000 crore and credit guarantee corpus of ₹3,000 crore. Given the significance MSME has with respect to employment generation and investment; the announcements are very positive."

**Principal Adviser, CII,
Dr Sarita Nagpal**



"We welcome the growth-oriented Budget 2015. It is consistent with the stated objectives of the government, reinforcing its commitment to realization of infrastructure projects. With the Budget, the government seems inclined to follow its bold path of building infrastructure and improve ease of doing business. Its intention to increase public investments while decreasing corporate taxation over a period of time are also steps in the right direction, and we are sure these steps will further improve the confidence of investors and industry alike. We also welcome the government's decision to defer GAAR by two years and the introduction of GST in April 2016."

**MD & CEO, Siemens Ltd,
Sunil Mathur**



"The Union Budget 2015–16 has proposals with a plethora of initiatives to revive economic growth, with promises for further benefits in the future. The Finance Minister has introduced several measures with respect to the manufacturing sector and industrial growth. Corporate tax rate is proposed to reduce to 25 per cent over a four year period beginning next year. To incentivize investment in new plant and machinery, additional depreciation of 20 per cent is allowed in respect of the cost of plant and machinery acquired and installed for manufacture of any new article or thing. Tax benefits for employing new workmen in manufacturing units, the eligibility threshold is brought down to 50 new workmen (from 100), subject to minimum 10 per cent of workforce. This measure would have multiple benefits. The employer would get additional tax deduction to the extent of 90 per cent of the first years cost and encourage direct employment."

**Managing Director, VDMA,
Rajesh Nath**



"At the outset, the macroeconomic indicators are clearly pointing towards environment of sustainable GDP growth. The CPI and WPI inflation indexes show downward trends, current account deficit is low and foreign exchange reserves are healthy. All these indicators will boost investor confidence. The government has taken several direct and some enabling measures for favorable impact on manufacturing and capital goods sector. Extension for tax deductions on investment in plant/machinery, higher import duties for non-taxi SUV segment are expected to help automotive industry. The higher allocation of funds for urban development and rural infrastructure will create demand pull for commercial vehicles and interest rate sensitive 2-wheeler segment. Thrust on agriculture infrastructure could help tractor segment which is currently in significant stress."

**CEO, Bharat Fritz Werner Ltd,
Ravi Raghavan**



"The Budget is practical, balanced and growth oriented. The decrease in taxation on royalty payments will propel the Make in India program to be successful. The introduction of bankruptcy laws are welcome and will build balance between entrepreneurship and lenders. Specifically for the defense sector, Budget allocation has been increased by 12 per cent to ₹2.46L crore. With focus on FDI in defense, Make in India, ensuring there is inclusive focus on skill development, technical entrepreneurship, and institutional mechanism to finance the MSME sector is encouraging for the defense sector."

**Vice Chairman, AXISCADES
Group of companies; CEO,
Jupiter Capital Ltd;
Chairman, FICCI Task Force -
Aerospace and Air Defense,
and Member of National
Executive Committee FICCI ,
Sudhakar Gande**

Machining Solutions



Aerospace



General Engineering



Automotive



Medical



Construction



Oil & Gas



Defence



Pipe



Die Mould



Pumps & Motor



Energy Generation



Railways

Delivering **PERFORMANCE** for Decades

Ace Micromatic Group which started as a machine tool designing firm over 40 years ago, has today grown substantially in stature. The group now specializes in manufacture of CNC machines with cutting-edge technology, developed indigenously.

With over 10,000 satisfied customers, upto 63% repeat orders and more than 30,000 running machines across the globe, the group has been delivering performance for decades.



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THE LARGEST MACHINE TOOL GROUP IN INDIA

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Source: Mitsubishi Electric



View of Mitsubishi's busy booth at IMTEX 2015.

Best-in-Class Technology

With live demonstrations of machines, buzzing crowd and busy exhibitors, IMTEX 2015 concluded on a high note. For Mitsubishi Electric, which showcased its advancements in CNC solutions, it was an important show. The company not only displayed its technology but also launched a new solution. Here is a report on how the show was for the company.

The Indian Machine Tool Manufacturers' Association had organized the 17th edition of its flagship event, IMTEX, during January 22–28, 2015. The seven-day exhibition was held at Bangalore International Exhibition Centre (BIEC) in Bangalore. IMTEX is considered to be one of the largest industrial shows in the South East Asia region. As a result, it attracts exhibitors and visitors from all over the world. Thanks to its promising footfall, exhibitors gear up to participate.

Source: Mitsubishi Electric

The new entrant

Taking advantage of this platform, Mitsubishi CNC not only showcased its technological prowess but also introduced new solutions in the market. The M800, a next generation CNC controller from Mitsubishi Electric features a touch-screen display and user-friendly interface. One of the key advantages of this product is its simplicity. It allows users to check the machine's operating status at a glance on the home screen itself.

Thanks to such ease of operations, the controller has grabbed the attention of visitors.

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Best-in-Class



The company also seemed to be happy with the visitors' response as the enthusiasm could be seen among visitors as they walked through the booth. Apart from the new entrant, the company's other products and solutions have also received an overwhelming response from the visitors.

NEW LAUNCH



Inauguration of M800 Series at IMTEX 2015.

The New Mitsubishi M800 Series

- ▶ A groundbreaking leap ahead for everything from CNCs to drive motors
- ▶ Peerless basic performance for excellent productivity
- ▶ Intuitive and revolutionary design makes for first-class usability
- ▶ Easy customization and support for automation provides high flexibility
- ▶ 19-inch vertical display with a high degree of customizability
- ▶ Check a machine operating status at a glance on the home screen
- ▶ Software keyboard, control panel, user manual reference, and notepad for handwriting features come standard
- ▶ Smartphone-like usability eliminates the need to use a manual
- ▶ Customize applications by adding, deleting, or rearranging them

The showcase

The company showcased solutions mentioned below at IMTEX 2015:

1. Compact Turning Center With E70

- ▶ Simple and easy CNC with higher cost effectiveness
- ▶ 1 nm control for high accuracy interpolation
- ▶ High speed USB, Ethernet, CF card interface
- ▶ Spindle as C-Axis possible for milling operations
- ▶ Screen customization to improve operability
- ▶ Ultra-compact drive units to reduce control panel
- ▶ Spindle motor SJ-DJ series provides faster Acc/Dcc
- ▶ High speed HF series servo motors for faster Acc/Dcc

2. High Performance Turning Centre With M70

- ▶ High accuracy machining with nano control
- ▶ Support 2- part system with a maximum of 11 axes
- ▶ NAVI-LATHE for easy programming of turning and turn mill
- ▶ Polar Coordinate Interpolation, Milling Interpolation, etc
- ▶ Balance cut, 2 part system synchronous thread cutting, etc.
- ▶ Higher performance multi hybrid MDS-DM2 series drives
- ▶ Low inertia spindle motor SJ-DJ series for faster Acc/Dcc
- ▶ High speed HF series servo motors for faster Acc/Dcc

- ▶ High speed tool spindle motor HF-SP Series

3. High speed tapping center with M70

- ▶ Standard CNC with high performance and high accuracy
- ▶ OMR-DD control for high speed and accuracy tapping.
- ▶ Faster Fixed Cycle to reduce time for better productivity
- ▶ NAVI-MILL for easy programming for part production
- ▶ Tap retract and axis pull up functions during power failure
- ▶ Higher performance multi hybrid MDS-DM2 series drives
- ▶ High speed HF series Servo Motors for shorter Acc/Dcc time
- ▶ Ultra low inertia spindle motor provides faster Acc/Dcc time
- ▶ TM-RB series DD motor provides faster indexing and greater accuracy

4. High precision machining center with M730

- ▶ High end CNC with greater Performance for mold machining.
- ▶ Absolute Nano Control for higher accuracy and stable machining.
- ▶ 168,000 blocks/min processing speed to reduce processing time.
- ▶ Super Smooth Surface control for quality machining (SSS function).
- ▶ R-NAVI for easy 5-face machining functions and operations.
- ▶ High performance higher power output SJ-DG series spindle motor.
- ▶ SJ-BG series built in spindle motor to improve spindle accuracy.
- ▶ High efficiency MDS-D2 drive unit provides high accurate machining.
- ▶ Power back up system can prevent damages of work piece and tools.
- ▶ HF series servo motor with high resolution encoders for better accuracy.

5. IQ platform CNC C70

- ▶ Compatible with the Mitsubishi FA integrated solution 'IQ Platform'
- ▶ High performance CNC integrated with high speed PLC offers
- ▶ A wide variety of FA products helps construct flexible lines

Additionally, various leading machines makers such as BFW, Ace Manufacturing Systems, Jyoti CNC Automation, DMG Mori Seiki, Mazak, etc., displayed their machines with Mitsubishi's controllers.



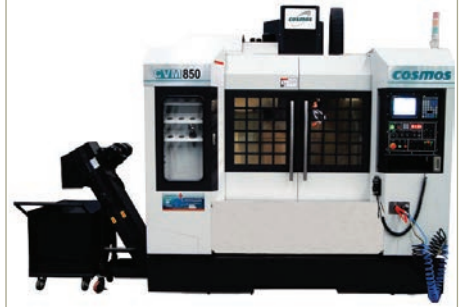
The display of CNC solutions at Mitsubishi's booth.



BFW Dhruva+ 3050 HE
with M70 controller.



BMV 45+ with Newly Launched
M800 controller.



Cosmos CVM850
with M70 controller.



Macpower - VTX600 with E70 controller.



GEDEE WEILER Quattro Turn
with M70 controller.



Mazak's HCN 5000
with Mazatrol Matrix 2.



DMG Mori Seiki's NLX2500.



EIFCO - Gear Hobbing2
with M70 controller.

Here is snapshot of few machines that integrate Mitsubishi's controllers. Also, here is a list of few more machine manufacturers, which offer their machines with the company's controllers: Ace Manufacturing Solutions, Ace Micromatic, Lokesh Machines Ltd, Pride, Galaxy, Abhijat Equipment Pvt Ltd, S&T Engineers Pvt Ltd, Khushbu Engineers, Yatrang Precise, Sri Yantra Engg (Hanwa), Electronica Hitech (Hartford), Kalyani Automation (Akira Seiki), Hindustan Export and Import, TRIDENT (TECKNOMECH) and Schaublin.

Mitsubishi Electric appreciates all its partners for their support and also thanks visitors for dropping by at the booth at IMTEX 2015 and seeing the latest offerings.

MMI

- Advanced Technologies for the Next Generation.
- Solid Support for Day-to-Day Comfort.
- Optimum Solution for the Future.



This is the MITSUBISHI CNC business philosophy. All the staff who are committed to MITSUBISHI CNC business wish to be "the best partner for customers aiming at global and future-oriented development". We will continue our efforts with the aim that our CNCs be of great help to the customers.

MITSUBISHI ELECTRIC CNC Solution

Your best partner for success in India

Our single goal is to minimize the downtime while maximizing the productivity of every Mitsubishi Electric product. The more time you spend using our products, the better your business runs.

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India: Land of Opportunities and Caliber

The manufacturing sector of India has recently seen a positive turn. Adding to this, the recently announced budget further offers promising leverage for companies to manufacture in India. We speak to industry stalwarts on what can be expected from the 'Make in India' campaign and how global and domestic companies can leverage in this space.

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Land of Opportunities

Prime Minister Modi's call to 'Make in India' has revived the spirits of the manufacturing sector in India. It lays a strong emphasis on making the country a platform to conduct business. This will be done through various initiatives already being introduced such as single-clearance windows, minimal procedures and cutting out of any red-tapisms. But what does this mean for the domestic players? Managing Director, UCAM Pvt Ltd, Indradev Babu averred, "I think the concept 'Make in India' needs to be understood. From what I heard from our Prime Minister as

Source: Department Of Industrial Policy & Promotion



Nedra Pereira
Deputy Editor
Vogel Business Media India
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The 'Make in India' campaign brings to the forefront opportunities for global and domestic players.

well as Financial Minister during the Aero India show, had some clear takes. One idea was to invite international companies to invest and make in India rather than straight import. The government proposes to enable this by bringing in changes so that doing business in India is easier and conducive. This will augur well for Indian manufacturing. Outputs would go up and in turn offer many opportunities for domestic players.”

Stepping ahead

India is already slated to become the next manufacturing hub and these initiatives to do business easier in India will ensure its execution as opposed to slogans sung at meetings and conferences. Indian products are already being seen world over for their consistent high-quality as well as economic innovation. However, there still is room for improvement. Director, Bestek Engineering Pvt Ltd, Rajkumar Sharma mentioned, “India has been widely recognized as a pool of skilled and talented manpower but lacking in system approach and long term vision. The last decade has shown lot of change in the Indian manufacturer’s approach, due to sizeable foreign investments in the manufacturing industry. The increased global competition has forced Indian industry to practice better systems and processes and improved their vision in terms of product performance.”

Agreeing with this sentiment and speaking on standardization for increasing global footprint, Business Head – WIDMA, Kennametal India Ltd, J Prabhakar, the Indian subsidiary of Kennametal Inc, stated, “Products should meet global standards in design, quality, performance and reliability, should be benchmarked with



“Technology development always happens keeping the future in mind and how it will benefit the company’s business and of course strategy will dictate how to deploy the technologies for maximum business benefit.”

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

global standards such as DIN or JIS. Certification of the products with CE/UL marking will further enhance the acceptance in the international market and adherence of manufacturing and business process to ISO standards strengthens the confidence of the global customers.”

Paradigm shift

Usually, ‘Made in India’ has been given to represent quality mass produced components. However, this notion is fast changing in the manufacturing sector. Managing Director, Macpower CNC Machines Pvt Ltd, Rupesh Mehta voiced, “It is a clearly visible trend in India, but we should not be surprised that it is changing as customers are demanding higher performance machines to cut down their cycle times and increase their productivity to lead against import components or machines. In order to continue delivering



“A process driven setup for manufacturing and assembly is a must for consistency in quality. This will ensure the quality and reliability to enter the global market and also to build zero defect product.”

**Business Head – WIDMA, Kennametal India Ltd,
J Prabhakar**

innovation driven products, one should also keep in mind to deliver value at each stage of innovation cycle.”

Over the last decade or so, more and more manufacturers especially SMEs are changing the way they manufacture inculcating lean manufacturing and quality checks throughout their processes. Director, Modsonic Instruments Mfg Co (P) Ltd, Deepak Parikh, advised that this mindset change was bound to happen as: “Mindset always changes under market compulsion. Innovation and future-readiness are keywords, which drive the business world over and India cannot be excluded from it. The mindset of Indian manufacturer is definitely changing.”

Innovative thinking

Another change that has been seen taking on an increasing trend is the attitude towards economic innovation and research



Machines from Bestek Engineering Pvt Ltd, Macpower CNC Machines Pvt Ltd, Modsonic Instruments Mfg Co (P) Ltd, that won the prestigious FIE Foundation awards.



"Government of India along with the Indian industry must actively participate in exhibitions worldwide, such as Hannover Messe 2015, to showcase our infrastructure and investment opportunities to the global business community."

Director, Bestek Engineering Pvt Ltd,
Rajkumar Sharma



"Low cost manpower is our strength and it must be leveraged. But we have to be very vigilant that low cost does not become synonymous with compromised quality."

Director, Modsonic Instruments Mfg Co (P) Ltd,
Deepak Parikh



"The need of the hour is to concentrate more on R&D and skill development so that our young workforce can be deployed for increased productivity surfacing innovative products to the world."

Managing Director, Macpower CNC Machines
Pvt Ltd, Rupesh Mehta

and development (R&D). Speaking on ways companies make their own path Prabhakar revealed, "Continual bench marking with the world-class products from the global players and finding our own answers through innovative means for upgrading the technology would lead to minimizing the cost of the products while meeting the global standards in terms of the quality and performance. Innovations for lower costs with simpler designs, coupled with quality and reliability of the products provide competitive edge in the market. High-level automation reduces the production cost by reducing the set up time and eliminates the human errors."

Supporting this view Sharma added, "The new generation of machine tool manufacturers needs to fill the technology gap between Indian manufacturers and foreign manufacturers through focusing on R&D and innovation. Furthermore, self

belief and the capability of taking risks, benchmarking with the best in the world and providing value to the customer are necessary to become successful."

Mehta too added his point of view by articulating, "Skill and scale should be the focal point of India in order to bring down production cost without compromising on quality aspects. When the above mentioned thing will be compounded, it will definitely highlight and fulfill the 'Make in India' concept."

Skill development

In addition to this, India has a very young population, and this works to the country's advantage. Various industry associations and companies are working along with academic institutions to produce not only knowledge based training but also skill based training, which is the need of the hour.

Speaking on the possible action all parties

involved need to take Babu suggested, "This is a very key matter there is big gap in understanding and finding the way forward. The industry needs skilled manpower and Institutes need placement for their candidates. It just needs proper alignment. We need more institutes teaching appropriate skills, and for this we need enough experienced faculty. Also, I think medium and larger organizations should build internal training departments that run courses offering recognized certificates or diplomas benefitting the candidates to seek employment anywhere."

Parikh also weighed in on this: "Skill development is indeed need of the hour. Focus should be on vocational training. There should be a strong association between educational institutes and industry. Today, India has shortage of full range of skilled manpower across all levels. We have lots of infrastructure in place but optimum utilization is not happening. District level efforts must begin to make this happen."

Exemplifying innovation

Even though there are aspects that need to be worked on further, India is the land of continuous learning and opportunity. In fact, various examples of economic innovation and design proving the country's mettle are witnessed every year at IMTEX. It is here where the FIE Foundation awards companies for latest and best technical innovations in machine tools. Moreover, many global companies set up its subsidiaries in India to take advantage of its unique location and people skills. Given the current policies turning into action, it's only a matter of time before everyone will echo 'Make in India'.

MMI

Source: UCAM / Kennametal



Machines from UCAM Pvt Ltd, Kennametal India Ltd, that won the prestigious FIE Foundation awards.

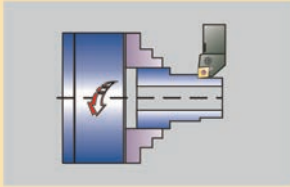
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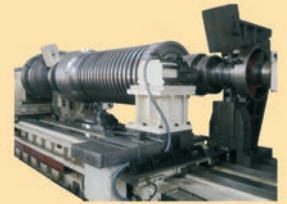
CNC Turning



SC-8K
GANTRY LOADER

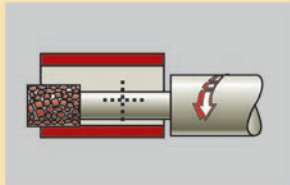


SC-14
PIPE TURNING



SC-25
CNC HEAVY DUTY LATHES

CNC Internal Grinding



BRIG-450 CNC
BIG BORE GRINDER

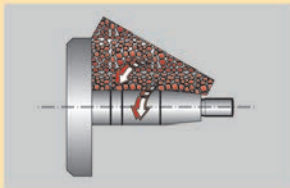


FIGT-300 CNC
FOUR STATION TURRET



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

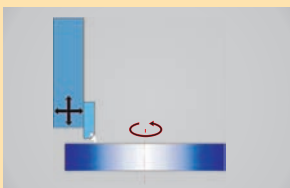


TD36



A42/60

Vertical Turning Lathe



VC - 50C
1.25 M



VC - 60C
1.5 M



VIG - 500 CNC
Vertical Internal Grinding

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India: Partner Country at Hannover Messe

In an exclusive conversation, Ambassador of India to Germany, Ministry of External Affairs, Government of India, Vijay Gokhale elaborates during the Hannover Messe Preview at Berlin on how India expects to position itself as a destination for manufacturing for both Indian and global markets. Read the excerpts of the interview to know about the Government of India's plans to put the country's manufacturing sector on the global map.

After a period of nine years, India has become the partner country for Hannover Messe 2015. What does this mean for India in terms of increasing the awareness of India's manufacturing caliber internationally and how will the partnership benefit both countries?

Vijay Gokhale: India looks forward to being the partner country at Hannover Messe in 2015. It expects to position itself as a destination for manufacturing for both Indian and global markets. It also intends to showcase its capacities in engineering and innovation as part of the global supply chain for both low-cost

manufacturing and high-end technologies. It expects that its participation as Partner Country in Hannover will foster long-term business partnerships between Indian and German companies. The Government intends to showcase its "Make in India" campaign.

Indian industry has already captured part of the supply chain in many areas especially in the automotive industry. As the partner country of Hannover Messe 2015, India will be inviting firms to cooperate in energy and energy-efficiency sectors. Germany is acknowledged as the manufacturing powerhouse of the

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Partner Country



developed world, and German companies are invited to make India their manufacturing base outside Europe.

The government's focus is showing the world the ease of doing business in India. How is this aspect going to be highlighted at Hannover Messe?

Gokhale: India's core message will be to present the key policies for the transformation of the manufacturing sector in India. India wants potential investors to know that its government is intent on improving the business environment through the simplification of procedures such as opening new sectors like railways and defence production for FDI; building best-in-class manufacturing infrastructure through the Delhi-Mumbai Industrial Corridor and other similar corridors and smart cities. Some of the efforts to ease business doing in the country have been to include the process of applying for industrial license and industrial entrepreneur memorandum online on a 24x7 basis through the e-Biz portal, and the validity of industrial license has been extended to three years, the list of the major components of different products excluded from industrial licensing, dual-use items having military as well as civilian applications de-regulated, services of all central government departments and ministries will be integrated in the e-Biz—a single window IT platform.

The "Make in India" is to provide an environment in which business can flourish and contribute to the world economy. Detailed information about the identified

Source: Vogel Business Media India



"India's core message will be to present the key policies for the transformation of the manufacturing sector in India. India wants potential investors to know that its government is intent on improving the business environment through the simplification of procedures."

Ambassador of India to Germany, Ministry of External Affairs, Government of India, Vijay Gokhale

25 sectors has been hosted on an interactive web-portal (<http://www.makeinindia.com>). The e-brochures related to these sectors can be downloaded from the Department of Industrial Policy and Promotion's website (<http://dipp.nic.in>). Investors can find relevant information on the 'Make in India' portal and can raise their doubts through the Query Module. Their queries are attended by a dedicated team of facilitators. An Investor Facilitation Cell has been created with the objective of providing all the necessary assistance and handholding on arrival in India. This cell will also assist investors in obtaining all necessary clearance from the government agencies.

The theme that everyone is talking about is 'Industry 4.0'. How do you see India showing the world that it is ready for the fourth industrial revolution?

Gokhale: India's world leading ICT sector will use the opportunity of Hannover Messe to team-up with German manufacturers in Industry 4.0. India understands well that its manufacturing sector needs to keep pace with the rapid changes in global manufacturing processes. By staying ahead of the curve in innovation and frontier technologies, it intends to ensure that manufacturing in India will remain competitive in the future. The integration of IT into manufacturing is an essential element of this strategy, and India's ICT companies will utilize their presence at Hannover Messe to position themselves as solution providers for global manufacturers including German companies. Germany has world-class manufacturing and India has a world-class IT industry. So they are a perfect match for Industry 4.0. This will be apparent at the Business Summit and in the significantly expanded Digital Factory area.

India has proved its manufacturing excellence in sectors such as defence, aviation and automotive. How will the government help increase investment in these sectors in the coming years?

Gokhale: The government has set a target to increase manufacturing sector growth to 12–14 per cent per annum over the medium term. Towards this endeavour, its 'Make in India' programme is designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. The primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector. The focus of the programme is on 25 sectors. These include: automobiles, aviation, chemicals, IT & BPM, pharmaceuticals, construction, defence manufacturing, electrical machinery,

PERSONAL



"The government has set a target to increase manufacturing sector growth to 12–14 per cent per annum over the medium term. Towards this endeavour, its 'Make in India' program is designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country"

Vijay Gokhale

food processing, textiles and garments, ports, leather, media and entertainment, wellness, mining, tourism and hospitality, railways, automobile components, renewable energy, biotechnology, space, thermal power, roads and highways and electronics systems.

By 2026, India will be a country with the youngest working population. What are the initiatives the government is undertaking with educational bodies and the industry to ensure that the required number of jobs are generated?

Gokhale: The Government of India's, 'Make in India' programme to make India a manufacturing hub presents a huge opportunity for job creation. The measures proposed in the Union Budget 2015–16 can help in creating millions of employment opportunities in the coming years, especially in sectors such as infrastructure and manufacturing besides the traditional IT sector. The creation of the Ministry of Skill Development and Entrepreneurship by Hon'ble Prime Minister Narendra Modi would help to create more jobs for the skilled and trained people and satiate the demand of the demographic dividend of the country. The Government will soon be launching a National Skills Mission that will consolidate skill initiatives spread across several ministries and standardise procedures and outcomes across 31 sector skill councils.

With the progressive and positive budget, if the plans to invest in infra and mega power projects materialise, alongside the standard of procedures (SOPs) offered to SME businesses, the boom in jobs would be unprecedented. The

setting up of AIIMS, IIT's and IT hubs across several states will help address the huge demand for IT jobs in India. Increased investment in sectors such as manufacturing in auto and defence equipment will open job avenues and steer economic growth and overall development. The budget allocation for start-ups would be used to promote them in tier 2 cities and beyond.

Are there any measures being implemented to overcome India's current bottlenecks such as power, water and transport?

Gokhale: The government is committed to creating world-class infrastructure in India. The Cabinet has approved Government's proposal to relax rules for foreign direct investment (FDI) in the construction sector by reducing minimum built-up area as well as capital requirement and liberalising the exit norms. The Government has allowed 100 per cent FDI under the automatic route for port development projects. Now that Railways has been open for 100 per cent FDI, the Government would come up with a comprehensive plan for facilitating FDI in the sector. The Prime Minister has reiterated his emphasis on renewable energy, including solar energy. He has referred to his vision of solid waste management and waste water management in 500 towns through the PPP model, of which bio-energy would be a vital element of this vision.

Infrastructure sector has received special attention in the recent budget 2015–16. To revive stalled projects and encourage new investment, the Government in its budget has proposed to bear greater risk in public-private partnership (PPP) projects. It has already introduced a risk-reallocation model in the roads sector. It also intends to introduce a law to reform the regulatory structure for the infrastructure sector. To boost infrastructure funding, the budget announced a new national investment and infrastructure fund and long-term tax-free infrastructure bonds. It will also continue to levy taxes on petrol and diesel to fund investments in roads and railways. It also proposes to set up five new ultra mega power projects, each of 4000 MWs in the plug-and-play mode. This should unlock investments to the extent of one lakh crore. It has increased targets for renewable energy sources to 170 GW by 2022. Out of which 100 GW will be from solar, 60 GW from wind and 10 GW from bio-fuels. It would also consider similar plug-and-play projects in other infrastructure projects such as roads, ports, rail lines, airports etc.

MMI

The interview was conducted by:
Soumi Mitra, Editor-in-Chief,
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E-mail: soumi.mitra@vogel.de

Standing on the Shoulders of Giants

Ace Manufacturing Systems Ltd (AMS) has a rich history. The company, which is one of India's largest CNC machine tool builders, was started in 1994. It has grown in leaps and bound since. Here's looking at the company's journey and what's in store ahead.

Ace Manufacturing Systems Ltd (AMS) is a part of the Ace Micromatic Group, which is the largest machine tool group in the country. It also has a presence in many parts of the world, AMS is based in Bengaluru. The group specializes in manufacturing CNC turning centers, CNC grinding machines, CNC machining centers, and automation equipment along with manufacturing components for diverse sectors such as automotive, aerospace, medical, die & mould, railways, etc.

The company has been enhancing its product range to suit diversified global requirements. Speaking on the steps the business is taking to increase its market share, Managing Director, Ace Manufacturing Systems Ltd, P Ramadas averred, "Products are made cost effective, re-designed and manufactured for various application requirements. New technologies and

innovations have been our core strengths and that will continue to reinforce our product base. Marketing initiatives to strengthen brand AMS globally is a key focus at present." The company has been growing at a steady rate YOY and to meet the growing demands of its customers, it is in the process of expanding its manufacturing facilities this year. Currently AMS has a capacity to produce about 1,200 machines a year. With the new manufacturing will be built in 2015-16 has an investment of ₹60 crore and will be around 175,000 square feet in size, AMS will be able to produce over 2,500 machines a year. "We are on a mission to increase our production to 10,000 machines per year by 2023-25," added Ramadas.

Steps for progress

Expanding the facility is not enough; AMS is currently working on implementing robust and lean processes to enhance component manufacturing and machine assembly. Furthermore to the initiatives, AMS plans to widen the reach and penetrate into high demanding markets internationally.

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Standing on the...



Investment on research and development of products and subsystems is one of the key initiatives. Emphasis is also given towards the process centric approach with automated processes and leveraging of advanced information technology. Enhanced product offerings to customers, improving the reliability of the machines, diversification of products and segments are some of the key initiatives in the pipeline.

There is also a strong emphasis on employee engagement initiatives such as 5S, Kaizens, and small group activities.

Ramadas enthusiastically opined, "With the 'Make in India' theme catching up, Indian brands are sure to get recognized worldwide and we are confident of our export growth in the years to come. Cost effective products are catered to diversified global market and sectors. We have our sales and service partners worldwide and are further expanding our network globally to meet our vision of being one of the largest producers of CNC machining centers in the world."

Research & Development

Another aspect the company holds dear is its focus on strong design and engineering. "The adage 'Innovate to grow' is passé; today organizations need to innovate to sustain existence. It is necessary to upgrade and innovate to be able to penetrate into new market segments. Efforts in research and development (R&D) to provide solutions that meet the customers' key concerns will provide sustained growth," asserted Ramadas.



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Aerial view of the AMS facility in Bengaluru.

Additionally, the company takes feedback from its customers very seriously and it is considered throughout a product development cycle. Products are developed with considerations to ease manufacturing, assembly, maintenance, service and importantly the ease of use.

New designs are thoroughly tested in, simulations and also physically validated in the assembled condition prior to commercializing the product. Advanced tuning methods are adopted to optimize the parameters of machines to achieve superior performance. "It is a constant endeavor of the R&D and engineering team to improve the products quality, performance and user interface. The R&D team also undertakes cutting and proving out of challenging components for novel applications," he mentioned. The department has also been recognized by the Government of India for its R&D efforts.

Philosophy on growth

The company's success lies in its customer's growth. Every time a customer walks into AMS with his machining needs, he leaves the company happy and satisfied. "We believe that the customers' growth is AMS' growth and AMS' growth is our supplier's growth," voiced Ramadas. This philosophy is nurtured in the minds of every employee enabling an inclusive growth. A session involving all employees including the Managing Director and CEO is held every morning. This provides an open and transparent platform to discuss targets, performance and other important aspects of the company. This attitude of being transparent and ethical is what motivates the workforce in achieving excellence. Alignment between the daily activities of the individuals and department to the vision of the organization is also one of the driving forces for success. Each employee knows his/her responsibility and works towards the aim of achieving excellence by being a dynamic organization.

Quality first

With strict adherence to quality systems, AMS follows a detailed set of component inspection processes. Every machine passes through a series of stringent quality test and calibration procedures for accuracy and safety before they are cleared for dispatch. It is a way of life at AMS. Incoming parts are checked and in process inspections are carried out at every stage of machine building process.

"Rigorous quality procedures such as laser calibration, ball bar test, heavy cut and NAS

component tests are carried out on every machine to ensure machining accuracies are achieved as per the standard set. With a quality management system that matches international standards (ISO-9001-2008), quality practices have been certified by TUV-Nord," revealed Ramadas.

Import substitution

AMS has always believed in providing products and solutions with a minimum total cost of ownership. There is a constant effort to make technologically advanced products affordable to the Indian manufacturing industries through making machines that are import substitutions. "With continuous evolution and R&D efforts, the gap between Indian machine tools and imported ones have narrowed significantly. Another advantage that customers benefit from buying machines domestically is the flexibility in the product design and configuration. With the wide variety of machines and options offered, there is always a suitable solution for the requirement," he expressed. "Import substitution is also a matter of pride to us as in our own way, we are contributing towards strengthening of the rupee and hence the growth of the country."

Going global

Being one of the most reliable sources to automotive industries, AMS has been selling nearly 70 per cent of its products to the auto sector. AMS is currently also focusing on diversifying its customer base with new emerging market sectors. Enhancing existing products, development of new products, and their promotions across



A snapshot of the shopfloor at the facility.



"Import substitution is also a matter of pride to us as in our own way we are contributing towards strengthening of the rupee and hence the growth of the country."

Managing Director, Ace Manufacturing Systems Ltd, P Ramadas

all markets is being considered.

"Global market penetration is very different as compared to the increasing market share domestically. An understanding of each country's requirement and end user market is vital. The opportunity in the global market is much higher but the competition is also stiffer. However, with strategic partners in key locations internationally, we are confident that the export sales of AMS products will increase rapidly. Annually, the company is also participating in over 10 international exhibitions overseas which have shown promising results in the recent past," said Ramadas when expanding on his plans to penetrate into the global scene.

Going green

AMS takes pride in being an environment friendly organization. By using natural lights, ventilation and practicing rain water harvesting, the company consumes very little electricity, thus contributing to lower carbon footprint. The factory is surrounded with over 200 varieties of plants bearing fruits and flowers throughout the year. Stressing on the importance of an environment that helps distress everyone, Ramadas disclosed, "This has been providing a healthier and better working environment for our employees. Employees enjoy a walk around the garden post lunch or in the evenings, thus, providing them with a stress free workplace."

In a nutshell

The AMS facility is not just a building where people get things done but more of a family that sees that everyone who enters it is taken care. A well oiled-machine of sorts working towards the betterment of all involved.

MMI



Member, Managing Board, Deutsche Messe, Dr Jochen Köckler addressing the international press during the preview meet at Berlin.

The Next Revolution

Deutsche Messe AG played host to 60 journalists from 20 countries in Berlin on February 3, 2015, giving a sneak-peak into the world's 10 leading trade fairs taking place simultaneously at HANNOVER MESSE 2015. The event will be held from April 13–17, 2015, with India as its Partner Country. Well-recognized, it is here that a galore of opportunities are present that translate into new sale leads, provide access to the latest products and technologies and attract exhibitors & visitors from across the globe. An insight...

Themed around the core premise 'Integrated Industry – Join the Network!', HANNOVER MESSE 2015 is the right platform to answer the question—"Is my organization ready for the 4th industrial revolution? This industrial revolution—Industrie 4.0—is slated to bring major changes in energy systems and industrial production models. It is believed that there will be a shift from mass production. This is due to the customers' increasing demand for customized products at low prices. Similarly, energy grids will need to become smarter so that they can optimally balance and deploy available power, gas and heat capacity from a wide range of

sources. Hence, the integrated industry—the intelligent digital networking and integration of industrial systems and processes—is the solution to combat these challenges. It is about enabling machines and work pieces to communicate with one another which will consequently allow the entire production lines to autonomously and dynamically re-configure themselves; thereby, rendering small-batch and one-off production in large-scale plants making it commercially viable.

Emphasizing on the advantages of Industrie 4.0, Member, Managing Board, Deutsche Messe, Dr Jochen Köckler, pointed out, "It will radically change production processes in the coming years. According to a recently published report by PWC, Industrie 4.0 will contribute to an 18 per cent increase in efficiency and cost savings of 14 per cent over a period of five years." The challenge as Dr Köckler put forth is achieving universal standards for machine-to-machine communication, maintaining data security and finding new business models that can be mastered only through collective endeavor

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The Next Revolution



in networks. The enormous potential that all sectors of the industry can unleash through this sort of integration will be showcased at HANNOVER MESSE 2015 with its lead theme of 'Integrated Industry – Join the Network!'

The phenomenal show

Playing a pivotal role in the 4th industrial revolution, HANNOVER MESSE 2015 will house 10 industrial fairs together from Industrial Automation, Motion, Drive & Automation (MDA), Energy, Wind, MobiliTec, Digital Factory, ComVac, Industrial Supply, Surface Technology and Research & Technology. The trade show will place a strong emphasis on



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industrial automation and IT, power transmission and control, energy and environmental technologies, industrial subcontracting, production engineering and services and research & development.

Focusing on the themes of the fair Dr Köckler piped, "As organizers of the show, we are happy that HANNOVER MESSE is the platform for the cooperation between the government and industry to strengthen the deployment of smart factory, smart grids, human robot collaboration, additive manufacturing, and Industrie 4.0." He further added that in April, Hannover will be the epicenter of the industry with 'Make in India' roaring loudly with India as its Partner Country.

The lion roars

Highlighting the importance of India as a Partner Country in HANNOVER MESSE 2015, Ambassador of India to Germany, Ministry of External Affairs, Government of India, Vijay Gokhale emphasized, "After nine years, India is back as the Partner Country in



"India has been consistently moving from low-end manufacturing to high-end manufacturing. There is a significant potential for enhancing trade and investments in the high-technology sector between India and Germany especially for import of high-tech equipment."

Ambassador of India to Germany,
Ministry of External Affairs, Government of
India, Vijay Gokhale



"Industrie 4.0 has begun. Yet most companies don't know how to make it a reality. HANNOVER MESSE 2015, with its lead theme of 'Integrated Industry – Join the Network!' will show them how."

Member, Managing Board, Deutsche Messe,
Dr Jochen Köckler



"Ease of doing business and the 'Make in India' campaign will be pivotally showcased across the India pavilion. The focus will no doubt be on various opportunities highlighted under the initiative to attract investments."

Chairman, Engineering Export Promotion
Council India, Anupam Shah



"The partnership between India and HANNOVER MESSE in 2006 generated a total business value of \$1.3 billion. This year too, the partnership will open up colossal sales potential for the German and international exhibitors at HANNOVER MESSE."

Managing Director, Hannover Milano Fairs
India, Mehul Shah

on the move is the centerpiece of the Prime Minister Narendra Modi's vision to make India a manufacturing hub in Southern Asia; thereby, making it rank in the top 50 countries for ease of doing business. He will spend two full days at Hannover and share his vision of 'Make in India'."

Managing Director, Hannover Milano Fairs India, Mehul Shah said in this context, "In 2015, the fair will be witnessing a significant representation from India wherein more than 350 companies are expected to participate which is being coordinated by EEPC, under the aegis of Ministry of Commerce and Deutsche Messe."

Supporting this sentiment, Chairman, Engineering Export Promotion Council (EEPC) India, Anupam Shah recounted, "Ease of doing business will be the focal theme of various seminars that will be organized at the fair. Noteworthy among

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"The idea of Industrie 4.0 is not just a distant vision, and it can be realized today. In the future flexible production will find its way."

Managing Partner, SCHUNK GmbH & Co KG,
Henrik A Schunk



"Phoenix Contact will present a variety of new products at the show. For the first time, the company will showcase a range of high-level innovation that will inspire visitors from across the globe."

CEO, Phoenix Contact GmbH & Co KG,
Blomberg, Germany, Frank Stuehrenberg



"Thanks to our innovative solutions and strong presence in the Indian market, we will be able to offer significant technological support with the investments that are set to be made in the country across sectors."

Member, Executive Board, Schaeffler AG,
& President, Schaeffler Industrial,
Robert Schullan



"With our Freeformer industrial system for additive manufacturing, the two worlds of additive manufacturing and injection molding will converge. We will be able to show its significance in the individualization of plastic parts."

Managing Director Technology & Engineering,
ARBURG GmbH + Co KG, Heinz Gaub



"We place emphasis on developing complete and innovative solutions that help to make machines more reliable and more energy efficient for our customers."

Senior Vice President, SKF Group Technology
Development, Bernd Stephan



"At HANNOVER MESSE, we will show attendees of the fair how our engineers, in consultation with our customers, design and manufacture damping and vibration isolation systems that help protect their systems, buildings, structures and profits."

President, ITT Control Technologies,
Munish Nanda

them, will be the 'India-German Business Summit' hosted by the Department of Industrial Policy & Promotion (DIPP)."

Speaking on the core sectors of the German economy—insurance, railways and defense, Gokhale said, "There has been substantial relaxation in the foreign direct investment (FDI) and these are our areas of focus during the show." Talking about the iconic Delhi-Mumbai corridor project he mentioned, "Around \$90 billion of investments have been made. The PM has announced 100 per cent FDI in high-speed railways which will provide opportunities to international players."

Elaborating on other sectors of interest for the Indian Government Gokhale averred, "India is already a well-established market for auto components and is worth \$40 billion. Germany being an innovator and manufacturer of auto components, we certainly hope to increase business on this front."

Emphasizing on India being one of the largest importers of arms in the world, Gokhale asserted, "It is the vision of the PM to manufacture these in India and not solely be dependent on imports. The government has recently liberalized the FDI from 26 per cent to 49 per cent." This move will pave the way for business opportunities. Shah added, "EEPC India will also organize a CEO delegation and lead the brand ambassadors of leading Indian manufacturing companies comprising Bharat Forge and BHEL to name a few."

Reaching out globally

For increasing awareness about the Indian manufacturing industry amongst the global audience, EEPC India is organizing two seminars—'Make in India – Opportunities in Electronics and Electrical Systems' and 'Heavy Engineering & Motion Drive and Automation' in partnership with its German counterparts ZVEI and VDMA, respectively.

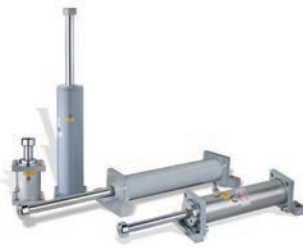
We are ready!

India's Internet of Things market (IoT) is expected to be worth \$15 billion by 2020, which means India's share will be less than 10 per cent of the global opportunity which Gartner estimates to be \$1.9 trillion by 2020. In this context, Mehul Shah explained, "Without seamless data integration, there can be no Industrie 4.0, hence the future of Industrie 4.0 is in the growth of IoT." In this backdrop the question that Dr Köckler asked at the beginning of the preview meet—Are we ready for the 4th revolution? holds significance. He highlighted, "The answer is YES as HANNOVER MESSE provides a host of opportunities and sets the right platform for networking between exhibitors and visitors for Industrie 4.0, paving a way to do business successfully by equipping the factories of the world."

MMI

Please log on to modernmanufacturing.in
for the unabridged version of this article.

Shock Absorbers



ITT engineers have developed shock impact safety protection for crane operators, so that neither cab nor trolley slams into the end of their respective tracks when cranes move across container yards. To accomplish this, ITT Enidine HD/HDN Series

shock absorbers decelerate the energy capacity loads, which can be up to 8 million in-lbs per cycle for some applications. The shocks include an air-charged bladder accumulator (which replaces mechanical return springs) that provides a shorter length and reduced weight compared to competing products.

► **ITT Control Technologies**

Hall 16 / Stall G 03

Safety Relays



The new PSR Mini relays from Phoenix Contact are one of the world's slimmest safety relays with the power of a large safety relay. With their compact 6-mm width, they ensure high safety thanks to positively driven contacts. The company's new relay technology makes this compact design possible. The

design is based on a slim but powerful basic relay characterized by minimal space requirements, low energy consumption, and high system availability.

► **Phoenix Contact GmbH & Co KG**

Hall 9 / Stall F 40

Jack-up Gearboxes



SKF has recently introduced jack-up gearboxes, which are very useful in mobile offshore drilling units and the renewable energy industry. The product solution includes the

CARB toroidal roller

bearings and SKF Explorer Spherical Roller Bearings, which have been proven in many of the most challenging applications, plus high performance seals. Unlike the traditional bearing arrangements used in jack-up gearboxes, the CARB enables an improved gear to gear contact during severe load conditions and a greater load carrying capacity.

► **SKF Group Technology Development**

Hall 22 / Stall B 12

Additive Manufacturing System

Arburg is showcasing its newly developed industrial additive manufacturing system, which is based on the processing of standard granulates. It is equipped with a movable three-axis part carrier and two stationary discharge units as standard. The second discharge unit can be used for an additional component in order to e.g. produce a part in different colors, with special tactile qualities, or as a hard-soft combination. Where necessary, the Freeformer can build up structures from a special support material.

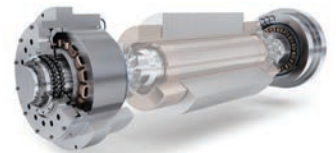


► **ARBURG GmbH + Co KG**

Hall 7 / Stall A 48

Magnetic Bearing

High dynamic load carrying capacity and increased imbalance compensation are key features of the powerful control electronics in the FAG Active Magnetic Bearing for shafts weighing more than 700 kg. This electronic comes for the first



time from Schaeffler. The magnetic bearing system is continuously monitored, improved and matched to optimum operating conditions and forces, thanks to the condition monitoring and intelligent assessment systems. This allows predictive analysis and preventative maintenance for the total operating life of the product.

► **Schaeffler AG**

Hall 22 / Stall A 12

Humanoid Robot

Schunk is presenting its modularly designed Care-O-bot 4 service robot from Fraunhofer IPA at HANNOVER MESSE. Both the arm joints and the 1-finger hand of the Care-O-bot 4 are taken from the company's standardized modules for mobile gripping systems. Mobile gripping systems from Schunk are designed exactly for such scenarios. The components can be used— in industrial applications and in measuring and testing applications, as well as in assistance systems that support people in everyday life.

► **SCHUNK GmbH & Co KG**

Hall 17 / Stall D 26



Portable 3D Coordinate Technology

Automotive manufacturing carries out high volumes of inspection daily, 3D coordinate measurement is indispensable to its operations. Read on to find out a few ways in which the technology proves beneficial in running the automotive production better in the new manufacturing environment.

The world has witnessed a total of three industrial revolutions, with all signs pointing towards the impending birth of a fourth one. Each revolution saw a significant increase in productivity and efficiency, and corresponding reductions in costs. Today, manufacturing practices are evolving to include 'cyber-physical' production systems

that can be controlled with smart products and the far-reaching internet 'cloud'. With regard to quality control for the automotive industry, the 'smart' factory revolution has brought about changes in the measurement requirements of the manufacturers'. The conventional factory and its incumbent methods are no longer ideal in this new environment. Increasingly, climate-controlled metrology labs are making way for in-line inspection systems that enable quick assessment and prompt corrective action. Single-use measurement tools and template type productivity tools are also slowly becoming obsolete.



Eddy Lek
Product Marketing Manager
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Source: FARO Technologies



An articulated arm with a laser line scanner attachment.

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Portable 3D



New roles of 3D coordinate technology in automotive manufacturing

For an industry such as automotive manufacturing that carries out high volumes of inspection daily, 3D coordinate measurement is indispensable to its operations. Here are some ways in which the technology contributes to running automotive production better in the new manufacturing environment:

► In-line inspection

Manufacturers used to rely on fixed coordinate measurement machines (CMMs) to perform inspection checks. While highly precise, one of the greatest drawbacks, however, was the device's inability to provide accurate results in thermally unstable environments such as the shop floor. In response to the automotive manufacturers' cost-control needs, metrology suppliers began to develop devices that maximize efficiency, by eliminating the time and effort that manufacturers spend on transporting components to the measurement rooms.

The portable CMM—a robust device that provides highly accurate readings even under harsh conditions of the shop floor—was thus born. In essence, inspection checks are being moved closer to the production line to a point where manufacturers demand the ability to complete tasks without even moving components off the line.

► Production Part Approval Process (PPAP)

The digital data that 3D coordinate technology provides is exceptionally useful for

manufacturers that practice Production Part Approval Process (PPAP). Regardless of where a component supplier is present along the supply chain, the PPAP industry standard requires that each item of output fulfils its design specifications consistently, as spelt out by the client. In that way, the automotive manufacturer is given full assurance of its component suppliers and their production processes. The speed and consistency in which measurements are acquired by 3D coordinate devices enable both suppliers and manufacturers to communicate their requirements and results clearly and easily.

► Machine-to-machine (M2M) collaboration

In a smart factory environment where machines 'talk' to one another, precision and automated inspection are key factors for manufacturers to achieve efficiency. Today, there are 3D measurement devices that provide those capabilities.

► Highly-flexible mass production

To cope with varied needs in the market, manufacturers seek versatile tools that handle multiple applications and flexible part volumes, in order to cater to as many options as possible at the lowest cost.

► Digital engineering

With the emergence of this engineering discipline, manufacturers have been able to improve and develop their production processes and output with better accuracy and consistency. Advancements in 3D coordinate technology, in particular point cloud solutions, have caused the trend to escalate further.

► Big data, cloud computing

The availability of cloud-based applications for 3D coordinate measurements enables data consistency and integrity, allowing resources (e.g., software information) to be shared across readily.

Different types of portable 3D coordinate-based metrology systems

Portable 3D coordinate technology exists in several forms. Fundamentally, these devices provide the benefits of CMMs with the added versatility of being portable, which allows the user to deploy wherever there is a requirement. In addition to being less cost-prohibitive than fixed CMMs, portable CMMs do not require a controlled environment, making it easier on the pockets to operate and maintain them.

► Point-to-point contact instruments

One of the most common portable CMM devices available is the articulated arm. Equipped with several articulating joints, these measurement arms are able to determine and record the location of a probe in 3D space and report the results through software. To ascertain the position of a probe,



The FARO AMP 3D imager can be used to automate measurement checks.

Source: FARO Technologies

the arms contain proprietary glass discs called encoders in each joint, and these encoders calculate the probe's position as the arm moves freely throughout its workspace.

Typically, articulated arms come in models with either six or seven axes of rotation, providing the user with flexibility while performing measurements.

Apart from the articulated arm, another device that performs contact measurement is the laser tracker. Designed to handle larger working volumes, laser trackers offer extremely accurate measurements over long ranges.

Put simply, a laser tracker establishes the precise location of a target in spherical space by measuring two angles and a distance, each time it takes a measurement. It does so by sending a laser beam to a retro-reflective target, which has to be held against the object being measured. The return beam reenters the laser tracker where the distance to the target can be determined using interferometry or phase shift analysis.

The horizontal and vertical angles to the probe are determined using precision angular encoders attached to the mechanical axis of a gimballed beam steering mechanism. Using the two angle measurements and distance determined by the laser, the laser tracker can report the coordinate location of the probe to extremely high accuracy levels. In addition, the laser tracker can follow or track the target as it moves in real time. This unique feature, coupled with the laser tracker's ability, to internally sample points at a rate of up to 16,000 times per second, enables the user to digitize data on complex surfaces and measure the location of moving objects.

► Non-contact laser line scanners

As an option, laser line probes can be mounted to articulated arms to provide non-contact scanning capabilities. This technique is an ideal way to create a dense point cloud, which can be used for tasks such as inspection

and reverse engineering. Suitable for delicate objects where touch probing should be avoided, non-contact scanning is a quick way to obtain a full surface model of a part. The device projects a laser line on the part to be inspected, which is reflected back towards the scanner and captured by a camera. Through standard triangulation methods, 3D locations are determined and recorded accordingly. By moving the laser line across the entire surface, the probe captures the 3D profile for further processing.

► 3D imager

Designed as a portable solution, the 3D imager is a high performance, accurate, non-contact system, capable of capturing surface data of up to four million discrete points in mere seconds. The device uses light projection technology and a camera to generate true representations of any part placed in its field-of-view (around 0.5 m x 0.375 m). For larger parts, reference points can be added so that separate sets of point clouds can be stitched together when required.

Automotive applications of 3D coordinate technology

Each of the 3D coordinate measurement devices introduced earlier suit different requirements, and here are some real-life examples of how some automotive players make use of FARO solutions in research and development, in-line inspection, as well as for the inspection of large components.

► Research & development

Mitsubishi Motors Corporation, the world leader in mass production of electric vehicles (EV), has one of its production bases in Okayama, Japan—a place where many other automobile-related companies choose to locate. Founded in 2011, Okayama Vehicle Engineering Center for the next EV (OVEC) is a network of 16 companies from the prefecture, formed in response to the changing



The FaroArm is used for alignment checks on the center axis of the conveyor trolley.

automobile industry. OVEC was built with the next EV in mind, and equipped with the latest production systems that the industry endorsed. Since its inception, OVEC rolled out its prototype vehicle, known as the OVEC-ONE, at the Automotive Engineering Exposition in 2013.

The development of OVEC-ONE was based on Mitsubishi's Galant Fortis model. To convert it into an EV, unwanted components such as the car engine had to be removed and replaced with other components (e.g., inverter, battery, compressor, heater, etc.). The challenge was to layout 10 new components of varied sizes and shapes thoughtfully in the available space.

To ensure that all the equipment fits in the space under the hood, the team acquired 3D data of each item with non-contact measurement, by making use of FaroArm. With the 3D CAD data, the team decided on the layout virtually, checking that the components do not interfere with each other.

When asked about the design process of the equipment layout, Coordinator, OVEC, Shiro Aikawa said, "3D measurement of the various components was necessary as they varied so widely in shape and size. Many of them were hard to measure with a caliper or tape measure. The FaroArm allowed us to efficiently complete the layout of the hood interior in a short period of time." In fact, individuals from the automotive industry have unanimously expressed their admiration for the EV's logical equipment line-up beneath the hood.

► Accurate inspection

Founded in 1991, FAW-Volkswagen Automotive Co Ltd is a Chinese joint venture company between FAW Group Corporation

and the Volkswagen Group. In its Chengdu plant in China, FAW-Volkswagen specializes in the production and assembly of the Jetta and Sagitar car models. A large component of the assembly line is the conveyor system on which all the vehicles are transported. Any failure in this system would effectively cripple all other departments within the facility, so in order to ensure that each plant operates at its optimum, the company puts in place a number of processes to minimize downtime on its shop floor.

FAW-Volkswagen utilizes an overhead conveyor to move vehicles around the plant, and regular inspection and alignment checks on the equipment are necessary to ensure optimal performance. Common areas of interest that require inspection include anchor points on the cradle support structure, corresponding anchor points on the conveyor trolley, and relative distances between the work piece and center axis. These measurements vary in nature, and range anywhere between 2–4 m in length.

Traditionally, the technicians rely on hand tools to get the job done. However, these traditional methods were not ideal. "To begin with, accuracy levels achieved are lower with hand tools," shared Engineer from the Assembly Shop Maintenance department, Zhou Tingzhi.

The company now deploys a 12-ft FaroArm on the maintenance platform, located right next to the assembly line. Whenever a glitch occurs on the production line, the team would use the device to pinpoint the precise problem area before zooming into it. Since then, FAW Volkswagen's inspection and alignment checks on its manufacturing

systems have become much more precise and simple. This, in turn, has kept the plant operating at its best. Zhou revealed, "Now, equipment alignment and inspection of check fixtures can all be done with just one tool. With the FaroArm, we can accomplish our measurement task, which has a volumetric size of 4 m and below, at an accuracy of up to 0.02 mm. We have eliminated the possibility of human error, and greatly increased the precision levels by switching to FARO."

► Inspection checks on large components

Komatsu, a mining and construction equipment manufacturer, develops and produces large dump trucks and wheel loaders at its Ibaraki plant in Japan. One of the main challenges that the Quality Assurance (QA) department at Ibaraki faced was in the inspection of large parts. As the Ibaraki plant manufactures large-sized construction machinery, even the parts that the team has to deal with are enormous. It is common for a machinery frame alone to exceed 2 m, which makes inspection both labor-intensive and time-consuming.

Importantly, the QA team faced problems with accuracy and repeatability when they relied on hand tools and a layout machine for measurement checks. On top of that, Komatsu also found the quality management of parts provided by partner companies to be a challenge. Whenever a large part is deemed defective after arriving at the plant, it would have to be returned for rework, which would delay the final delivery and also incur extra costs for transportation.

Through recommendations by colleagues from other Komatsu plants, Yoshioh Nihei from the Inspection Section (QA Department) decisively invested in the FARO Laser Tracker Vantage. Since its implementation, the team reduced measurement time for machinery frames from 1.5 days to just a day, with an added capability to measure complex features on a part.

Amongst all the benefits enjoyed by Komatsu, the one that is most appreciated by the team at Ibaraki is its portability. By identifying defects early, before a faulty part is introduced into the manufacturing process, extra costs and time that would have been incurred for rework are eliminated. The foreman of the Component Inspection Center (Inspection Section, QA Department of Komatsu's Ibaraki Plant), Manabu Kobori chimed in agreement, "When we visit partner companies and take measurements on-site using the Vantage, we are able to manage the processes from production to quality assurance in a consistent manner, thereby enhancing the quality of our products." **MMI**

Focusing on the Indian Market

India is a traditional trading partner of the Czech Republic in Asia. Very strong economic relations were developed after 1947, when India gained independence. Read more about the scenario of the bilateral trade and Czech Republic's future plans.

Over the past sixty years, around a hundred industrial projects under the assistance of Czech companies have been realized in India. The trade exchange between India and the Czech Republic has especially tremendously grown over the last twenty years. The dynamics of mutual trade along with the size of the internal market and business interests on both sides led to the inclusion of India in the group of priority countries under the Export Strategy for the years 2012–2020. Talking about it, Minister of Industry and Trade, Ministry of Industry and Trade of the Czech Republic, Jan Mládek explains, “We expect further development of business relationships in connection with last year's introduction of the new Indian Government, which declared the need to implement economic reforms and thus contributed to the stabilization and acceleration of the economic growth of the country.”

India – a bunch of opportunities

Export opportunities exist in a number of sectors, such as energy, engineering, transportation and aerospace industries, technologies for environmental protection and the defence industry. A few Czech companies have also established manufacturing plants through joint ventures or representations in the Indian market. “The Ministry of Industry and Trade (MIT) supports the development of economic relations between the Czech

Republic and India in several ways. An important step was the inclusion of India in the group of priority countries under the Export Strategy of the Czech Republic for the years 2012–2020. This list is developed and continuously updated by the Ministry of Industry and Trade,” asserts Mládek.

This step provides a targeted support for Czech exports and other export promotion activities in this Asian country. Another supportive activity is performed by the foreign office of the trade promotion agency Czech Trade in Mumbai. Establishing another office agency in Bengaluru is currently being considered. Mládek mentions, “Our ministry also supports Czech companies in international exhibitions in India, such as the Czech official participation at the international fair of mining and mining equipment IMME in December 2014 at Kolkata or the official participation at the IMTEX 2015 at Bengaluru.”

India is among the twelve priority countries, and this huge market with one billion and two hundred million people seems to be very promising for bilateral cooperation between the two countries. “The main objective of the Czech official participation is to support Czech companies in accessing the Indian market and contribute to the diversification of the country's exports and gradually reduce dependence on the EU markets,” concludes Mládek.

Czech Display of Innovation

In IMTEX 2015 following Czech companies participated and showcased their technological prowess.

KOVOSVIT MAS

The company's production portfolio is mainly oriented towards sub-suppliers for industries like automotive, energy, aviation and engineering. It offers its clients a comprehensive service, providing individualized solutions, flexibility and top-quality products.

N.KO spol. s.r.o.

At IMTEX 2015, N.KO spol. s r.o. is displayed UZ LINE unique double sided beveling machines for steel, stainless steel,



“An important step was the inclusion of India in the group of priority countries under the Export Strategy of the Czech Republic for the years 2012–2020.”

Minister of Industry and Trade, Ministry of Industry and Trade of the Czech Republic, Jan Mládek

aluminum, etc. This metal chamfering machine is versatile and acts like many machines built into one.

PILANA METAL s.r.o.

Pilana Metal offers bi-metal band saw blades for metal cutting and wood cutting, hand hacksaw blades (BiM, HSS flexible, HSS all hard, High Carbon steel), machine hacksaw blades (BiM, HSS all hard), etc.

SLOVÁCKÉ STROJÍRNY, a.s. – TOS ČELÁKOVICE

TOS Čelákovice covers highly precise CNC grinding machines, conventional lathes and CNC lathes, CNC gear cutting machines and multifunctional lathe centers.

STROJIMPORT a.s. – TOSHULIN Group

TOSHULIN Group presented lathes, milling cutters, grinders, drilling machines, machining centers, forging presses, power hammers, metal processing machines, etc., at IMTEX 2015.

WEILER Holoubkov s.r.o.

WEILER Holoubkov Ltd is a sister concern of German company WEILER WERKZEUGMACHINEN GmbH. It produces lathes, radial drilling machines, drilling machines for assembly purposes and travelling drilling machine that is equipped with CNC control.



Exhibitors from the Czech Republic at IMTEX 2015.

Source: Vogel Business Media India



The heart of the crane systems are SHW8 rope winches from STAHL CraneSystems. During production in Künzelsau they were equipped for particularly high speeds and operating with tool grabs.

Strong and Accurate Machines

First fully automated crane solution for the Indian Ford press and stamping line that helps in achieving higher productivity.

Sparkline, STAHL CraneSystems' Indian crane building partner, has developed fully automated process cranes for a new Ford plant in India. The crane builder supplied a total of seven cranes – equipped with winches, wire rope hoists and crane components from STAHL CraneSystems. The cranes operate on two

levels and in some cases can travel over one another. Wireless communication between the crane bridges and a complex anti-collision system permit the cranes to operate in various safety zones. Ford specified high speeds for lifting and travel motions to enable the press and stamping line to be retooled quickly. "At present, a high-end crane system of this type is unique in India," explains Managing Director, Sparkline, Doshi.

Automation results in higher productivity

Ford manufactures vehicle body components on the newly erected press and stamping line at Sanand, India. The tools in the presses must be changed regularly – this is usually time-consuming: the crane has to be summoned and moved into position, the

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Strong and Accurate



operator must attach the tool, lift it carefully out of the machine, move it to the storage point and then set it down. He must also take up the next tool, move the crane back to the machine and insert the heavy load into the press with millimetre accuracy.

Retooling is fully automated in the new plant at Sanand – this saves valuable minutes and thus increases productivity of the whole system. When the operator has entered the destination number of the tool, the crane



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State of the art production at Ford India. Automatic process cranes with STAHL CraneSystems components are used for retooling the press and stamping lines.

travels to the position selected at a speed of up to 60 m per min, following prescribed routes and detouring around safety areas. The cranes provide a positional accuracy of ± 6 mm. When the crane reaches the machine, a grab lifts the tool, the crane travels automatically to the storage area and sets the tool down in a free space.

Experts on the spot

Most of Ford's specifications for the crane system could only be built in customized design. STAHL CraneSystems started assisting its Indian crane building partner Sparkline with its expertise at an early stage, when the components were being selected and calculated. The systems technical flexibility even exceeded the high expectations of Ford's team.

State-of-the-art crane technology from Germany

The heart of the systems are modified winches from STAHL CraneSystems. During production in Künzelsau, South Germany, they were prepared for mounting the grabs, designed for a hoisting speed of up to 9 m per minute and equipped with a second brake to meet the high safety requirements.

STAHL CraneSystems supplied a total of six frequency-controlled SHWF8 winches with safe working loads between 50 ton and 63 ton, and four ASF7 wire rope hoists with safe working loads between 20 ton and 32 ton. The wheelblocks and travel drives were also supplied from Germany. Sparkline designed and built the cranes along with the grabs and programmed the controls.

Intelligent crane control was required to operate the complex crane system safely and cost-effectively. The cranes operate on two levels and communicate by wireless to

prevent collisions. Laser-based distance meters supply positional data. The control is a Siemens S7 PLC combined with the latest generation inverters. Designing the safety features of the system was also demanding, as the specified American Standard CMAA 70 - Class D (for heavy

duty) had to be brought into line with Indian industrial standards.

Commended on completion

Sparkline delivered the completed crane system just nine months after receiving the order, in March 2013. The cranes were erected over the following months and commissioned in March 2014. Sparkline received more post from Ford in July 2014 and were applauded for their outstanding work and successful completion of the project.

German-Indian partnership

STAHL CraneSystems has been building up the crane technology market in India together with Indian crane building partners since 1999. Sparkline, as specialist for material flow solutions in the automotive industry, is now one of the largest purchasers of STAHL CraneSystems chain hoists in the world. The crane builder has its own chain hoist warehouse to supply standard products to its Indian partners quickly. They have two state-of-the-art crane building facilities in Pune, India. **MMI**

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Agent Wanted



The shopfloor at Ambica Pharma Machines.

Of Meeting Unexpected Expectations!

Ambica Pharma Machines Pvt Ltd, builders of machines wanted to upgrade its machining practices. The company incorporated CNC machines from Haas and have seen innumerable improvements. Read on for an excerpt of its story so far.

Enthusiastic and always ready to apply the latest technical advancements is how one can best describe Chairman and Managing Director, Ambica Pharma Machines Pvt Ltd, Ashok Mistry. Situated in the industrial hub of Vatva in Ahmedabad, the company is one of India's leading manufacturers for pharmaceutical machinery. Packaging machines such as injectable powder filling machine, injectable liquid filling machines, vial/bottle capping machines and various types of labeling machines are manufactured at the company's unit.

The company commenced its operations in 1967 when Kalidas Mistry manufactured a labeling machine for a major pharmaceutical giant. This was a time when all pharma companies imported packaging machinery which was of course a very expensive affair. The journey for Ambica since then has been

very fruitful and the company has been able to carve a niche for itself in the pharma machine manufacturing industry.

"Since the day my father started operations, the company has been witnessing a phenomenal rise not only in terms of productivity, but also in terms of reaching out to various international markets. As of today, we have installed over 1,000 machines in India as well as other countries such as Pakistan, Bangladesh, Indonesia and Greece besides some countries in the Mid-East and South America. Our vision is to manufacture top class machines by completely focusing on maintaining quality," said Ashok Mistry.

The need to upgrade

Explaining the manufacturing process of these machineries, Mistry stated everything is done automatically. "Even the inspection of each and every component of the machine is done through specialized machines. Earlier, we used conventional lathe machines to carry out the process, but today that has been replaced by CNC

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Of Meeting Unexpected



machines. When I purchased the first CNC machine in the year 2004, many people thought that I was wasting my money and investing it into incorrect technology. However, being technology savvy, I was confident about my decision," Mistry said.

"Our first CNC machine purchase was an instinctive decision focused on our desire to upgrade and innovate. It was one of my cousins who introduced me to this technology and I decided to acquire this for my day-to-day manufacturing processes. Some of the workers in my unit thought that they would be rendered jobless once I introduce automation in our industrial unit. But, I am pleased to say that they were proven wrong and all the employees in my company are a



"I am very happy to say that the challenges we faced prior to shifting to CNC technology, were met once we started using Haas machines."

Chairman and Managing Director,
Ambica Pharma Machines Pvt Ltd,
Ashok Mistry

happier lot today. We are able to carry out the entire turning and milling operations on CNC machines with ease. I can say that our transition from conventional to modern machining was very smooth," Mistry quipped.

Required markers

Explaining the criteria to select a CNC machine for his application, Mistry said that he had several options to choose from. "I checked all the available brands, including Haas. After going through all the quotations, I decided to purchase a Haas VF-5 Vertical Machining Centre (VMC) as it satisfied all my technical requirements and was cost effective too as compared to other similar brands. Since I was aware about Haas machines, I didn't find the need to do any benchmarking before going in for the VMC. I have got the best machine thanks to the representatives from Haas Factory Outlet – Phillipscorp CNCSSIPL division, Ahmedabad, who through their great support has time and again proved that my decision to go with Haas has been the right one," Mistry said.

"Currently, we have four CNC machines, all of Haas. These include 2 VMCs, one turn mill centre and one turning centre. I am very happy to say that the challenges we faced prior to shifting to CNC technology, were met once we started using Haas machines. We are now able to carry out tough and complex jobs through our 4-axis machines using CAM software," said Mistry. He also praised the company for rendering excellent after-sales service.

Customer satisfaction

Speaking on the excellent service they have received from Haas, Mistry averred, "I must say that for me it is 10/10 for Haas when it comes to providing service to its clients. Working with Haas is like working with some local reputed Indian company. They work like a conscientious indigenous company and their prime concern is that machining should not stop at any cost. Once I had a minor maintenance issue and the representatives from the company solved it within few hours without affecting my productivity. They have a commitment to their customers which has to be lauded. He also added that their machine downtime is very low.

"We have to maintain certain quality parameters since we are recognized for that. No one in our industry is able to achieve the precision and quality that we have consistently achieved and have proved time and again by resorting to the latest automation. Due to this, we have also earned the ISO9000 certificate," Mistry said and hopes to grow 5-10 times in the next 10 years. "I am sure that we will achieve this landmark by expanding our manufacturing facility as well as purchasing more machines whenever required," Mistry concluded.

MMI

EVENT CALENDAR

Event Name	Contact	Date & Venue
Northwest Machine Tool Expo	T: +1 (800) 547 7377 E: info@cygnus.com www.machinetool Expos.com	April 1–2, 2015 Oregon Convention Center, Portland, US
Hannover Messe	T: +49 0511 89-0 E: info@messe.de www.hannovermesse.de	April 13–17, 2015 Hannover Exhibition Grounds, Hannover, Germany
BLECH India 2015	KV Rajeevan T: +91 124 452 4207 E: rajeevan.kv@interads.in www.blechindia.com	April 22–25, 2015 Bombay Exhibition Centre, Mumbai, India
AMTEX 2015	T: +91-80 43307474 E: info@reedtriuneexhibitions.com www.amtex2015.com	May 29–June 1, 2015 Bombay Exhibition Centre, Mumbai, India
INTEC 2015	T: +91 (422) 222 2396 E: intec@codissia.com www.intec.codissia.com	June 5–9, 2015 Codissia Trade Fair Complex, Coimbatore, India
IMTOS 2015	Kamlesh Gohil T: +91(0) 9328899503 www.kdclglobal.com	July 4–7, 2015 Pragati Maidan, New Delhi, India
Automotive Engineering Show (AES)	Sameer Khedkar T: +91 (22) 6144 5900 E: sameer.khedkar@india.messefrankfurt.com www.aes-show.com	July 7–9, 2015 Chennai Trade Centre, Chennai, India
Machine Tool Expo 2015 – Delhi	Mahesh T: +9886680466 E: mahesh@imtma.in www.mtx.co.in	August 20–23, 2015 Pragati Maidan, New Delhi, India
Cambodia International Machinery Industrial Fair	Phnom Penh T: +855-23553219 E: service@chanchao.com.tw www.camboexpo.com	August 21–24, 2015 Diamond Island Convention and Exhibition Centre, Cambodia
Machine Tool Expo 2015 – Ahmedabad	Mahesh T: +9886680466 E: mahesh@imtma.in www.mtx.co.in	September 24–27, 2015 Mahatma Mandir, Gandhinagar, India
EMO Milano 2015	T: +39 0226 255 860/.861 E: info@emo-milan.com www.emo-milano.com	October 5–10, 2015 Milan, Italy
sps ipc drives	T: +49 711 61946-0 www.mesago.de/en/SPS	November 24–26, 2015 Nuremberg, Germany

To suggest an event, please send details to swati.deshpande@vogel.de



Buzzing with visitors: Aerial view of the stalls at IMTEX 2015.

Reflection of the Market

IMTEX 2015 and Tooltech 2015 has been a grand success owing to the enormous response from exhibitors as well as visitors. Participants could learn about the current market condition and customers' requirements while visitors were exposed to the latest development and innovations. In all, it created a win-win situation for everyone who took part in it.

The recently concluded IMTEX 2015 and Tooltech 2015, cumulatively, was South East Asia's largest exhibition for the machine tool industry in the true sense. The event held over a period of seven days, accommodated 1,022 exhibitors from 24 countries while around 89,000 industry professionals visited the same.

Inauguration

IMTEX 2015 and Tooltech 2015 were inaugurated on January 22, 2015, by Minister



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of State for Heavy Industries & Public Enterprises, Government of Karnataka, GM Siddeshwara; Minister for Higher Education and Tourism in Karnataka, RV Deshpande; IAS, Additional Chief Secretary, Commerce & Industries Department, Karnataka, K Ratnaprabha; Deputy Managing Director, EXIM Bank of India, Debasish Mallick; Former Chief Mentor, Confederation of Indian Industry & Founding Trustee, Ananta Aspen Centre, Tarun Das and Former Member Secretary of National Manufacturing Competitiveness Council, Ajay Shankar. Also present at the occasion was Chairman Exhibitions, IMTMA, Jamshyd N Godrej; President, IMTMA & Managing Director, TaeguTec

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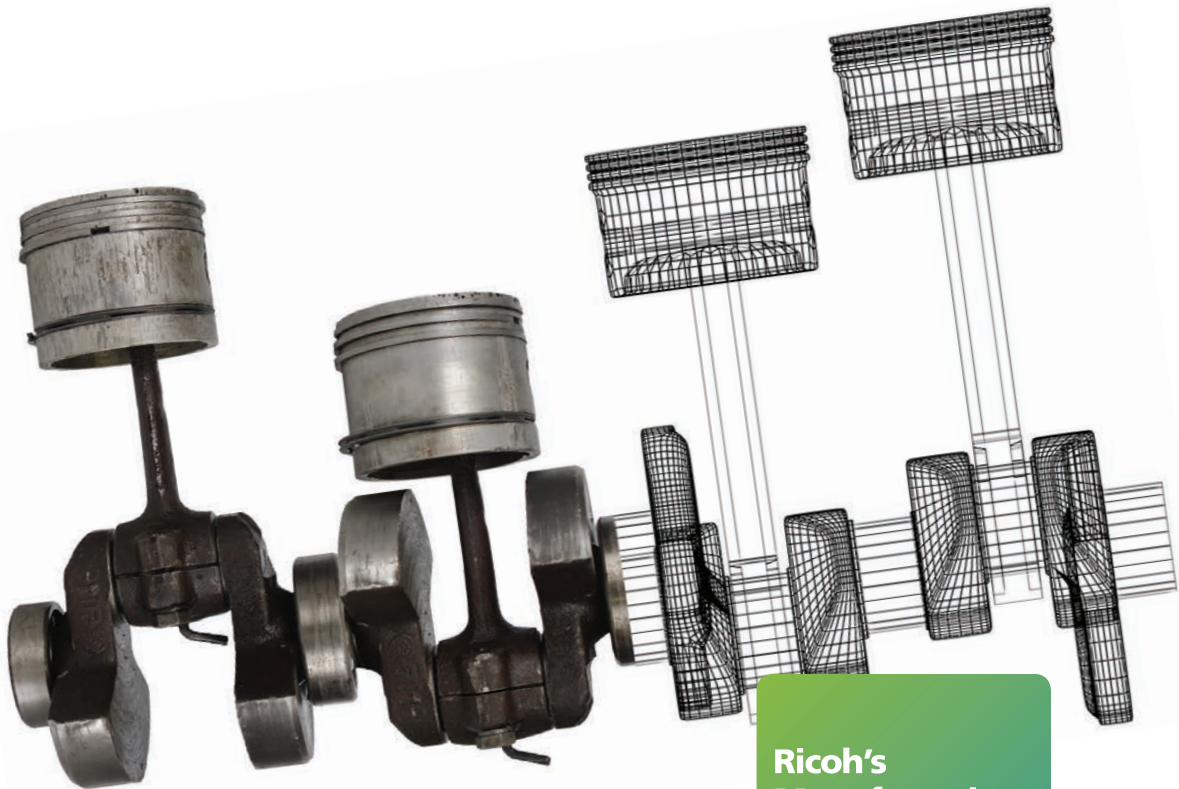
Reflection of the Market



India Pvt Ltd, L Krishnan, and Vice President, IMTMA and Chairman & Managing Director, Jyoti CNC Automation Ltd, PG Jadeja.

Speaking at the inauguration, Union Minister Siddeshwara said that Karnataka is in the process of setting up its first machine tool park. This will bring about manufacturing efficiency through cluster

Contract to expand



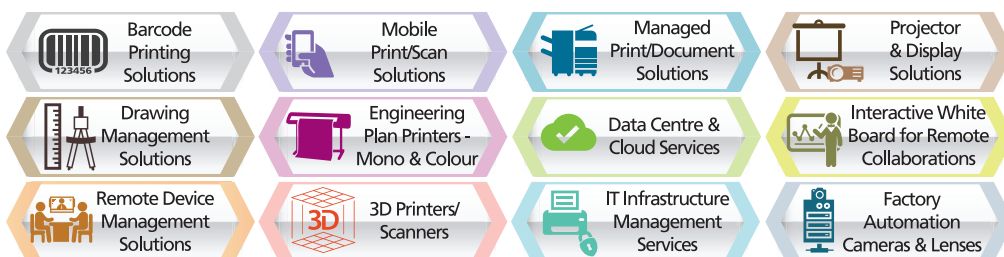
Ricoh's Manufacturing Solutions

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As manufacturers work with diverse suppliers across geographies, information access and management becomes extremely critical for quicker and efficient workflow processes, as it significantly reduces time-to-market, ensures consistent quality and optimises the cost of operations. Ricoh's 360 degree product portfolio and its strategic collaborations with leading technology partners give you innovative, all encompassing solutions for total control and higher productivity.

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development. Additionally, Deshpande opined that investing in Karnataka would bring rich dividends as the state is the hub for the manufacturing industry.

On the occasion, Krishnan underlined the importance of IMTEX by saying it is one of the biggest events that cater to the manufacturing sector. "The show has the ability to galvanize and motivate the entire manufacturing industry. Even at the time of recession, IMTEX helped industry leaders to connect with their customers. With the current improved sentiments, this platform would further act as a catalyst to spur investment and help in the modernization of the manufacturing industry," he added.

During the inaugural ceremony, IMTMA honored Managing Director, Sahajanand Laser Technology Ltd, Arvind Patel with the prestigious 6th 'IMTMA – Premier Outstanding Entrepreneur Award.' The award has been instituted in memory of Vinod L Doshi, an outstanding industrialist.

Product Galore!

Exhibitors took this opportunity to showcase their technological prowess at the show. As a result, the ground came alive with more than 1,000 machines displayed at the event. That's not it! Many participants also launched their new products here. Talking about exhibits and new products, CEO, Micromatic MachineTools Pvt Ltd, TK Ramesh said, "We displayed twin spindle machines—both turning and milling, along with a range of twin spindle CNC lathes with automation and compact CNC lathes. Also, our company extended the existing sliding head range of machines." On the other hand, Wikus displayed its production program. "The range includes bandsaw blades that are



High profile dignitaries inaugurating IMTEX 2015 in Bengaluru.

made of carbon steel, bimetal and carbide tipped bandsaw blades, which proves useful for the processing of metallic materials," informed Founder & Chairman, WIKUS, Wilhelm H Kullmann.

Customer commitment

From the exhibitors' point of view, the show holds utmost importance as it not only allows the displaying of products and solutions but also provides a platform to meet existing and potential customers. "IMTEX is one of the major shows in India for the machine tool sector. The advantage of participating in this show is that it attracts customers from varied sectors," mentioned General Manager, SMW Autoblok Workholding Pvt Ltd, Sia Bakshi. For foreign participants, the event helps strengthen the customer base and show their level of commitment to existing customers. "Being

present in a tradefair like IMTEX is a way to express our motivation in developing business in India. This is also a way to make known our presence in the country not only for sales but more importantly for services. For us, this event was the right place to meet customers and thus, better understand their requirements," opined Vice President, Sales and Marketing, Fives Machining, Metal Cutting/Composites division, FIVES Group, François Duval.

Learning about the market was another motive to be at the show for the exhibitors. "At events such as IMTEX, the DVS Group can learn and understand the requirements of its customers and also gauge market conditions," says Sales Manager, DVS India, DVS Group, Erwin Lefèvre. The event also proves to be an ideal platform to learn about the market trends. "It will help us prepare ourselves according to the market demand," explained Managing Director, UCAM Pvt Ltd, Indradev Babu. Director, Asia Pacific Sales, Mastercam / CNC Software Inc, Gene D Welli shared the same opinion.

Moreover, the event also acted as a knowledge sharing platform. "Through IMTEX, our local suppliers received an opportunity to interact with global experts and also witnessed various advanced technologies available in the market," averred Deputy General Manager, MAG IAS GmbH, Shashank MP. Such learning helps companies decide their line of action for the future. "The combined experience and knowledge allow us to have the whole production process in mind and optimize the manufacturing of parts in all its facets," said Director, EMAG India Pvt Ltd, Andreas Zieger.



On an average, 15,000 visitors attended this industry event every single day of the exhibition.

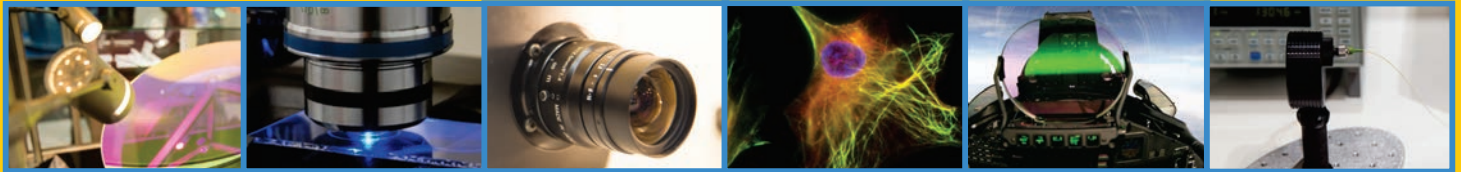
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EXHIBITORS

LASER World of PHOTONICS INDIA's exhibitors are manufacturers and service providers in the field of laser and optics, components and applications.

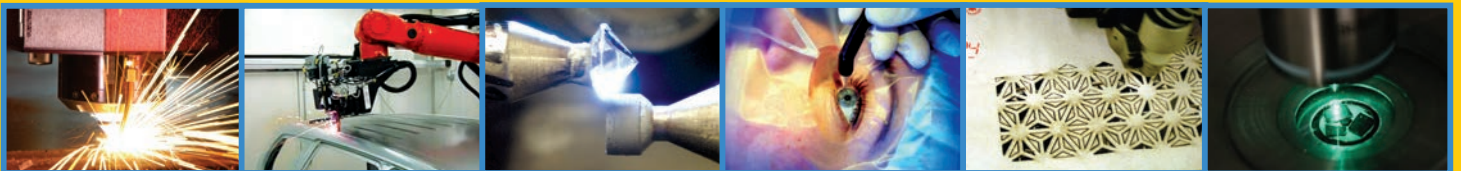


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- Electrical engineering / Electronics
- Jewellery
- Precision mechanics / Optics
- Science / Research
- Telecommunications
- Toolmaking / Machine Manufacturing
- Healthcare / Medical Technologies
- Signage / Printing

Expectations fulfilled!

Giving another dimension, Managing Director Asia Pacific, Blaser Swisslube, Patrick Mathys stated, "It was a forum for us to meet and thank our loyal customers who have been associated with us for a long time." He further added that the company has quality discussions with their customers on the leveraging effect of their liquidtool approach. Apart from the loyal customers, exhibitors were also happy to receive fresh enquiries from potential customers. "All our expectations for this expo have been fulfilled as we witnessed massive footfall at our stall," noted Managing Director, DMG Mori India, Ranjit Bhide.

On an average, 15,000 visitors attended this industry event every single day of the exhibition. These comprised decision makers and senior executives from diverse manufacturing industries like aerospace, railways, defense, capital goods, automobiles and auto components. The event also hosted over 20 trade delegations from public sector undertakings and 40 industry delegations from a wide spectrum of manufacturing industries. The exhibitors were also happy with the visitors' footfall. Director, Durga Bearings Co Pvt Ltd, Bishnu Sultania said, "We received very good response. Now, are hopeful about the improvement in the market conditions."

Future ahead

The hope of improvement in the market conditions has led exhibitors to set new aims for themselves. Talking about it, Vice President, IMTMA, and Chairman & Managing Director, Jyoti CNC Automation Ltd, PG Jadeja revealed, "We are currently in a mode of consolidation and our focus for the past four to five years has been on the aerospace and defense sector. Now, our aim is to further fructify in these sectors."



IMTMA honored Managing Director, Sahajanand Laser Technology Ltd, Arvind Patel with the prestigious 6th 'IMTMA – Premier Outstanding Entrepreneur Award.'

On the other side, Ace Manufacturing Systems is also looking forward to make new investments. "In order to grow, investment is necessary. In this year alone, we plan to invest around ₹100 crore in capital investments, i.e., land, infrastructure and machinery," disclosed Managing Director, Ace Manufacturing Systems Ltd, P Ramadas.

Awards

Additionally, during the event, Fuel Instruments & Engineers Pvt Ltd recognized the 'best innovations of the year' and honored them with the FIE Foundation Awards.

Talking about it, Director, Fuel Instruments & Engineers Pvt Ltd, Dr Jayant C Padte said, "This year at IMTEX, we witnessed tremendous improvement in terms of innovative machines and technologies. Our company awards the top Ten Indian

Companies for their brilliant work and also encourages them to perform better."

Other initiatives

Besides the show, IMTMA had also organized the International Seminar on Machining Technologies (ISMT). The sessions during the seminar revolved around 'Powering Manufacturing Growth and Competitiveness'. While, Ajay Sinha from Hero-Moto Corp presented on the 'Experience of using an Integrated Automation Line.

Also, IMTMA had taken various initiatives for students and academia. This included the specially organized Academia Pavilion which showcased innovative research projects from 25 engineering and technical institutions. IMTMA had also organized a workshop called 'Job Connect' which provided a platform for various industry leaders to impart advice to the students on matters concerning the industry, especially on vocational roles they can look forward to.

Conclusion

Over the years, IMTEX has been one of the most preferred tradefairs for exhibitors. Emphasizing on importance of the event, Managing Director, SCHUNK Intec India Pvt Ltd, Satish Sadasivan said, "IMTEX has been and will continue to be the single most relied event for the industry in India."

Then next year IMTEX Forming will be held at the same venue from January 21-26, 2016.

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IMTMA had undertaken various initiatives for students and academia including the safe driver initiative.

Source: IMTMA

Source: IMTMA

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Exhibition Schedule & Venue:

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Thursday 23 April 2015 10:00 - 17:00 hours
Friday 24 April 2015 10:00 - 17:00 hours
Saturday 25 April 2015 10:00 - 17:00 hours

Hall 1, Bombay Exhibition Centre,
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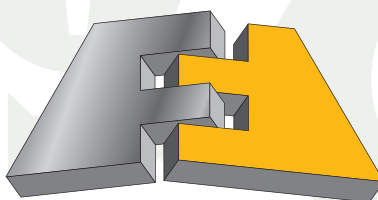


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A Driving Force for the Automation Industry

The first editions of SPS Automation, Motek India and Control India created a perfect platform for exhibitors to showcase their automation solutions. Simultaneously, it allowed visitors to see and compare them at the same place. The seminar sessions provided an excellent platform to learn about new technologies and solutions. Here is an overview of the events.

Messe Frankfurt along with Mesago Messe Frankfurt GmbH and P. E. Schall GmbH & Co KG organized SPS Automation, Motek India and Control India under the one roof at Mahatma Mandir Exhibition and Convention Centre, Gandhinagar, during February 5–7, 2015.

Compiled by:
Swati Deshpande
Associate Editor
Vogel Business Media India
swati.deshpande@vogel.de

These events, in their first editions, drew attention of solution providers and end-users.

Key highlights

The fair gathered more than 60 leading industry brands, which presented their latest technologies and solutions on over 3,500 sq mtr of exhibition space. Moreover, it attracted over 2,800 trade visitors. The participating companies took this opportunity to launch their latest innovations in the area of automation, instrumentation, testing and quality control. To name a few, Escha presented one-of-its kind compact power

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A Driving Force



connector while Omron launched MMSymac that integrates motion logic control. Additionally, Pepperl+Fuchs introduced AGV and 6-point laser dependent anti-collision system at the fair.

Sharing knowledge

Additionally, the parallel sessions of the technical seminar created a perfect platform to share knowledge. The seminar featured various presentations and case studies on the role of automation in manufacturing and process driven industries and brought together more than 60 experts and industry professionals. It covered a range of topics from sensors, robotics, drives and motors, functional safety, etc.

Looking forward

After the conclusion of the first edition, Executive Director and Board Member, Messe Frankfurt Asia Holding Ltd, Raj Manek, opined, "The successful debut of SPS Automation India, Motek and Control India has laid a solid foundation for the coming years and we are certain that the events will grow as the finest business arena to access opportunities in Indian market."

The next edition of the fair is scheduled from April 7–9, 2016 at the Mahatma Mandir Exhibition and Convention Centre, Gandhinagar, Gujarat.

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Source: Vogel Business Media India



(L-R): Managing Director, Dr Gereon Heinemann, Managing Director and Chairman of the Board, Fred Gaegauf and Managing Director, Gerd König, Firtz Studer AG addressing the Motion Meeting.

Efficiently Energizing

In the backdrop of the entrancing Alpine landscape, the 2015 Motion Meeting held at Thun in Switzerland on Feb 6, 2015, ingeminated how STUDER and the other companies in the UNITED GRINDING Group emphasize strongly on enabling its customers use resources efficiently. The congregation revolved around the premise on the importance of energy efficiency in machine building in the future.

With the theme of 'The Cylindrical Grinding Universe' this year's Motion Meeting witnessed the presence of around 150 sales partners and 60 journalists from all over the world to comprehend the product and process strategy of the company. Focusing on making customers even more successful, STUDER Steffisburg (CH), STUDER Biel (CH) as Internal Grinding Technology Center and SCHAUDT MIKROSA Leipzig (DE) as Automotive Competence Center,

work together as the Cylindrical Grinding Technology Group under the umbrella of the UNITED GRINDING Group.

Elaborating during the grinding technology confluence, Managing Director and Chairman of the Board, Fred Gaegauf; Managing Director, Dr Gereon Heinemann, and Managing Director, Gerd König, Firtz Studer AG highlighted that it is pertinent to develop capabilities, capacities and products to win more market shares. The spokespersons elaborated that the company will continue making investments in 2015 especially to increase the efficiency of the production processes; hence, Lean Six Sigma has been introduced as standard throughout the Group. The company aims to improve production times, shorten processing times and save on energy costs as it consequently translates in providing customers more benefit.

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Efficiently Energizing



Enabler to use resources efficiently

With global energy requirements constantly increasing, energy efficiency is becoming an important area for machine tools. Therefore, realizing the importance of doing the right thing at the right moment, Fritz Studer is committed to implement energy and resource efficient solutions to its products based on the below principles.

► Resource-conserving machine design combined with an engineering approach that takes account of the entire life cycle.



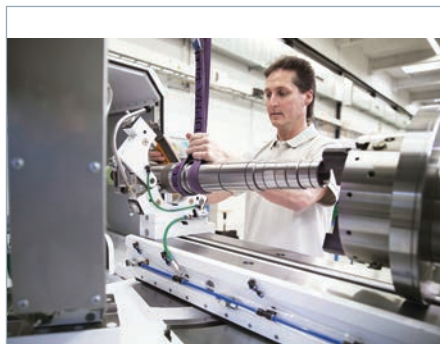
Soumi Mitra
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- Special methods and simulation techniques, which optimize the machine structure and the machine dynamics.
- Development and application of technologies and methods to save energy and costs.
- Energy-efficient manufacturing and production concepts.
- Fluid and thermal concepts with reduced use of fluids.
- Support of the machine operator in optimizing the energy consumption of his process.

The company proudly deploys constructive measures in the area of coolant supply and extraction system by using energy-optimized electric components. The software used in STUDER machines contribute largely in reducing and optimizing processing times (up to 50 per cent) and energy consumption of its grinding machines which help to save energy.

Defining efficacy quotient

Based on the above energy-saving premises, a trend-setting cylindrical grinding machine—the S141 was launched lately. The machine's ergonomic design and user-friendliness are impressive. No matter whether it's a flange component that is required or spindles up to 1300 mm, the S141 CNC Universal internal cylindrical grinding machine is able to meet any challenge. Two generously-sized sliding doors provide the best accessibility not only to the workpiece but also when changing the grinding wheel. Furthermore, short changeover times and fast reprogramming of the controls help keep downtime to a minimum.



With its short changeover times, the S141 has the potential for mass production and the necessary flexibility to finish single pieces economically.



The S131 has a swing diameter of Ø 250 mm (9.8") and grinds workpieces of up to 300 mm (11.8") in length.



Demonstration of the machine at Motion Meeting 2015.



The S151 has a swing diameter of Ø 550 mm (21.6") and grinds workpieces of up to 700 mm (27.5") in length.

This makes the machine very interesting for the production of single pieces, small and large series. The S141 is available in a variety of model lengths for workpieces up to maximum lengths of 300, 700 and 1300 mm (11.8", 27.5" and 51.1"). In all the models, the swing diameter over the table is Ø 400 mm (15.7") and the maximum grinding length is 250 mm (9.8") for internal and 150 mm (5.9") for external grinding. The S141 is the ideal machine for grinding spindle shafts, spindle casings, rotor shafts, axes or flange parts.

Simultaneously celebrating the success of the S141, the company recently produced its S131 and S151 machines adding to its series. The S131 is much smaller and more compact than the S141—with a swing diameter over the table of Ø 250 mm (9.8") and a maximum grinding length of 175 mm (6.9") for internal and 125 mm (4.9") for external grinding. It is available for workpieces with a maximum length of 300 mm (11.8").

The S151 is a somewhat larger than the S141—it has a swing diameter over the table of Ø 550 (21.6") mm and a maximum grinding length of 400 mm (15.7") for

internal and 150 mm (5.9") for external grinding. It is available for workpieces with a maximum length of 700 mm (27.5").

Recognizing the power of innovation

Engaged actively as a major player in state-funded projects concerned with energy efficiency, the company works in collaboration with universities on projects concerned with improvements in grinding machines, and thus, leading to reduction in the energy consumed by machines. In the Motion Meeting this year the company awarded the "Fritz Studer Award" and a sum of CHF 10,000 to Dr Eduardo Weingärtner from the Swiss Federal Institute of Technology Zurich, Institute of Machine Tools and Manufacturing for his work—"On-Machine Wire Electrical Discharge Dressing of Metal Bonded Grinding Wheels". The coveted award aims to strengthen the innovative power of the machine industry with technically feasible approaches.

With all the innovation that I witnessed in this edition, I can only imagine what the next edition of Motion Meeting holds!

MMI

Source: Fritz Studer AG



(L-R): Dr Eduardo Weingärtner, from the Swiss Federal Institute of Technology Zurich, Institute of Machine Tools and Manufacturing receiving the STUDER research award 2014 at the hands of Dr Gereon Heinemann, Managing Director, Fritz Studer AG.

The Age of Experience

The 17th annual SOLIDWORKS World 2015 conference was held February 8–11, 2015 at the Phoenix Convention Center in Phoenix, Arizona, USA. A large and enthusiastic crowd of approximately 5,500 SOLIDWORKS users attended the conference. A report on the happenings...

SOLIDWORKS World—the event—is rightly named so as it is a world on its own. Everything one sees in this realm makes one see how man is stepping into the future with limitless possibilities and extended boundaries.

This year's edition like its predecessors brought together thousands of users from the SOLIDWORKS community together. This year too had former CEO of SOLIDWORKS and now Dassault Systèmes' Vice President Sales of its Value Solutions sales channel, Bertrand Sicot commence the event. What was new was the availability of the event being streamed live. Sicot welcomed the crowd and the other one thousand attending remotely. He commented on how users now have two 3DEXPERIENCE Platform solutions available to them—SOLIDWORKS Conceptual Designer and SOLIDWORKS Industrial Designer. A brief introduction of two new SOLIDWORKS products—SOLIDWORKS Inspection and Model Based Definition—were made. The apparent underlying message in all of this was Dassault Systèmes' desired expansion of the 3DEXPERIENCE Platform into the SOLIDWORKS' user community. CEO, Dassault Systèmes, Bernard Charès expanded on this in his presentation of the Dassault Systèmes' vision related to the use of the 3DEXPERIENCE Platform and its support of design in the age of experience. A theme that was echoed by the SOLIDWORKS' new CEO, Gian Paolo Bassi and Chief Strategy Officer, Dassault Systèmes, Monica Menghini as well as many of the keynote speakers.

Inspirational attitudes

At the general session every year, attendees get to witness various customers of the soft-

ware displaying and explaining their products. One user in particular was the highlight of the show—Sefi Udi. Nine years ago, Udi met with a car accident that left him paralyzed neck down. "I had two choices: one was to lie in bed and two was to make the most of my life. Lying in bed was not an option," said Udi. In 2011, he was accepted into The Industrial Design Faculty in Bezalel Academy of Art and Design (Jerusalem); it is here that he learned SOLIDWORKS on the recommendation of the head of faculty. Looking for a controller that could help him work with the software better and finding none, he himself designed a controller that has three microcontroller switches using SOLIDWORKS and can be used via his mouth and controlled by his tongue—giving him full control over the software. The software helped him draft his designs faster compared to the long and tiresome drafting he used to do on Word. Since then, Udi has gone on to design solutions that aid people with special needs such as turning pages on a Kindle using his breath and designing

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The Age of Experience



his new house to cater to his needs of using a wheelchair in the space. His story was truly inspirational.

Another example seen at the event was the Griffin Lander by a company called Astrobot. The company recently made news by winning three Google Lunar XPrize milestone awards. The Lunar XPrize is a new space race pitting eighteen teams from around the world in a competition to land a rover on the moon and move 500 meters on its surface while sending video footage back to earth for us all to enjoy. President, Astrobot, John Thornton discussed the unique challenges his team is facing to get from the earth to the moon.



Innovation and learning at its best at SOLIDWORKS World 2015.



Nedra Pereira
Deputy Editor
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Source: SOLIDWORKS

Thornton covered the unique challenges presented by solar radiation and meteorites that can reap havoc on robots.

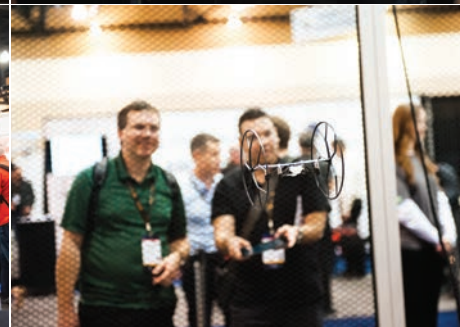
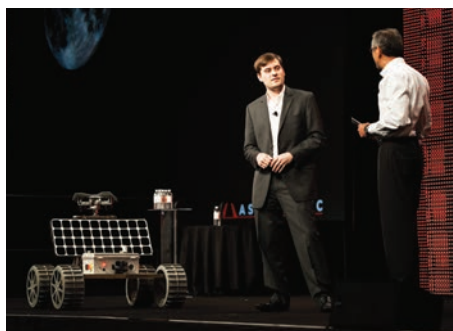
Another product worth mention is Roominate, an engineering toy aimed at girls. Roominate is a unique blend of building, circuits, design, crafts, storytelling, and creativity teaches kids while they play. Using motor and light circuits, modular furniture building pieces and walls, the toy empowers kids to build creations as per their imagination. The company's founders believe that this gender disparity begins at a young age. For example, many girls' toys lag behind in the development of spatial skills, hands-on problem solving skills, and confidence with technology. Co-founder, Roominate, Bettina Chen voiced her aim to inspire future innovators at an early age and her experience in founding Roominate.

Aspiring the future

The Dassault Systèmes executive-delivered presentations were intermingled with an eclectic mix of keynote presenters, including Chief Innovation Officer, Bold Machines and former CEO, MakerBot Industries, Bre Pettis; Professor of Physics, the City University of New York, Dr Michio Kaku; and Industrial Designer and Chief Globalization Officer, Linno, Seoul, South Korea, Jinsop Lee.

Pettis presented his thoughts on the next industrial revolution: 3D printing and how it is pushing into new frontiers. He challenged the audience throughout his talk and encouraged everyone to educate our daughters to be engineers and designers. He also remarked that "school is dead, long live education." Stressing on the point that a change needs to be brought about on how we educate, train, and inspire young people.

Dr Kaku, the famous theoretical physicist, author, professor, and popularizer of science gave a stimulating and thought provoking talk on how technology will change our lives. His vision for the future included how technology will be embedded in everything that we do and



Glimpses of the conference and Partner pavilion at SOLIDWORKS World 2015.

use. He gave an example of how in the future when we will wear contact lenses, the lenses that will provide access to data about everything we need to know. That by looking at someone, these lenses will recognize them and provide data on that person (e.g., name). He spoke about how we will imagine something and it will be printed. He also emphasized how the Internet will be everywhere and nowhere. It will be like electricity—always there, but never thought about.

In the third main stage keynote, Lee presented his view on designing for the five senses (i.e., sight, sound, smell, touch, and taste). He articulated his thesis that when designing an experience (or product) we need to design for the senses. He argued that experiences that rate high across all senses are more valued than those that don't. His thesis is very interesting when considering Dassault Systèmes' stress on the development of experiences and not products.

India perspective

Director Sales, Professional Channel – India, Dassault Systèmes, PM Ravikumar and Senior Technical Manager, India & SAARC - Dassault Systèmes, Ravi Vardarajan in a one-to-one gave insight in to what plans the company has for India. Both of them were keen on taking SOLIDWORKS further into all

educational institutions. The software is already being used in several academic colleges and institutions. Ravikumar asserted, "We want students to have access to SOLIDWORKS so that they can focus on their design by using it as a tool—a tool that can make concepts into reality." Also, they stressed on how the software does not come with a minimum to maximum age, anyone with a will to learn could do so because of its user friendliness. Vardarajan mentioned that the youngest certified person of the software is actually only 11 years old." This year too, the company will further increasing market share by focusing on new customer acquisition, doubling the VARs investments in terms of sales team and covering the entire market.

All-in-all

Finally, the conference included demonstrations of some key new SOLIDWORKS features and numerous breakout sessions where customer stories from multiple industries ranging from industrial art and medical devices to consumer electronics and renewable energy solutions were presented. The event also offered hundreds of technical training sessions, many of which included hands on time, and a sizable Partner Pavilion, which featured more than 100 hardware and software providers who work with SOLIDWORKS (e.g., PLM and PDM solution providers, implementation partners, manufacturers of 3D printers, CAM solution providers, and so on).

If you missed this one, come to next year's SOLIDWORKS World 2016 at Dallas, Texas, I'm sure it won't disappoint!

MMI

Former CEO of SOLIDWORKS and now Dassault Systèmes' Vice President Sales of its Value Solutions sales channel, Bertrand Sicot, and the drone taking photographs of the audience at the General Session.

Source: SOLIDWORKS





Eminent dignitaries from the government and the industry graced the inaugural ceremony of ACMA Automechanika New Delhi 2015.

ACMA Automechanika New Delhi 2015

The much talked about automotive expo concludes successfully in New Delhi. Read on to know the highlights of the impressive event.

The 2nd edition of ACMA Automechanika New Delhi was a paradise for companies involved in the automotive sector. Held from February 26 – March 1, 2015 at Pragati Maidan in New Delhi, the four day event mirrored the growth in the automotive sector. It also witnessed an enthusiastic response from auto part majors, the aftermarket and business visitors on the whole.

Grand opening @ ACMA Automechanika New Delhi

Eminent dignitaries from the government and the industry graced the inaugural ceremony of the event, which was officiated by the chief guest for the occasion – Secretary, Department of Heavy Industry, Ministry of Heavy Industry & Public Enterprises, Government of India, Dr Rajan Katoch. Addressing the gathering, he said, “The Indian automotive aftermarket is at an inflection point where the aftermarket offers a promising future, but the opportunities that arise will come with their share of challenges. Therefore, the Indian auto component industry must develop and cultivate an organized automotive aftermarket supply chain for the industry and integrate with the service and repair segment.”

Outlining the opportunity in the Indian aftermarket industry, President, ACMA,

Ramesh Suri said, “The Indian automotive component aftermarket industry clocked a turnover of Rs 36,000 crore in 2013 and is projected to touch Rs 77,000 crore by 2020. The Indian aftermarket industry recorded an impressive cumulative growth rate of 15 per cent in FY14. This year, we expect the overall component industry to grow in a single digit while the aftermarket will continue to grow in double digits.”

Also present at the inauguration ceremony Vice President, Brand Management Automechanika New Delhi, Michael Johannes said, “ACMA Automechanika New Delhi, with its unrivalled and broad spectrum of products covers the value chain of the automobile industry in its entirety and offers a specialized platform for business networking between local suppliers and global manufacturers. With industry majors as well as many new companies and country pavilions this year, there is a lot to discover and explore for trade visitors.”

Mammoth attendance

The exhibition featured a total of 436 exhibiting companies from India along with foreign contingents from Brazil, China, Germany, Hungary, Indonesia, Italy, Japan, Korea, Malaysia, Poland, Spain, Taiwan, Thailand, the UAE, the UK and the USA. The participants set up their respective stalls across an area of 16,000 m². Also, over 20 companies’ unveiled new products, technologies and component lines for the aftermarket in the region. About 12,861 business visitors from India and abroad

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ACMA Automechanika



visited the show, creating new records as compared to the last edition of the show in 2013. Apart from this, several exhibitors and trade visitors have confirmed on closing sizeable business deals.

Put on show!

Some of the new products showcased at the event include the electric vehicle – battery operated three wheeler by UP Telelinks Ltd, IP 68 waterproof ‘Seal Gen2 Series’ self-recovery winches by Comeup Industries Inc, LPR srl’s EasyKit that allows mechanics to replace old parts all at once, an economical alternative for replacing clogged diesel particulate filters by LIQUI MOLY among others.

Laying the future road map

The next edition of ACMA Automechanika, focusing purely on the needs of the growing Indian aftermarket will be scheduled in February 2017. The event will continue to present numerous opportunities in the aftermarket as well as address the industry concerns on various counterfeit products sold in the replacement market.

Now that’s a winner in the automotive machine race!

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Inauguration of
TIMTOS 2015.

An Impressive Display of Technology

TIMTOS 2015 was held during March 3–8, 2015 at Taipei, Taiwan. The show attracted buyers from varied industries. Furthermore, it created a perfect platform for them to discuss business and finalize deals. Here is a report.

The technological sophistication from a small island such as Taiwan is attracting the global machine tool industry. One could clearly see this at the Taipei International Machine Tool Show (TIMTOS) 2015. This biennial machine tool exhibition that took place in Taipei was organized by Taiwan External Trade Development Council (TAITRA) and Taiwan Association of Machinery Industry (TAMI). An international exhibition in

true sense gathered 1,015 exhibitors from all over the world. It included 260 foreign manufacturers from 18 different countries.

Crunching numbers

These exhibitors were accommodated in 5,411 booths and were located at the three venues including Nangang Exhibition Centre, TWTC, and the newly built—Expo Dome.

Also, it hosted pavilions from two important European countries i.e. Germany and Switzerland. The sheer presence of German pavilion tells the importance that the Taiwanese market hold for Europeans. At the event, India was represented by two exhibitors namely Pragati Automation Pvt Ltd and Fenwick and Ravi, while over 200 visitors from India witnessed Taiwanese hospitality.

Furthermore, the event registered 8.3 per cent growth in the visitors' footfall compared to the last edition. As many as 7,130 foreign buyers visited the show. The top 10 buying countries by order volume ranked as China, Japan, Malaysia, Korea, India, Thailand, the USA, Russia, Turkey and Singapore.

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An Impressive Display



Highlights

The main attraction on the first day of the event was the presence of President, Republic of China (Taiwan), Dr Ying-Jeou Ma at the inauguration. This defines the commitment and approach of the nation towards the industry, exhibitors and visitors. "I was impressed by seeing President Ma's presence at the show," mentioned Director, Economic Research & Planning Dept, Japan Machine Tool Builders' Association (JMTBA), Motoyoshi Yamamoto.

Additionally, the advancements that Taiwanese companies showcased were remarkable. Each one of them displayed its technological prowess attracting the visitors' attention. Automation solutions were spread across the exhibition centers.



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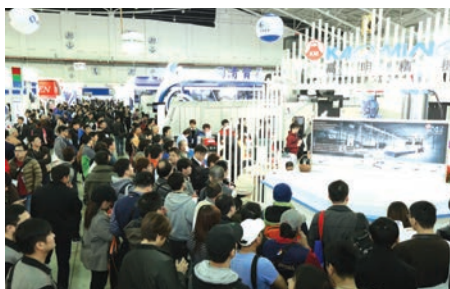
One of the eye-catching displays was YLM's i-bender, an intelligent tube bending solution that integrates a robot. The passing by visitors stopped to have a look at the complete demonstration of the robot. This solution specially mesmerized visitors with its efficiency and accuracy.

"Several companies demonstrated automation solutions. In fact, such solutions designed for different industries and needs were found on the fairground on the large scale. I would say these sophistications were mainly displayed to draw attention of visitors coming from western side of the world," observed Indian visitor—Managing Director, UCAM Pvt Ltd, Indradev Babu.

Another company from the home ground, YCM, showcased its solution on the theme of 'intelligent multi-axis machine tools with high efficiency'. "We presented NSV102A, a vertical machine center and also showcased double column machine center NFP66A, which promises high efficiency and accuracy. At the same time, we also displayed our cutting-edge technology—the multi-axis turning center NT-2000SY2, together with DCV2018A-5AX that is equipped with latest intelligent design 'iPros MX'. Over all, I feel with our display of latest machines, we presented R&D capabilities of our company," explained Chairman & CEO, YCM, Bryan Chen. The company also exhibited the smaller size double column 5-axis machining center, NFP500A-5AX that has comprehensive thermal control solutions to ensure thermal stability and accurate cutting.

Trends in Far East

The display of 5-axis machines was a clear trend at TIMTOS 2015. "5-axis controlled machines, multi task machines and robots were seen at many stalls. In the field of NC devices for 5-axis machines, the solutions



Glimpses of TIMTOS 2015.



Source: TAITRA

from Heidenhain and Siemens really stood out," noted Yamamoto.

Also, the exhibitors emphasized more on the offering complete solutions than the stand-alone product. For example, SEYI displayed a complete array of automotive solutions at the fair. The company unveiled machines that address four major themes—servo press technology, auto parts forming, heavy duty metal forming and automation & total solutions.

Some of the other notable machines on the fairground were iS2-160 Intelligent Servo Press, from Chin Fong Machine Industrial Co Ltd, MT-1000 Bridged-type 5-Axis Mill-turn Machining Center from Fair Friend Enterprise Co Ltd and SP3020L Ultra-Precision Gantry Type Oil Wire EDM from Ching Hung Machinery & Electric Industrial Co Ltd. Grabbing the attention of the selectors, these machines also won Taiwan Machine Tools Industry Award 2015 for Excellence in Research and Innovation in various categories.

"Though there was lot of innovation seen

in the segments of 5-axis machines and machining centers, the sheet metal machinery seemed to be little overlooked in the exhibition. I did not find much advancement in this area," stated Sakar Engineers, SG Karhadkar.

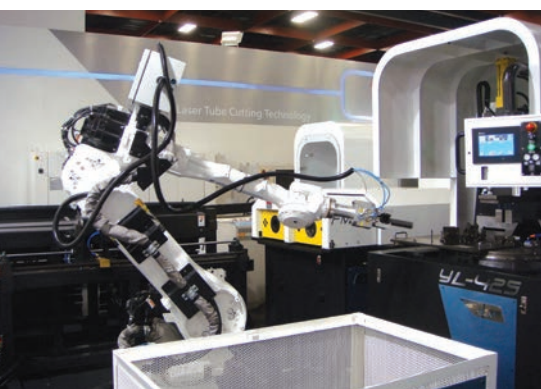
Money matters

Nonetheless, it was a well-arranged show, which is projected to generate business of up to \$2.1 billion. According to the organizers, the prime drivers of these orders were the Procurement Meetings that generated \$35 million. Under this initiative, around 29 elite buyers from 18 countries, including China, India, Turkey and Russia conducted 171 negotiations with 73 Taiwanese suppliers.

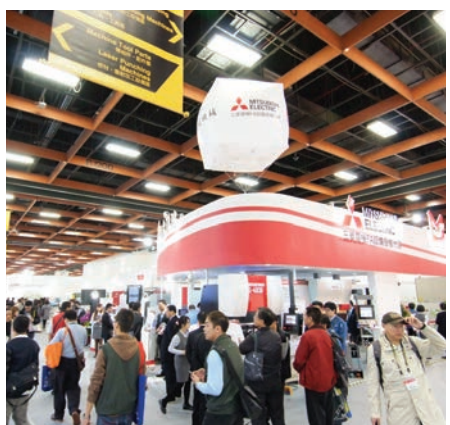
Talking about the business that the company made at TIMTOS 2015, Chairman, Fair Friend Group (FFG), Dr Chu Chih-Yaung said, "On the first day itself, we raised the show sales target from NT\$100 Million to NT\$200 Million." The company bagged a huge order worth RMB120 Million for an automatic production line for engine cylinder heads from a Chinese automobile factory and another order of \$4.5million order from MMT Engineering, one of the largest machine tool agents in the US."

Overall, it was a grand show that echoed high spirit of Taiwanese businesses. At the same time, the higher number of foreign visitors reflected increased adaptability of the Taiwanese technology across the globe. TIMTOS, which is scheduled during March 7–12, 2017, is expected to scale new peaks to deliver huge prospects across the trade.

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YLM's i-bender, the tube bending solution that integrated a robot.



View of the fairground.

Source: TAITRA



A glimpse of last year's expo.

Proving China's Mettle through Metal

Rated as Asia's largest and the world's second largest expo in the metal and metallurgical industry, Metal + Metallurgy China 2015 will set the stage for being the one-stop-shop for all things related to the metal and metallurgical industry.

For an exhibition with enduring popularity for over two decades and far-reaching influences in both Southern and Northern China, the secret of its success lies in the huge market. The expo will lay more focus on market agglomeration and industrial integration from Southern China to Northern China, and from China to the whole world.

Metal + Metallurgy China 2015, in addition to the conventional exhibitions,

will have new contents in casting robots and die casting, and will incorporate a metal deep processing section that covers the entire industrial chain. These comprise the 13th China International Foundry Expo, the 13th China International Industrial Furnaces Exhibition, the 15th China International Metallurgical Industry Expo, the 11th China International Refractories and Industrial Ceramics Exhibition and the China International Die Casting Expo 2015.

The expo will be held from March 31 – April 3, 2015 at the newly built China Expo Complex in Hongqiao CBD, Shanghai. Jointly organized by China Iron and Steel Association, China Foundry Association, Chinese Mechanical Engineering Society (CMES), Metallurgical Council of CCPIT, Industrial Furnace Institution of CMES and Hannover Milano Fairs Shanghai Ltd, the organizers of the event intend to build

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Proving China's



a world-class event for the industry with advanced concepts and professional services to create excellent opportunities for Chinese enterprises to 'go global' and overseas companies to enter the Chinese market.

What's new?

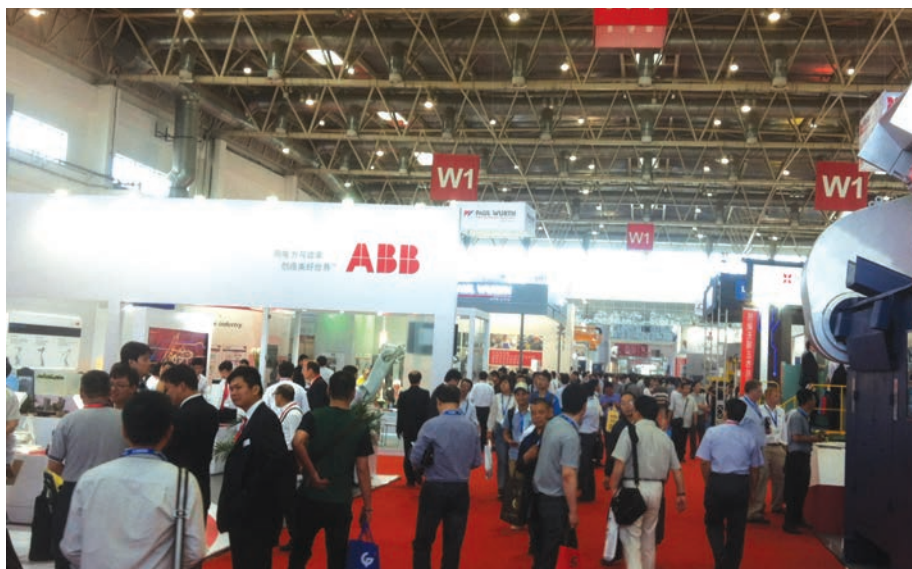
This year, the exhibition will be structured different to its preceding editions with Deutsche Messe AG and its China subsidiary Hannover Milano Fairs Shanghai Ltd joining hands with the



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CONCURRENT EVENTS AT THE EXPO

- ▶ China International Steel Summit
- ▶ The 7th Chinese Foundry Summit
- ▶ China International Thermal Processing Technology Forum
- ▶ China International Aluminum Processing Forum
- ▶ 3rd China International Refractory Production and Application Conference
- ▶ 13th International Steel Market and Trade Conference
- ▶ Exhibitor New Products Launch
- ▶ Metal Form Seminar
- ▶ M+M China Golf 2015
- ▶ Business Matchmaking Meeting



The high number of visitors at the show.

existing organizers. With an extensive scope of exhibits, innovative products and extinctive features, the four-day event will now be alternatively held in Shanghai and Beijing.

The exhibiting space is expected to exceed 80,000 m². A series of value-added activities such as forums that cover major topics in the four industries will also be held simultaneously during the show period, accompanied with other activities like business matchmaking services, specialized seminars and technical activities. Thus, the expo will create excellent opportunities for industry updates, exchange of views and mutual cooperation.

Ideal platform

The expo will be an ideal platform to

network and witness the latest technologies as dozens of well-known names in the related industries including Kao, ABP, Inductotherm, DISA, Fanuc, Allied Mineral Products, Shanghai Xinyan, IMF, Nederman, MAGMA, Grenzebach, Calderys, Koins, Ebner, Siemens, Savelli, MAUS, and Capital have registered for participation. The vast majority of exhibitors like FANUC, KAO and Allied Mineral Products will also expand their presence with substantially increased booth areas and will showcase their best products. Evidently, these international giants continue to favor the financial and industrial center of Shanghai with unfailing passions and unprecedented investment.

Moreover, the excellent reputation of Hannover Milano Fairs Shanghai Ltd, the China subsidiary of the world exhibition

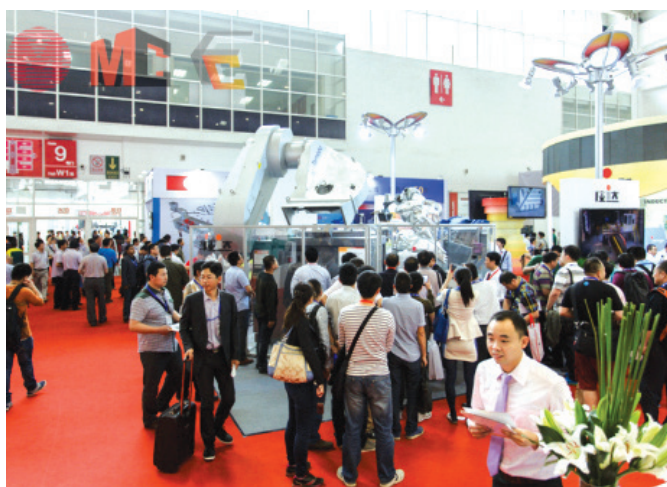
guru Deutsche Messe AG, and its unreserved support as the overseas organizer will bring the international philosophy and superb professional services to the exhibition.

International participation

In addition to the usual Chinese exhibitors, the international pavilions will be more dazzling than ever at the exhibition. Specifically, brand-new sectors of robot/automation, metallurgy and foundry will enable buyers to reach target groups directly and conclude more purchase orders. The international pavilions are also completely upgraded in furnishing and publicity endeavors.

The event is one not to be missed. See you there!

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Visitors networking and witnessing demonstrations at various booths at the event.

CNC Microfinisher for Transmission Shafts



Grind Master Machines Pvt Ltd offers nanofinish range of machines for microfinishing of engine and transmission parts. Model SMP-500 is a CNC microfinisher that can be used for microfinishing of transmission shafts, steering parts and pump parts, turbo charger shafts, lay shafts, main

shafts, etc. It has a patented Nano Finish Control System that provides simple and user-friendly screen for easy and quick set up change and therefore, the machine is very flexible and suitable to handle a range of parts.

► **Grind Master Machines Pvt Ltd**

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Horizontal Machining Center



Lakshmi Machine Works Ltd's (LMW) new generation horizontal machining center, JHM 40 comes along with a fixed table and a moving column. This compact designed machine comes with 400 x 400 mm Index table with minimum 7.5° angle of indexing, axis stroke X: 500 mm, Y: 550 mm, Z: 500

mm axis travel and BT 40 taper spindle. Moreover, the machine is optimized by the latest FEM software. It enhances machine's rigidity and to eliminate vibration damping effects.

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Compact Turn & Mill Center



The NTX 1000 second generation is a compact turn & mill machining center for complex turning and milling operations. It features B-axis and lower disk turret for up to 6-sided and 5-axis machining

of smaller components. It is ideally suited for various industries such as medical, aerospace and watchmaking and electronics. The tool spindle can handle a maximum turning diameter of 430 mm with a swing diameter of 680 mm. The turning length specified is 800 mm and the tool spindle travel 455 x ±105 x 800 mm (in X, Y and Z).

► **DMG Mori**

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High Speed Vertical Machining Center



Bharat Fritz Werner Ltd's (BFW) Dhruva vertical machining center allows users machine components faster. This is possible with 60 m/min rapids combined with 11 kW of power. The product was displayed at IMTEX 2015 with a Mitsubishi M70 CNC system. However, it also offers an option of Siemens 828D CNC system. The Dhruva HE variant is Ethernet and network ready, and the USB drive provide more flexibility. It can be tracked on a remote network. The machine offers 2D online and offline simulation as well.

► **Bharat Fritz Werner Ltd**

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Flute Cutters



TaeguTec has expanded the MillRush line by adding extended flute cutters, also known as 'porcupine' or 'long-edge' cutters, and splitter inserts to improve performance on roughing operations. The two new 3PKT 15 and 19 mm inserts

come in two different kinds called the SM2 (with three corners and two grooves) and SM3 (with three corners, three grooves and a different color periphery). The idea behind the SM2 and SM3 is so that there are no mismatches after machining and both offer a lower cutting load and less vibration.

► **TaeguTec India P Ltd**

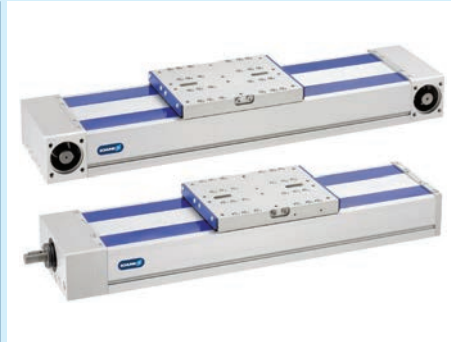
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Schunk, a leading provider of clamping technology and gripping systems, has numerous innovative products in its portfolio. Here are some of its offerings:



Gripping Modules

With the capability of adaption for all standard servo motors, the SCHUNK EGA electrically driven long-stroke gripper is the most flexible gripper of its kind on the market. New small sizes expand the application range, and ensure compact, mechatronic gripping solutions from the standard area. Due to its comprehensive adaptability, the EGA can be easily integrated to the existing system's control and regulation unit. It can directly interpolate as an additional axis since it can be controlled with the same command set as the superior robot. Therefore, problems with incompatible control signals can be excluded, and features of the system's control unit such as programming, safety, or field buses can be directly used.



Linear Modules

The SCHUNK linear modules of the Delta series are able to bear heavy loads and are the specialists for demanding linear motions with high moment loads. SCHUNK now presents the Delta 145C, a particularly compact module that enables powerful strokes up to 4,000 mm. Its inner dual-profiled rail guide ensures maximum rigidity and precision, thus exhibiting superior performance in absorbing heavy loads. To increase the reliability and the service life of the module, a specially fixed plastic cover strip protects the guidances, and drive elements from dirt.



Magnetic Grippers

SCHUNK, the competence leader for clamping technology and gripping systems extends its series of digitally controllable magnetic grippers with the compact SCHUNK EGM-M monopole gripper. The smallest SCHUNK gripper so far (26 mm x 98 mm) is still precise and powerful and is suitable for handling parts weighing up to 7 kg. Since its magnetic field reaches to the outer edge, no interfering contours will become a problem. The monopole grippers can be similarly used as suction cups, can be positioned anywhere on the workpiece, and can be flexibly combined with larger units. As all the SCHUNK EGM magnetic grippers of this series, the monopole grippers are working with energy-efficient electro-permanent magnets.

Mechatronic Gripper Modules

The SCHUNK EGL 70 mechatronic parallel gripper combines power and intelligence. With variable gripping force between 50 and 600 N it is one of the most powerful and flexible mechatronic grippers on the market and was specifically developed for industrial applications. Since the finger position, closing speed, and gripping force are freely programmable within a maximum stroke of 48 mm per finger, diverse components with a weight of up to 3 kg can be precisely handled in force-fit gripping. The gripper fingers can



be prepositioned to reduce cycle times. The entire control and power electronics of the EGL are integrated to save space and to allow decentral operation and even mobile use, thanks to the 24V DC operating voltage.

Intelligent Toolholder Management

On the way to 'Industry 4.0', SCHUNK the competence leader for clamping technology and gripping systems is setting another miles-tone: Numerous SCHUNK precision toolholders can be marked with an individual data matrix code now, which allows an intelligent toolholder management. Regardless of whether it is done manually by smart phone, or fully automated with a machine tool scanner, every toolholder can be reliably identified with the help of a code, and together with the corresponding data base system, they can be exactly assigned. Within the framework of intelligent manufacturing processes, it is possible to generate a precise history together with the data from the superior cloud, with sites of operation, used tools, service life and machining parameters.



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HYUNDAI WIA Machine Tools pours its whole efforts on every process of production and distribution, covering from self-reliant designing to manufacturing and after sales service.



E160 Series

- 45° slanted one-piece high rigidity bed structure
- Unbeatable rapid travel speed: **30m/min**
- The most reliable high speed servo turret is adopted: **0.1sec/step**
- Compact design, able to install within a narrow space.



F500D/600D

- High-precision P4 Angular Contact Bearing main spindle
- Dual Tables for high productivity
- Latest Servo ATC for fastest tool exchange in the class
- Latest SIEMENS 828D Controllers for various software support



HS Series

- Heavy Duty Motion Roller Guideways
- Powerful Dual Wound Spindle Motor
- Heaviest Maximum load in its Class
- Big Plus Spindle (BBT)



Machine Tools Line-Up

- CNC Lathe (Horizontal & Vertical)
- Drill Tap Centers
- Vertical Machining Centers
- Horizontal Machining Centers
- CNC Boring Machines

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SPADE•RUSH



»»» HIGH PRODUCTIVITY HEAD CHANGEABLE DRILL FOR LARGE DIAMETER HOLEMAKING

- Quick change system with unique clamping design
 - Easy to replace the head while in the machine
- Asymmetrical pocket design for high quality holemaking & reliable performance
- Rigid drill head clamping & enhanced body rigidity to maximize productivity
- Drill diameter range: 26.0mm - 41.0mm (3xD & 5xD)



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