

THE MACHINIST

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TURNAROUND TYCOON

He's triumphed over the perfect storm once but Ashok Leyland's top boss Vinod Dasari is already preparing for the next one even though the sailing's been smooth

Consumer Durables
Success through
zero compromise



SAYAJI HOTEL, INDORE
16TH NOVEMBER 2017
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Revolutionary design: optimized tip, interface and drill for improved machining economy

APPLICATION

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10.00–26.99 (0.394–1.063)	Cylindrical with lat according to ISO 9766	10

Drill tips

Diameters, mm (inch)	Geometry	Grade	Application
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10.00–33.00 (0.394–1.299)	-KM	GC4234	K
10.00–33.00 (0.394–1.299)	-MM	GC4234	M
10.00–33.00 (0.394–1.299)	-GP	GC4234	P K M

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P M K H

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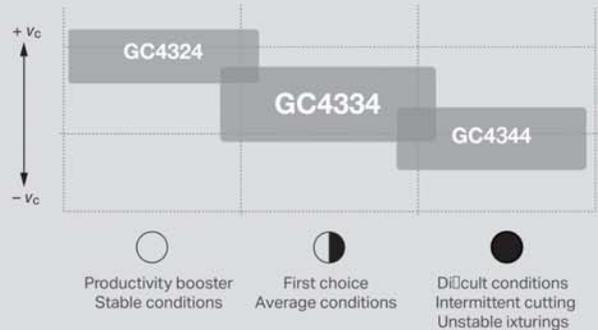
- Great edge-line security
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More info www.sandvik.coromant.com/zertivo

GC4324 and 4334 with INVEIO™ coating

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- Improved crater and flank wear resistance

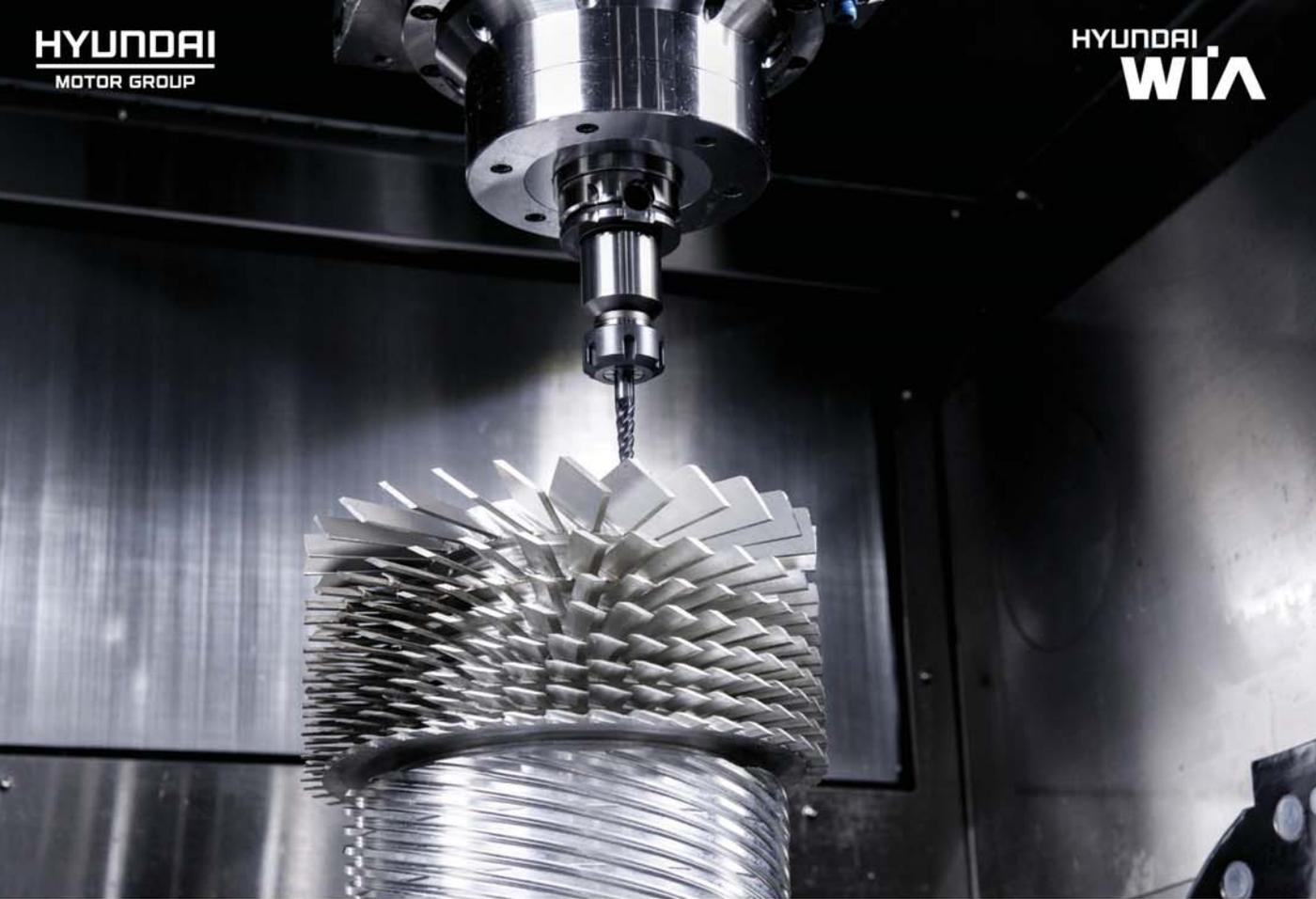
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Grade	insert size	Geometries	Supplement chapter
GC4324, GC4334 and 4344	1	GR, LM	E
GC4324, GC4334 and 4344	2-9	GM, GR, LM, GT	E

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CNC Machining Centre (High Torque)

Performance LargeSeries

CNC Large Vertical Machining Centre



K MillSeries

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Time for Transformation

When is the time to transform? Of course, when the chips are down you obviously require a major overhauling to get things back on track. But what about the time when things are going well for you? If you read this issue's Cover Story, you will realise that even when the sailing is smooth, you need to prepare yourself to face the storm. And as Vinod K. Dasari, MD of Ashok Leyland, warns, being unprepared for the changing times could not be just dangerous but could also be fatal.

We live in times when the word 'dynamic' is more often used to describe our surroundings than the word 'stable'. Technology, economic scenarios, social milieus and political systems are changing rapidly. In such a volatile and

"THE BEST WAY TO PREPARE FOR A CHANGE IS TO DRIVE THAT CHANGE BY LEADING THE TRANSFORMATION BOTH INTERNALLY AND EXTERNALLY."

uncertain environment, it is imperative that businesses brace themselves for every possible change. And the best way to prepare for a change is to drive that change by leading the transformation both internally and externally. That is exactly the message that Dasari is giving to his people and to the Indian automotive industry, in our Cover Story.

Come November 16 and The Machinist magazine will take up this subject of transformation at its third Global Manufacturing Summit (GMS) in Indore. The GMS was conceptualised to discuss and deliberate upon the challenges and opportunities faced by the Indian manufacturing industry. The reason we call it 'Global' is because of the nature of the topics discussed and because of the stature and the aspirations of the companies involved. Manufacturing industry is today on the cusp of a transformation. To know how you could make the most of it, join us at GMS 2017 Indore.

Details at gms.themachinist.in

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Market

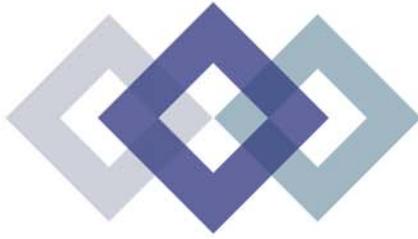
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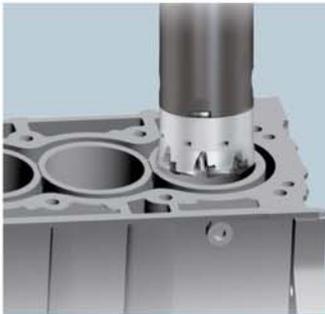
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Hexagonal double-sided inserted with high efficiency, high precision and low cost

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NEWS

Mahindra & Mahindra invests in Turkey-based Erkunt Traktor Sanayii A.S.

MAHINDRA & MAHINDRA LTD (M&M LTD) announced its second foray into Turkey through the acquisition of Erkunt Traktor Sanayii A.S. (Erkunt), the fourth largest tractor brand in Turkey. This transaction is expected to close by the last quarter of calendar year 2017.

This association with Erkunt on the back of the Hisarlar acquisition earlier in the year will help in growing Mahindra's farm equipment business in the strategic market of Turkey. With two strong brands such as Mahindra and Erkunt coming together and with a wider combined product portfolio,



this association will offer complete mechanisation solutions to the diverse needs of Turkish farmers, thereby creating a more significant presence in Turkey. The association will also build an export business especially in the

neighbouring markets of the Middle East, CIS and Europe.

Commenting on the development, Dr. Pawan Goenka, Managing Director, Mahindra & Mahindra Ltd. said, "At Mahindra's Farm Equipment Sector, our strategy is to globalise aggressively and also expand our portfolio to include various new categories of tractors and farm machinery. Turkey is a very important

market in our globalisation journey and we wish to participate in its entire agri mechanization landscape. The acquisition of Erkunt will enable Mahindra to expand its footprint in the world's 4th largest tractor market."

ADB earmarks up to \$4bn a year for new partnership with India

THE ASIAN DEVELOPMENT BANK (ADB) plans to raise its annual lending to India to a maximum of \$4 billion to support the country to accelerate inclusive economic transformation toward upper middle-income status, as laid out in a new ADB Country Partnership Strategy (CPS) for 2018-2022 endorsed recently.

ADB's program in India will focus on three main pillars of activity during the 5-year period—boosting economic competitiveness to create more and well-paid jobs, improved access to infrastructure and services, and addressing climate change and improving climate resilience. About 85 percent of lending will be focused on transport, energy, and urban infrastructure and services. Other finance will be aimed at public sector management, agriculture, natural resources and rural development, as well as skills development and urban health. The planned lending level, which includes private sector operations, compares with an average of \$2.65 billion a year in loans extended in the period 2012-2016. It will be complemented by technical assistance to help undertake strategic studies, build capacities, and prepare projects, increasing from the current average of \$6.6 million in 2013-2016. ADB will also explore cofinancing opportunities, including climate funds for relevant projects.

Siemens & Alstom to combine mobility businesses

SIEMENS AND ALSTOM have signed a Memorandum of Understanding to combine Siemens' mobility business including its rail traction drives business with Alstom. The transaction brings together two innovative players of the railway market with unique customer value and operational potential. The two businesses are largely complementary in terms of activities and geographies. Siemens will receive newly issued shares in the combined company representing 50 percent of Alstom's share capital on a fully diluted basis.

"This Franco-German merger of equals sends a strong signal in many ways. We put the European idea to work and together with our friends at Alstom, we are creating a new European champion in the rail industry for the long term. This will give our customers around the world a more innovative and more competitive portfolio", said Joe Kaeser, President and CEO of Siemens AG. "The global market-place has changed significantly over the last few years. A dominant player in Asia has changed global market dynamics and digitalization will impact the future of mobility. Together, we can offer more choices and will be driving this transformation for our customers, employees and shareholders in a responsible and sustainable way," Kaeser added.

"Mobility is at the heart of today's world challenges. Future modes of transportation are bound to be clean and competitive. Thanks to its global reach, its scale, its technological know-how and its unique positioning on digital transportation, the combination of Alstom and Siemens Mobility will bring to its customers and ultimately to all citizens smarter and more efficient systems to meet mobility challenges of cities and countries. By combining Siemens Mobility's experienced teams, complementary geographies and innovative expertise with ours, the new entity will create value for customers, employees and shareholders," said Henri Poupart-Lafarge, Chairman & CEO, Alstom SA.

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NEWS

HHV sets up high precision optics fabrication laboratory at Bangalore

HIND HIGH VACUUM CO. PVT. LTD. (HHV) has set up

an optics fabrication laboratory at its existing unit at Dabaspet, Bangalore. The aim is to offer a diverse portfolio of capabilities for fabrication of high precision optical components in the visible and Infrared range. With the addition of this optics fabrication laboratory, HHV is now geared up to provide end to end solutions for complex optical component requirements, especially for space and defence applications. The company through this laboratory, will now manufacture different sizes



of lenses, flats, prisms and domes for various applications including night vision optics, Binoculars, Periscopes, Astronomical and Telescopic mirrors etc. Extensive experience exists in-

house, in working with materials like Fused Silica, Zerodur, optical glass types imported from Schott, Germany and successfully handling Silicon, Germanium and Zinc Sulphide materials.

“Being vertically integrated allows HHV unparalleled freedom in addressing the inherent challenges of manufacturing optical components from fabrication of the substrates to thin film coating,” said Prasanth Sakhamuri, Managing Director, HHV. “We continuously endeavour to improve and expand our manufacturing capabilities.”

ABB to acquire GE Industrial Solutions

ABB has announced the acquisition of GE Industrial Solutions, GE’s global electrification solutions business. GE Industrial Solutions has deep customer relationships in more than 100 countries and an established installed base with strong roots in North America, ABB’s biggest market. GE Industrial Solutions is headquartered in Atlanta, Georgia, and has about 13,500 employees around the world. In 2016, GE Industrial Solutions had revenues of approximately \$2.7 billion, with an operational EBITDA margin of approximately 8 percent and an operational EBITA margin of approximately 6 percent.

ABB plans to acquire GE Industrial Solutions for \$2.6 billion; the transaction will be operationally accretive in year one. ABB expects to realise approximately \$200 million of annual cost synergies in year five, which will be key in bringing GE Industrial Solutions to peer performance. As part of the transaction and overall value creation, ABB and GE have agreed to establish a long-term, strategic supply relationship for GE Industrial Solutions products and ABB products that GE sources today.

“With GE Industrial Solutions, we strengthen our Number 2 position in electrification globally and expand our access to the attractive North American market,” said ABB CEO Ulrich Spiesshofer. “Combined with the long-term strategic supply relationship with GE, this transaction creates significant value for our shareholders.”

He added, “Together with the GE Industrial Solutions team, we will execute our well-established plans in a disciplined way to bring this business as part of the global ABB family back to peer performance. With this next step of active portfolio management, we continue to shift ABB’s center of gravity, in line with our Next Level strategy, by strengthening competitiveness, mainly in the North American market, and lowering risk with an early-cycle business.”

“This combination brings together two global businesses with a broad complement of electrical protection and distribution assets,” said John Flannery, CEO of GE. “ABB values our people, domain expertise, and our ability to operate in the segments where we have depth and experience.

Tata Steel & Thyssenkrupp sign MoU for European JV

TATA STEEL LIMITED AND THYSSENKRUPP AG have signed a Memorandum of Understanding to create a leading European steel enterprise by combining the flat steel businesses of the two companies in Europe and the steel mill services of the Thyssenkrupp group. The proposed 50:50 JV – Thyssenkrupp Tata Steel – would be focused on quality and technology leadership, and the supply of premium and differentiated products to customers, with annual shipments of about 21 million tonnes of flat steel products. The JV would have a pro forma turnover of about €15 billion per annum and currently employs about 48,000 people spread across various locations. It would be headquartered in the Amsterdam region of the Netherlands. The proposed combination of businesses would be formed through a non-cash transaction framework, based on fair valuation where both shareholders would contribute debt and liabilities to achieve an equal shareholding in the venture. Thyssenkrupp Tata Steel would have a robust capital structure that is well matched by the underlying free cash flows of the company.

Compact & Versatile

TURNMILL

Turnmill with Y axis & Sub Spindle



Application Examples



Hirth Coupling



Indexing Roller



HSK Tool Holder



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A list of key events happening between November 2017 to July 2018, both nationally and internationally.

<p>CeBIT India November 30– December 02, 2017 Bengaluru www.cebit-india.com</p>	<p>ArabiaMold Sharjah December 11–14, 2017 Sharjah, UAE http://www.arabiamold.com/</p>	<p>ExCon December 12–16, 2017 BIEC, Bengaluru http://excon.in</p>	<p>IMTEX 2018 January 25–30, 2018 BIEC, Bengaluru http://imtex.in</p>
<p>Auto Expo Components February 8–11, 2018 New Delhi www.autoexpo.in</p>	<p>ELECRAMA March 10–14, 2018 India Expo mart, Noida http://elecrama.com/</p>	<p>SIMTOS April 03–07, 2018 Seoul, South Korea http://www.simtos.org</p>	<p>Die & Mould India International Exhibition April 11–14, 2018 Mumbai, India www.diemouldindia.org</p>
<p>Hannover Messe April 23–27, 2018 Hannover, Germany www.hannovermesse.de/home</p>	<p>CeMAT April 23–27, 2018 Hannover, Germany http://www.cemat.de/</p>	<p>ACMEE June 21–25, 2018 Chennai Trade Centre, Chennai http://www.acmee.in/</p>	<p>AMTEX 2018 July 06–08, 2018 New Delhi, http://www.amtex-expo.com/ amtex_delhi</p>

**OUR
INHOUSE
UPCOMING
EVENTS**



16th November, 2017
Sayaji Hotel, Indore



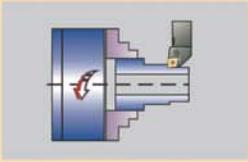
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SC-8K
GANTRY LOADER



SC-14
BIG BORE LATHE



SC-25
CNC HEAVY DUTY LATHE

CNC Internal Grinding

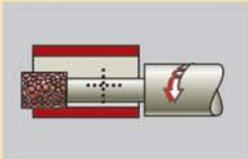


FIG-200 SPL CNC
BIG BORE GRINDER

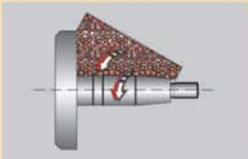


FIGT-300 CNC
FOUR STATION TURRET



FIGE-150 CNC
ID / OD GRINDER

CNC Cylindrical Grinding



AWH-1500 CNC
LONG SHAFT GRINDER

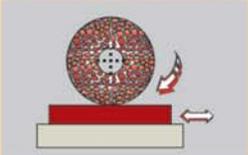


AWH-2000 CNC
HEAVY DUTY GRINDER



SWH-400 CNC
AUTO LOADING

Surface Grinding



SG-106 CNC
CREEP FEED GRINDER



SGR-60
ROTARY GRINDER



SG-63
HYDRAULIC / PLC

Automats



A15/25

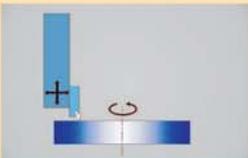


TD36
AUTOLOADING



A42/60

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1.5 M



VC - 75C
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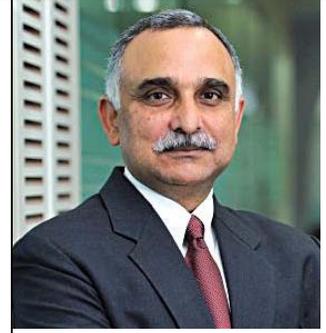
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BOMBARDIER INDIA APPOINTS SUDHIR RAO AS ITS NEW MD

Bombardier Transportation has announced that Sudhir Rao is to assume the role of Managing Director at Bombardier Transportation in India. In this position, Rao will oversee all Bombardier Transportation's activities in India. This appointment reinforces Bombardier's focus and commitment towards building a sustainable business in India while improving the company's performance and competitiveness.

"India is one of the high priority markets for Bombardier Transportation. We have placed a strong focus on delivering projects for the Indian and export market, enhancing our engineering and industrial footprint, and increasing our local content to continue delivering on the Indian government's Make in India initiative." said Laurent Troger, President of Bombardier Transportation. "Sudhir has the proven credentials to drive profitable growth for companies: strong leadership skills, deep manufacturing industry experience and a track record of execution that makes him the right choice to lead our India business as we continue to transform our company."



E+H INDIA APPOINTS KAILASH DESAI AS A NEW CHIEF OPERATING OFFICER

Endress+Hauser a Switzerland-based instrumentation and process automation company has announced the appointment of a new Chief Operating Officer with effect from 1 October 2017.

Kailash Desai has been promoted to this position and will take charge of the India business. In his stint with Endress + Hauser since 2003, he worked in various management roles focusing on marketing and sales, while also gaining experience in human resources and the projects business.

Following an assessment of more than 100 applicants for the job (including both internal and external applicants) Kailash Desai, Sr. Vice President- Sales was finally selected and appointed by the Endress+Hauser Group Executive Board.

CONTINENTAL INDIA NAMES PRASHANTH DORESWAMY AS THE HEAD OF THE ENTITY

Continental has named Prashanth Doreswamy as the head of their entity in India. Doreswamy will take over as Market Head of Continental India and Managing Director, Continental Automotive India, in the first week of October 2017. Prashanth Doreswamy succeeds Claude d'Gama Rose, who retires later this year.

Prashanth Doreswamy will continue to focus on driving revenue opportunities for Continental in the region and increasing its technology and product development capabilities in India. The German conglomerate that commenced India operations in 2008, has established a strong presence in the domestic market through steady investments, localization of the value chain and betting big on technology.

Today, the tier 1 automotive supplier, tire manufacturer and industrial partner operates across India – with over 7000 employees across 16 locations, including nine plants that cater to the Indian market and a Technical Center that supports global R&D.



TATA TECHNOLOGIES APPOINTS JK GUPTA AS THE NEW CFO

Tata Technologies has announced the appointment of J.K. Gupta as its new Chief Financial Officer. In this role, he will be responsible for corporate finance, strategy and business planning, for Tata Technologies.

Speaking on the occasion, Warren Harris, Managing Director and CEO of Tata Technologies, said, "Tata Technologies is delighted to welcome JK Gupta during this exciting phase of transformation for the company. We are positive that his vast experience and deep functional knowledge will be an important asset as we expand our business globally."

With 38 years of experience across multiple industries (engineering, steel, entertainment and IT), Gupta joins Tata Technologies from Tata Consultancy Services (TCS).



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MG Motor opens its first manufacturing facility in India

UK-based automotive marquee MG Motor has announced the inauguration of its first-ever manufacturing facility in India, through a minimum initial investment of Rs 2,000 crore. With an initial capacity of 80,000 units per annum in the first phase, MG Motor India will roll-out its first product from the plant in 2019.

The state-of-the-art facility, spread over an area of 170 acres, will be completely revamped by MG Motor by 2019. The company has already hired an initial workforce of 70 employees at the plant. The facility will entail creation of significant number of jobs, apart from several additional indirect jobs in the state, as part of the 'Make in India' and 'Skill India'



initiatives.

“Today is a water-shed moment for the MG brand in India with the inauguration of our first-ever manufacturing facility here. Overall, we aim to positively contribute to the ecosystem here in Gujarat including all stakeholders by generating employment opportunities for local talent, leveraging the capable supplier base and contributing to the overall benefit of the society and community here,” said Rajeev Chaba, President and Managing Director, MG Motor India.

Ford tests Microsoft HoloLens globally

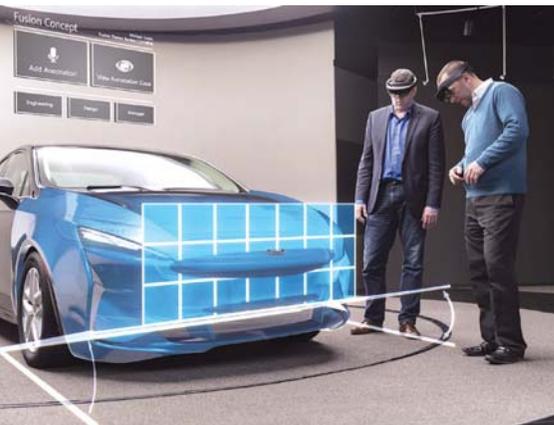
Ford designers have been swapping some clay-sculpting steels and rakes for mixed reality headsets and visualization software that can change vehicle design elements – side mirrors, grilles, vehicle interiors and more – in mere seconds.

Designers have been piloting Microsoft HoloLens technology for a year now in Ford’s Dearborn studios, allowing them to see proposed virtual design elements as if these pieces were part of physical vehicles. They’ve been able to explore different shapes, sizes and textures of future vehicle attributes in minutes and hours instead of the weeks and months it can take to create clay models. And now, Ford is expanding this pioneering testing across the globe.

“It’s amazing we can combine the old and the new – clay models and holograms – in a way that both saves time and allows designers to experiment and iterate quickly to dream up even more stylish, clever vehicles,” says Jim Holland, Ford vice president, vehicle component and systems engineering. “Microsoft HoloLens is a powerful tool for designers as we continue to reimagine vehicles and mobility experiences in fast-changing times.”

HoloLens technology uses mixed reality, which enables designers to see holograms in photo-quality backdrops through wire-free headsets. They can scroll and preview at the flick of a finger through numerous design variations projected virtually onto an actual car or clay model.

“We may not be able to teleport yet, but HoloLens allows us to review full-size 3D designs with designers and engineers around the world in real time,” says Craig Wetzels, Ford manager, design technical operations. “And we’ve only just scratched the surface, so possibilities for the future seem almost limitless. This is very exciting.”



Mazda, Denso & Toyota join hands for EVs

Mazda Motor Corporation, Denso Corporation and Toyota Motor Corporation signed a contract to jointly develop basic structural technologies for electric vehicles. Furthermore, the three companies have also decided to establish a new company consisting of selected engineers from the three companies to ensure the efficient implementation of the joint technological development projects. As countries and regions around the world adopt increasingly stringent policies to help reduce greenhouse gases, new regulations that mandate a certain proportion of electric vehicle sales are beginning to emerge. Complying with these environmental regulations, while ensuring the sustainable growth of our companies, requires the development of a wide range of powertrains and technologies. The company regard electric vehicles as a key technological field in this process alongside fuel cell vehicles.

Mazda, Denso, and Toyota have decided to jointly develop basic structural technologies for EVs capable of covering a wide variety of vehicle segments and types to ensure flexible and rapid response to market trends. This agreement covers a diverse range of models, from mini vehicles to passenger vehicles, SUVs, and light trucks, and aims to innovate the development process by combining the strengths of each company, including Mazda’s bundled product planning and prowess in computer modeling-based development, Denso’s electronics technologies, and the Toyota New Global Architecture (TNGA) platform.



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WABCO India showcases ESCsmart technology; Tata Motors deploys it

WABCO India Ltd along with Tata Motors Ltd, recently launched Electronic Stability Control (ESCsmart) for trucks and buses at WABCO INDIA's test track in Chennai. Tata Motors becomes the first OEM to deploy ESCsmart for the Prima range, helping prevent accidents by increasing vehicle stability and safety. Jacques Esculier, WABCO Chairman and Chief Executive Officer, introduced the technology to key Government officials, fleet customers and the media.

WABCO's ESCsmart functionality builds on the company's industry-leading Anti-lock Braking System (ABS) and Electronic Braking System (EBS) platforms. It is an active safety system that monitors the roll and directional stability of vehicles. The system can automatically intervene, independent of the driver, when a high risk of instability is detected, thus helping to reduce the likelihood of accidents particularly associated with rollover, skidding and jackknifing.

Speaking of the launch of ESCsmart Esculier said, "WABCO is a global leader in innovating technologies that contribute to safer and more efficient road transportation of people and goods. Following pioneering the introduction of ABS for commercial vehicles in India, WABCO is extremely proud to now launch ESCsmart and to play a key role in further help-



ing to support the Government of India's vision to reduce road accidents."

Esculier added, "WABCO is honored and proud to partner with Tata Motors to launch ESCsmart for their Prima range of trucks. We look forward to paving the way for its further adoption in India." Alongside significantly reducing the risk of accidents associated with vehicle instability, the self-learning capabilities of ESCsmart also help vehicle manufacturers to eliminate the necessity of physically testing all variants of vehicles during homologation. This saves considerable time and labor.

Brakes India & ZF JV launch EPB technology in India

Brakes India with JV partner ZF have announced the successful production of the first Electric Park Brake (EPB) system with a global OEM, . EPB is part of an on-going commitment of the company to help enhance overall brake system performance, driver safety and comfort.



In addition to providing park brake functionality, EPB is a fully integrated part of the brake system with features such as dynamic actuation, brake pad wear sensing and reduced degradation associated with mechanical systems. The EPB also helps in enhancing safety in emergency situations with full-four wheel anti-lock functionality versus standard park brake which provides emergency park brake on the rear axle only. Manfred Meyer, Global VP, Braking Engineering for ZF said, "We were the first to market globally with our EPB system in 2001 which pioneered in Lancia, Audi, VW and more recently on the BMW X4 and BMW i8, Jeep Renegade, Fiat 500X, Ford 150, Honda Accord, Nissan Qashqai, Range Rover Evoque and more."

Pricol gears up for BS VI norms



Pricol Ltd announced an exclusive agreement with Wenzhou Huirun Electrical Machinery Co., Ltd for technical collaboration and, supply and production of Fuel Pump and Fuel Pump Modules in India. Through this agreement, Pricol intends to further strengthen its automotive pump portfolio in India and will now become a comprehensive supplier of Fuel Pump Module required for Electronic Fuel Injection Systems. Wenzhou Huirun will support Pricol Ltd with product & process technologies for new business opportunities arising in segments like 2 wheeler, 3 Wheeler, 4 Wheeler, Commercial vehicle and Off-road vehicle. With an initial investment of Rs. 200 mn over the next 3 years, Pricol Ltd eyes a market share of more than 30 percent in the 2-wheeler segment in India. With already confirmed order for this product with a leading 2-wheeler OEM, Pricol Ltd plans to manufacture 3-6 mn Fuel Pump Modules post the implementation of BS VI.

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Himachal Roadways flags off electric-bus for public transport

Goldstone Infratech Ltd has recently announced that its state-of-the-art Zero Emission electric bus has officially started running under Himachal Pradesh Transport Corporation. The 25+1 seater Goldstone eBuzz K7 was flagged off by G S Bali, Minister of Transport, Himachal Pradesh Government at Kullu in Himachal Pradesh and will ply between Kullu-Manali-Rohatang Pass. This bus from Goldstone Infratech has the distinction of successfully completing trials at a steep gradient and over 13,000 feet altitude for the first time in the country.

The bus which has been Made in India by Goldstone Infratech Ltd and has been certified by Automotive Research Association of India (ARAI), after extensive testing at part



level and vehicle level at various testing facilities.

Anand Swaroop, Chief Operating Officer – Goldstone Infratech Ltd said, “Goldstone Infratech is proud to become India’s first company to run its ARAI certified Electric Buses on Indian Roads. We are committed to offer quality products to the country. We are sure that these electric Buses which have started serving the passengers between Kullu-Manali-Rohatang pass at such a high altitude will be-

come benchmark for every State Transport Undertaking. This will surely augment faster adoption of much needed Electric Public Transport system in the country and further support the cause of environment protection.”

Magna opens new Engineering Center in Shanghai, China



Magna has opened a new engineering center in Shanghai to bring its latest mirror and vision systems to automakers and drivers. The new engineering center is expected to generate up to 100 new jobs, including a number of highly-skilled engineers. The facility will also feature an innovation showroom where customers will be able to see and interact with Magna’s latest technologies from all over the world. “China is a key hub for our engineering and product development within Asia and around the globe,” said John O’Hara, Magna Closures & Mirrors President. “Our new Shanghai engineering center allows us to increase our development activity, providing even more customizable solutions for automakers.” The company aims to bring newer technologies like its ClearView inside and outside mirrors to China. As a leader in both camera-based advanced driver assistance systems and mirrors, Magna developed ClearView to help improve visibility while changing lanes, backing out of a parking space, or driving with a vehicle full of cargo.

Piaggio & Foton form a strategic partnership for four-wheel LCVs

The Chairman and CEO of Piaggio & C. S.p.A. (PIA), Roberto Colaninno, and the CEO of Foton Motor Group, Wang Jinyu, signed an important preliminary agreement in Beijing for the strategic development of a new range of four-wheel light commercial vehicles.

Over the coming months, a work team made up of representatives from the two companies will examine the manufacturing and commercial plans and draft the final contractual documents. Assuming the positive outcome of these activities, the aim is to finalize the technical documentation for the project and the relevant contracts by Spring 2018.

The objective of the agreement, as a strategy to strengthen and modernise the offerings of the Piaggio Commercial Vehicles division consistently with the strategic guidelines of the Piaggio Group, is the development of a new range of commercial vehicles to enable the Piaggio Group to achieve significant expansion in relevant markets while simultaneously achieving important cost reductions. The positive growth outlook of the sector has played an important role in the creation of a research and production platform to help the Piaggio Group to strengthen its positioning and expand in international markets.

Different types of vehicles are being planned in the range of mini pick up and minivan models, for transportation of both passengers and cargo, to meet the growing demand for commercial mobility solutions particularly suited to intra-city travel. They will be equipped with latest – generation eco-friendly engines and state-of-the-art technological features. All the vehicle types will have a payload capacity up to 1.5 tons.



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OEM UPDATE



Engineering Tomorrow

Danfoss India's plant in Chennai is engineering tomorrow's India. Let's see how.

By Swati Deshpande

As one enters inside the campus of Danfoss India at Oragadam, Chennai, one thing goes unnoticed is the solar panels. This campus is a LEED Platinum rated facility with an on ground solar installation and has a focus on R&D. It also houses an application lab. Speaking on the facility Ravichandran Purushothaman, President, Danfoss India says, "The focus of this centre is to design and innovate products for climate and energy for both India and outside market. The campus in India is an investment worth \$100 million, which we completed about two and a half years back. With this campus in place, we moved away from just a sales drives subsidiary to R&D and innovations driven entity."

Why Chennai is chosen for establishing the facility? He explains by saying, "There are quite a few universities here such as IIT Madras. And we work closely with universities. This strengthens our business." He further mentions that the employees come from all corners of the country. He fondly adds, "It's a little India here. We have people working here from all nooks and corners of the country. And the advantage that it adds to the company is such diversity culminates various ways of thinking. And this potpourri of thinking further helps our business grow."

Emphasis on R&D

Purushothaman informs that the company has four core businesses that include Power solutions segment, which makes hydraulic components for all off road mobile hydraulic applications, cooling business, drive business and heating seg-

ment. "Incidentally chiller components are one of the core of the businesses and company manufactures 70 percent of components of chillers but doesn't actually manufacture chillers." Why? He says, "You can't manufacture both. For the wellbeing of the business, you have to make your choices clear. Additionally, skill sets required for making a chiller and making chiller components are different. So we are doing what we can do the best that is making components."



"Danfoss has a three-step approach to 'Make in India': First – to make in India for the Indian Market, second – to make in India for the rest of the world and third – to make components in India for application in global innovations."

Ravichandran Purushothaman, President, Danfoss India



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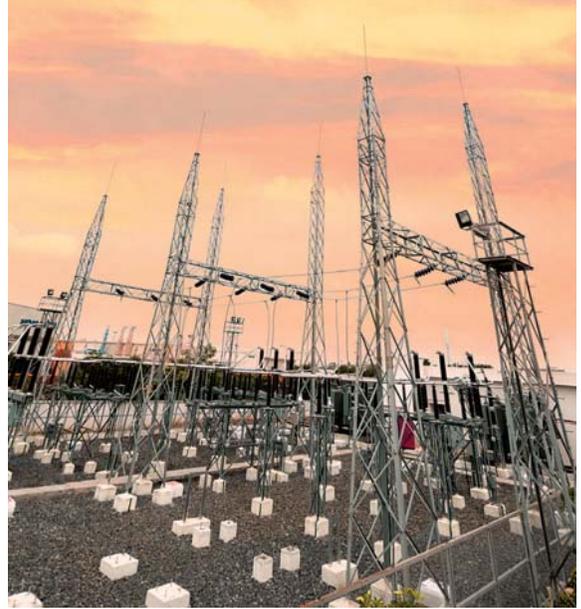
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Furthermore while speaking on the Indian operations, he says “We have tremendous emphasis on the R&D. Over 300 people work in the R&D. We have four world-class labs here, wherein various testing are conducted for our customers. For example if an OEM plans to make a chiller, it comes here, works around with various components, does its math and comes out with a desired product.”

How is the response from OEMs towards such facility? “Our lab is fully booked for next 20 months. Our intention to have lab is to not have new businesses but to experiment and innovate. Labs have been established for helping customers innovate,” he informs.

Recently came a feather in the cap for the company. Its one of the labs has been identified as a Satellite lab for Intertake Global. “This gives us opportunity to expand reach of the lab,” he says.

New opportunities

The company is currently on the cusp of digitalisation. “In this era, digitalisation is like building an engine while the aircraft is in the air. As we run our business, we need to fix digitisation,” Purushothaman explains. Elaborating further he mentions, “We are Tie I or Tier II suppliers for lot of OEMs. Digital products mean our products should be able to talk. Also, my products can send data on continuous basis on performance, and various other parameters. When we look at Industry 4.0, it opens door of opportunities for us. We can use various factors such as machine learning, artificial intelligence, data analytics, etc. All of these can be done and completely transform the way products are made here. What matters is what

We are Tie I or Tier II suppliers for lot of OEMs. Digital products mean our products should be able to talk. Also, my products can send data on continuous basis on performance and various other parameters.

is important for customers and what are they looking at,” he adds.

The other trends that are catching up are energy efficiency and being green. “Green is not a fancy title anymore. It is sensible investment made for the future. There has been considerable awareness on it and lot of Indian companies have already taken a lead. Godrej has recently launched a propen based air conditioner. With regard to energy efficiency, we still have long way to go. And we see lot of opportunities in this area.”

Additionally, India is developing very fast. “Only 1/3rd of India is built 2/3rd is still to be built. If you look at commercial air-conditioning penetration, it is only 10 percent.

Same is the case with refrigeration. So as a country we have huge opportunity. Energy intensity in the country is very low if compared to other countries. Indian resident’s per capita consumption of electricity is 1/6th of China and 1/20th of US. And that creates lot of opportunities for us,” he explained.

Considering these opportunities the company has ambitious plans to grow. “In last December we crossed the mark of Rs. 1,000 crore in sales and we are aiming at doubling our business by 2020.” Isn’t it short span of time? “It is short span of time however considering the opportunities that lie in front of us, we should be able to meet our target,” he says. Additionally, Make in India initiative is helping the business. Speaking on the company’s contribution towards Make in India he says, “Danfoss has a three-step approach to ‘Make in India’: First – to make in India for the Indian Market, second – to make in India for the rest of the world and third – to make components in India for application in global innovations. Furthermore, our promise towards Engineering Tomorrow’s India in a sustainable manner holds true by way of providing energy-efficient solutions to diverse industries. Danfoss is committed to the cause of creating energy efficient technologies that contribute to the reducing the carbon footprint at an individual and industrial level,” he concludes. 

Oragadam campus is a LEED Platinum rated facility with an on ground solar installation and has a focus on R&D and also houses an application lab.

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Whether it is product, processes or practices, Videocon makes no compromise in achieving or maintaining it, says **Abhijit Kotnis**, the Company's Chief Manufacturing and Sourcing officer.

By **Niranjan Mudholkar**

Q First of all, congratulations on bagging the second position at the prominent State Level Award for Excellence in Energy Conservation and Management for your Aurangabad plant. Tell us about the different initiatives taken by the plant.

Being an indigenous manufacturer, all Videocon products are manufactured with-in the country at our state of the art manufacturing facilities located across India. Being a responsible Indian corporate, we ensure that all sustainable practices are followed across our manufacturing units. With backward integration capabilities in all our product categories, we are able to reduce costs and pass on the benefits to our customers. This is further enhanced with steps such as localisation of all the components and parts across our product portfolio, focus on raw material cost reduction, workforce and productivity enhancement and optimisation. Moreover, Videocon ensures that our products pass through stringent rules to achieve the highest quality standards. This is reflected in our BEE ratings depicting high energy efficiency abilities. To give an example, Videocon's entire AC portfolio has been updated and comprises of 3 stars and 5 stars models only. When it comes to manufacturing, quality assurance and safety standards is our top priority. Through years of experience, we have been able to inculcate an innovation mindset across our employees. This helps us to generate ideas and come up with cost effective solutions.

Q How difficult is it to find the balance between addressing diverse consumer demands with the environmental cause?

At Videocon, it has been always our endeavour to bring products that are technologically innovative and at the same time, eco-friendly. Videocon is committed to green



"At Videocon, we have adapted to an environment that is driven by quality. Whether it is product, processes or practices, there are zero compromises to achieve and maintain it. And in this course, we strike cost effectiveness."

initiatives, and we have established a green management goal for significantly reducing greenhouse gases and manufacturing eco-friendly products. Our Hybrid Solar Air Conditioner that utilises solar energy to operate, is one such exemplary product. Moreover, all are products are RoHS compliant (Restriction of Hazardous Substances), which makes sure that no harmful substance is present in any electronic equipment and form. Further in addition, our manufacturing units have been upgraded with eco-friendly refrigerants.

Further, we fully comply with the E-waste rules and regulations set by the Central Pollution Control Board (CPCB) of India. There has been a conscious decision to have sustainable practices such as installation of grey water treatment plant, upgradation of effluent treatment, sewage treatment, and using the treated water for gardening. We ensure that we celebrate World Environment Day with our employees in great enthusiasm, to make each member understand the importance of safeguarding the environment, and have them be a part of Videocon's green drive.





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Q You operate in a very competitive industry and in a market where customers are both demanding as well as price sensitive. How are you managing costs at the shop floor level to ensure good quality at competitive prices?

At Videocon, we have adapted to an environment that is driven by quality. Whether it is product, processes or practices, there are zero compromises to achieve and maintain it. And in this course, we strike cost effectiveness. We take up total productive maintenance (TPM) which helps us in retaining and improving the integrity of production and quality systems through machines, equipment, and various processes, that add business value to our organisation. We have also taken up lean manufacturing at all units to ensure systematic minimization of waste. We have implemented a 'just in time strategy' with regards to all our processes that further helps us to maintain inventory costs. Further, we have also adopted the Kanban and 6 sigma approach to strengthen our manufacturing.

Q You have a contract manufacturing deal with Coolpad India - a subsidiary of Shenzhen-based handset maker Coolpad Group - to produce five lakh devices in the first quarter of fiscal 2016-2017 from your Aurangabad facility. How's this deal progressing? What are the different products that you are manufacturing as per this deal?

Our association with Coolpad India is on steady grounds and working well for both of us. Our contract is for manufacturing handset screens in the size of 5" and 5.5" across Coolpad brands in India. Till date, we have produced more than 2 million handsets for them.

Q Continuing from the above question, does the deal also include any kind of R&D activities? If yes, then what are you doing on that front?

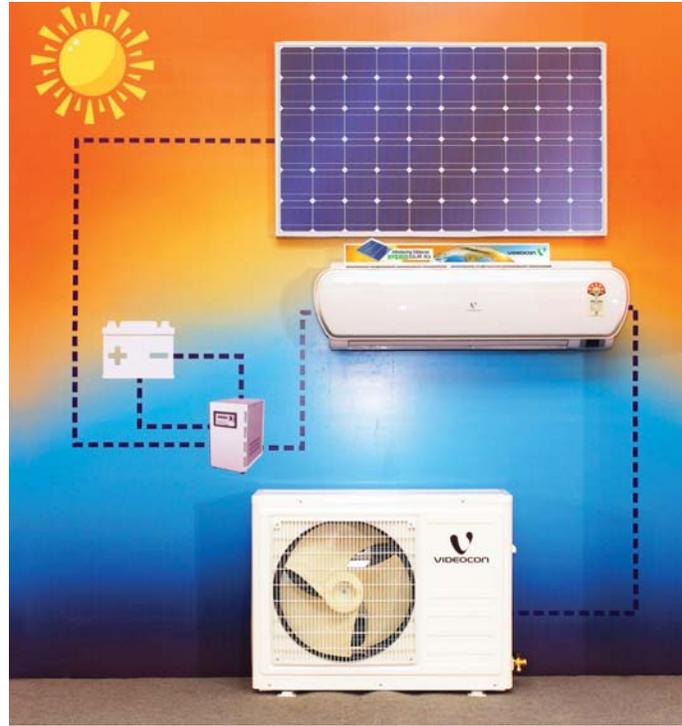
No, as of now we are not doing any kind of R&D for Coolpad India. However, localization in a few products has progressed.

Q You have also signed an MoU with BOE Technology Group. What is the nature of this partnership and has the actual work started on it?

Yes, we recently signed a MoU with BOE Technology group and have initiated the designing and manufacturing of LED panels as per the India market needs.

Q I understand that there is a huge focus on innovation at the Videocon Group. What drives this innovation and how do you blend it the seemingly monotonous manufacturing activities?

At Videocon, we believe that innovation is an amalgamation of ideas and their timely initiating and implementation constitute success. As part of our R&D, we research continuously and introduce new technological innovations based on a stringent new model of development process. This process is driven by customer feedback and market research with Quality being



"Also, the new breed of customers is ever evolving, and so are their demands. While understanding their requirements, we have stepped up our R&D and manufacturing capabilities to create products that match up this growing demand."

the key potential to achieve.

Q Rurbanisation or transformation of India's rural landscape is creating a new breed of customer who is economically still evolving and yet is aspirational. How are you innovating to meet the needs of this customer?

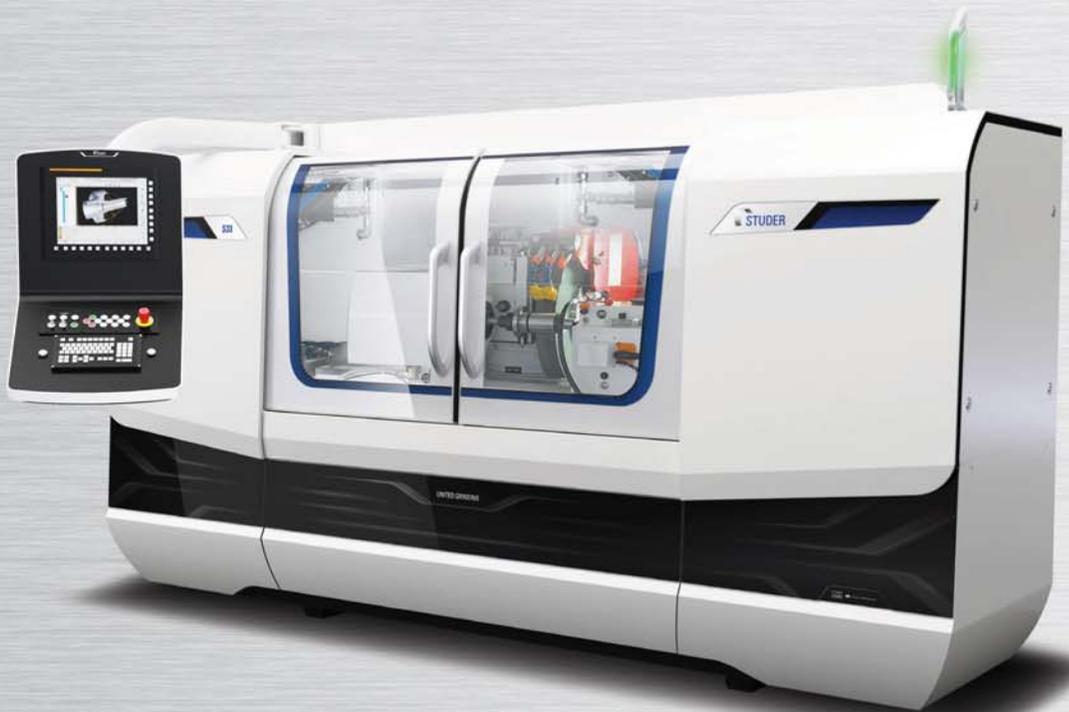
We have an extensive line of products that caters to the varied consumer segments, depending on their choice and preferences. Also, the new breed of customers is ever evolving, and so are their demands. This makes up for a sizeable number of the populace in the country. While understanding their requirements, we have stepped up our R&D and manufacturing capabilities to create products that match up this growing demand.

Q How many manufacturing plants does Videocon have in India? Where are these plants located and what products do these plants manufacture?

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Turnaround TYCOON!

He's triumphed over the perfect storm once but **Vinod K. Dasari, MD**, Ashok Leyland, is already preparing for the next one even though the sailing has been absolutely smooth in the recent times.

By **Niranjan Mudholkar**

I must confess that I approached my interview with Vinod K. Dasari, MD, Ashok Leyland, with a bit of a bias. I was anticipating to meet a person who would be very serious and stiff in his approach to the interview. I was wrong! While being a thorough professional, Dasari came across as a very affable and down to earth person. A few minutes with him and I realised that he is a knowledgeable person who is always prepared to face any question or challenge without losing his composure or smile.

Dasari started his journey with Ashok Leyland way back in 2005 as the Chief Operating Officer. "It's unusual for a young person to join at a senior level in this Company. So, that had its own bit of challenges. But once you get into it, people accept you for who you are. It was a great learning experience from 2005 to 2008. In 2008, I became a whole-time director. In fact, even before I had joined, the discussion was that if you perform well and if you learn well, you will have the opportunity to become the Managing Director. So, whatever was said was coming my way," he shares. Al-

though Dasari became the Managing Director in 2011, his predecessor was still involved in the top level decision-making process as the Executive Vice Chairman. The predecessor stepped down in 2013 giving complete charge of the organisation to Dasari.

Trial by fire

"It was truly a trial by fire," he recalls. I assume that he is just referring to the economic scenario in the market and say so but he reminds me that the cyclical nature of the market is something that the commercial vehicles (CV) industry is used to. "It goes up and down for us all the time." There is something else and it is far more critical. To give a proper perspective and insight, he takes me down the history of Ashok Leyland. From 1948 to 1955, the Company was just making cars as Ashok Motors. From 1955 to 1987, it had a joint venture with British Leyland so it became Ashok Leyland. Till then, it was okay as all the technology was coming from UK. From 1987, Iveco bought British Leyland's shares and owned 51 percent stake in the Company. So, technology was still coming from outside. But in

September 2017 sales figures

		Sept '17	Sept '16	%	Apr'17-Sept'17	Apr'16-Sept'16	%
M&HCV	Sales	11,804	8,958	32	51,280	49,368	4
LCV	Sales	3,566	3,094	15	18,206	15,238	19
TOTAL SALES		15,370	12,052	28	69,486	64,606	8

Source: Ashok Leyland



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2007, the Hindujas acquired the shares of Iveco.

And suddenly, there was no more technology available! Obviously, Ashok Leyland had to invest a lot in technology and it hurt the finances badly. Dasari explains: "To give you a perspective, whatever we had invested in the first 60 years, we invested double that amount in the five-year window of

"We believe you have to innovate for India rather than introducing a fancy global technology. Engineering is not just about solving the problem; it is about solving the problem at the right cost."

2008-2013. In a manufacturing company, when you invest so much and invest so fast, your fixed cost goes up very high. The second problem was that all this investment was funded by debt. So, our debt, which was always 1:1 or less than one, had gone up to almost 1:2.4. The total debt at that time was Rs. 6,800 crore! I used to tell people at that time that every morning I had to sign a cheque of one-two crore rupees as interest before I had my cup of coffee!"

The CV market dynamics in the country were also changing drastically at that time. What was once a two-player market was now filled with eight to ten new players. "And then the market also collapsed," Dasari says. "So, we had a situation when the market was collapsing for not one year but for two years in a row. In a large manufacturing company, if you don't get volumes, you are just destroyed. On top of it, with so many players, the pricing would be very bad because everybody wanted something sold for them," he adds.

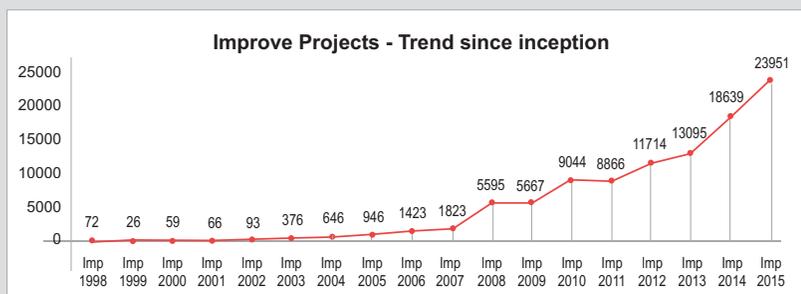
What would you call a period when the pricing was bad, volumes were bad, debt was high and the breakeven level was also very high? Dasari calls it the 'Perfect Storm surrounding the Company from all sides!' To tackle with this storm, the Company undertook a massive transformation exercise. As part of this exercise, Ashok Leyland under Dasari decided that it will not just cut on the cost but will also invest in the future. In that period, it developed products like Boss and Captain.

The 'Improve' initiative

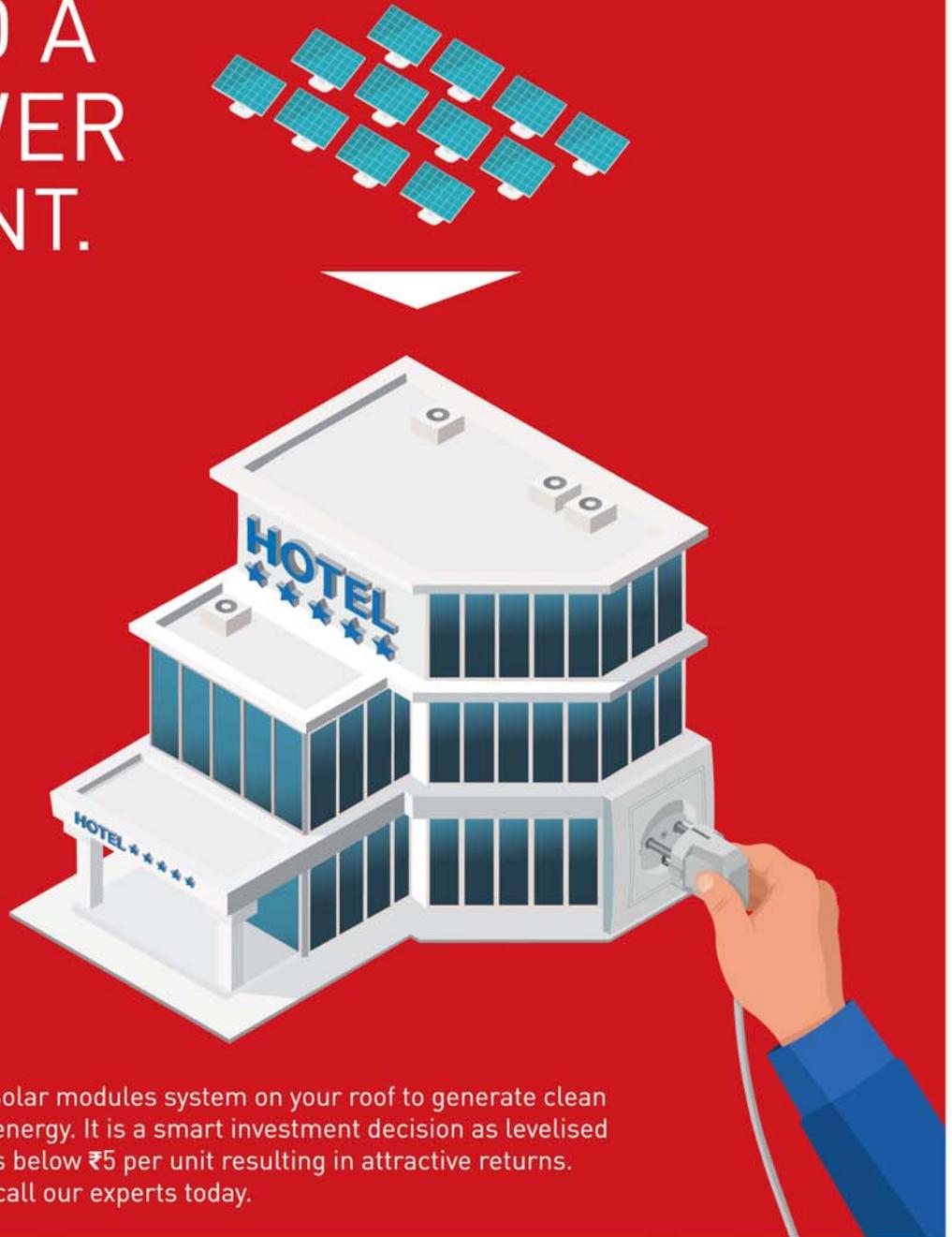
Improve competition is one of the most important events in the Ashok Leyland (AL) calendar which showcases the improvements done by all AL employees. The Spirit of Improve since its inception in 1998, was to involve all employees in the Improvement and growth journey of Ashok Leyland. True to its intent, we have seen the involvement of people spiralling year after year as also the number of Projects Implemented. The first Improve was at Hosur 1 with the participation of less than 50 teams. It then grew in size and depths covering the most relevant subjects connected to the AL's growth journey. Improve has covered a long distance, the growing enthusiasm and the support

from the management has been overwhelming. Even in the thick of times, Improve competition is one which was never stopped. The Project trend is tabulated.

With the aim of bringing in uniformity and improved effectiveness in the conduct of the competitions at all Ashok Leyland plants, many changes are being made in the Mini-Improve and Improve processes. Mini-Improve is another event which is handled at plant levels and scrutinized by a common jury panel to select best of the teams. Going from a plant quota system to merit based selection would ensure that the best teams of Ashok Leyland present their achievements in the Improve Finals. In all, there are more than 70 teams comprising of manufacturing, manufacturing support service and corporate/ marketing. This is based on the Teams meeting the cut-off criteria during Mini-Improve competitions. Next year, Ashok Leyland 'Improve' will turn twenty. What started as a small HR initiative has grown leaps and bounds and has become every employee's dream.



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Investing in service

The Company also invested in network. Dasari explains why: “People describe our industry as a complex industry but I feel it is very simple. Nobody buys my vehicle for how it looks. Customers buy my truck for

“The Intelligent Exhaust Gas Recirculation (iEGR) technology is not only better suited to Indian conditions compared to Selective Catalytic Reduction (SCR) technology (based on European technology) but will also prove to be hugely cost effective, easy to operate and hassle-free to maintain.”

Indigenously developed iEGR technology

In April 2017, Ashok Leyland showcased its full range of future ready products, based on Intelligent Exhaust Gas Recirculation (iEGR) technology, at its annual Global Conference 2017 in Chennai. Ashok Leyland will be the only domestic OEM to implement this technology successfully for its products above 130HP.

Vinod K. Dasari, MD, Ashok Leyland says that Intelligent Exhaust Gas Recirculation (iEGR) technology is a simple yet innovative solution to achieving the desired results to meet the BS4 norms. “This technology is not only better suited to Indian conditions compared to Selective Catalytic Reduction (SCR) technology (based on European technology) but will also prove to be hugely cost effective, easy to operate and hassle-free to maintain. All of which will benefit the Ashok Leyland’s customers, resulting in better margins compared to products by OEMs which are based on SCR technology.”

“More so this indigenous technology will help us deliver on our brand promise of ‘Aapki Jeet, Hamari Jeet’ in multiple ways. For our customers it will mean ease of use and better cost efficiencies. For the environment it will mean more efficient fuel combustion and improved emissions. The indigenous development of iEGR technology will also mean faster time to market and minimal cost of implementation. We will emerge as the only OEM in India to have achieved this,” Dasari adds.

its good operating performance. Equally important is the need to ensure that the truck keeps operating. I need to have a service network that supports it. So, there are only two things in this industry – make a product that performs well and have a service network that ensures the performance is maintained. So, we have significantly expanded our network from what was seven years ago 270 outlets to 2,700 outlets at present! Earlier, more than fifty percent of our service outlets were in the South. Today, the spread has grown substantially across the country.”

Apart from this wide spread network, Ashok Leyland is also taking its full-fledged containerised workshops to customers’ sites like deep mines and other remote areas helping them save on precious time and cost. The Company also provides service on wheels for quicker resolution of the problem and ‘Knowledge On Wheels’ that provide on-site training to channel partners and others. It has also introduced a digital Bluetooth based diagnostic and trouble-shooting application where the computer on the truck communicates with the truck driver’s smart phone and helps him to understand and address basic problems in the truck all by himself. If he cannot solve the problem then it will connect him to the nearby service mechanics, who are rated by Ashok Leyland based on their training and facilities available. And the payment for the service can be made online.

The Company is now making full use of the digital platform as a tool to enhance its services for the customers. Importantly, it is making technology localised, relevant and user friendly. “We believe you have to innovate for India rather



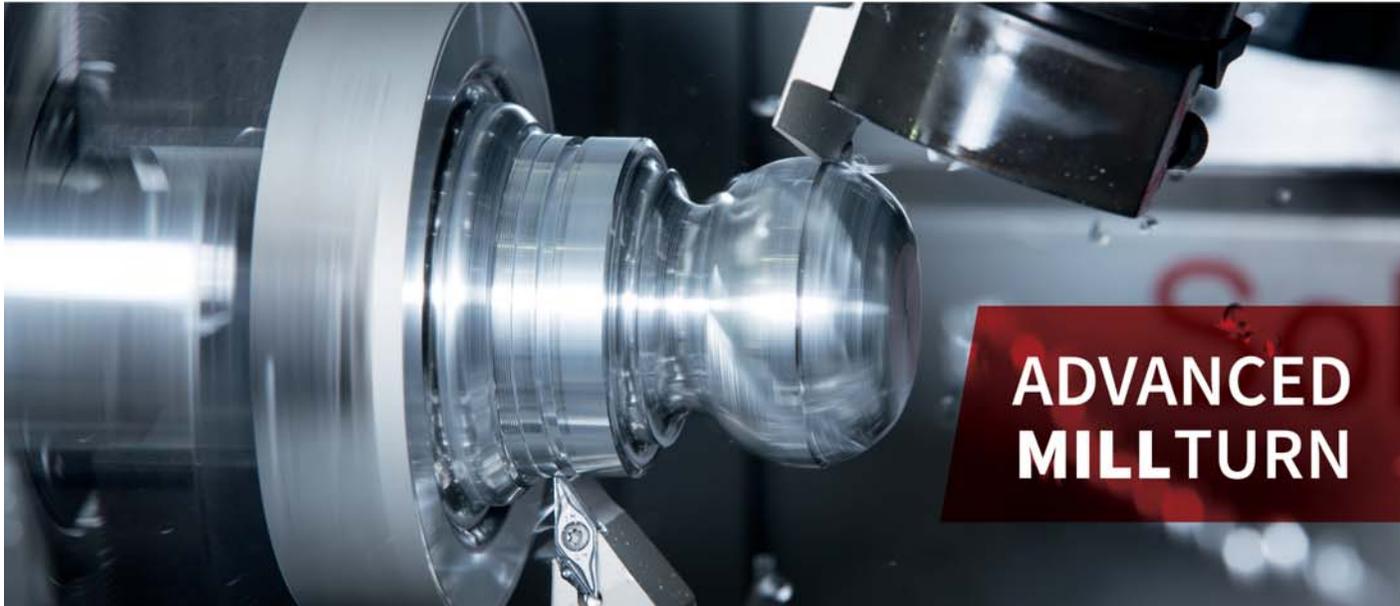
Defense is a big focus for Ashok Leyland. Dasari wants to grow this business from the current Rs.500 crore to Rs.5000 crore.



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than introducing a fancy global technology. You cannot have a high-handed approach like that and call our innovation 'Juggad'! That is disrespecting Indian innovation. Engineering is not just about solving the problem; it is about solving the problem at the right cost."

Of course, while product and service innovation have been the key pillars of the transformation process at Ashok Leyland, Dasari has also had to bring in a lot of changes at the organisational level. He is thankful that he has been supported by a great team and that the Board has showed complete faith in his decisions. Dasari selected his core team, which drove the transformation along with him, not just based on core competencies but also on their attitudes.

How the turnaround started

It was in April 2013 that Vinod Dasari had taken full control of the Company as its MD. The business plan in 2013-14 said that the Company will sell 89,000 vehicles. "And I had a scenario where at 65,000 or something, we would lose a hundred crore rupees. My gut feeling was that we would actually do about 54,000. At that number, we would lose Rs.800 crore. And by the way,

"People describe our industry as a complex industry but I feel it is very simple. There are only two things that work in this industry – make a product that performs well and have a service network that ensures the performance is maintained."

Ashok Leyland has never lost its money in its entire history! The question was, can we do only 54,000 vehicles and still not lose money. In June 2013 I went to London along with my CFO to meet the promoters and presented the scenario to them. They asked me if I was doing any cost cutting. And I explained to them that small cuts won't help and that I have to do some deep cuts and some of it will not be palatable. But I have to protect the company. I said there are a lot of risks but I am confident that I can execute it. They said go ahead," Dasari narrates.

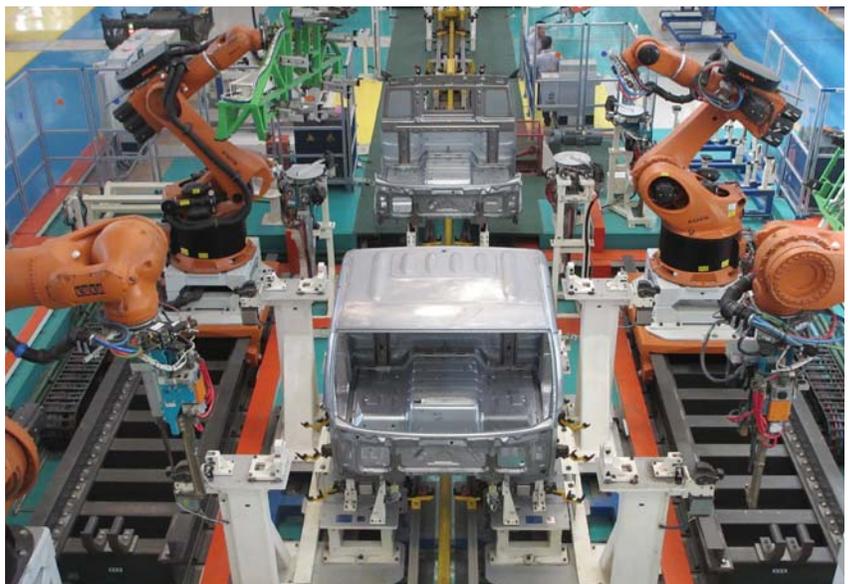
So, Dasari launched a programme called K54, which basically aimed at breakeven at 54,000 vehicles. "By the way, that year, we finished at 54,050! And we just about broke even. That was the bottom for us. Since that time, our Ebitda has gone up for from about two percent at the bottom to nine straight quarters of double digit Ebitda, which is the highest in the industry. In terms of stock market performance, we were at about Rs.12 a share and we went up to about Rs.120 a share. In many ways, in terms of market performance, where

the customer was rewarding us, we were doing very well. In terms of financial performance, we were one of the best performing companies not just in India but in the world," Dasari shares with pride. That, Dasari, describes as the Chapter one of

his journey at Ashok Leyland. "Chapter two has now started," he says.

Transformation 2.0

Dasari says that Ashok Leyland now has a very structured and



Inside Ashok Leyland's Deming Prize winning Pantnagar Plant

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comprehensive leadership development programme at all levels. The target Dasari has given to Ashok Leyland's HR is that they should have a hundred CEO candidates. And a lot of work is being done to try and get there. "At one of the leadership development programmes, I said that 'when we were performing really badly, all I had to do was cut your salary and you knew something was wrong'. That communication was easy. Now, things are different. Employees are getting 150 percent of their performance variable pay and their salary is in the top range of the industry standard. So how do you then get these people to be excited and motivated. This communication is a lot more difficult." So Dasari explains the five-year strategy to his people.

The foundation of this strategy is 'Quality, People and Brand'. It includes a lot of things like digital approach, solutions approach, and so on. "In the period of three years to five years, we are migrating from a linear manufactured vehicle to a modular vehicle. Soon, we will move from Euro 4 to Euro 6, which has never been done before. We will go from some degree of internal combustion engines to electric vehicles. May be the customers will say 'Don't sell me a truck as I get paid per ton kilometre so I will pay you per ton kilometre.'" Quite likely, I say. "It is. So, we have to prepare a Company with a DNA, which is different from what it was in the last 70 years. Not only you have to take the initiatives to make the Company successful in the coming times but you also have to change the DNA of the Company along with its culture as well as the thought process! We had to change the DNA once in 2013. And now I have to change it again 2017! We must keep rolling. We will have to do it and this changing DNA is not a choice. It is a matter of survival."

Dasari is big fan of the book 'Zero to One', which he asks all his people to read. And as in the first chapter of this book, he often asks one question to his people. "What is the one truth that you believe in but nobody else will believe in?" The answer that Dasari himself gives to this question is that 'If we don't do one more transformation, we will not survive'. "This is the one truth I believe in but nobody else believes. They say that the company is doing well, everybody is getting paid well, we are winning awards, our Pantnagar plant won the Deming

Focus on service

Ashok Leyland has, in recent years, expanded its network rapidly to cater to its wide set of customers. It has 1000 touch-points with an additional 5000 outlets for Leyparts, the genuine spare parts brand. A service centre at every 75kms on all major highways, Ashok Leyland delivers its "Tatkaal" promise of reaching customers within 4 hours and getting their vehicle back on-road within 48 hours. There are also a slew of initiatives and programs by Ashok Leyland for the aftermarket business in the CV industry. Some of these include Add-on service packages, Cabin Repair Facility, Knowledge On Wheels, 24x7 Accident care call centre, and so on.



Sunfire is Ashok Leyland's next generation school bus. It is equipped with segment first features like anti-bacterial interiors, anti-skid flooring, fire retardant interiors, i-ALERT system for real time tracking and a front collision avoidance system called 6th sense. Dasari strongly feels India needs to adopt stricter safety norms when it comes to school buses. "Children are a nation's future and to protect them and ensure that their travel to and from school is stress-free, it becomes imperative that we rehaul their mode of transport," he says.

Prize and so what are you talking about. Well, it's not that I see an iceberg in front of us. I see a beautiful pasture ahead of us and if we don't take advantage of it then we will miss it completely and perhaps even get swallowed by somebody else.

Dasari believes that here are two aspects to the second transformation. One aspect is that Ashok Leyland should be able to deal with the disruptions that are coming to the market. "We should be able to navigate these disruptions better. Equally important is to prepare the organisation to be ready to deal with these disruptions because nobody knows what these disruptions will be. Technology is changing much faster than it used to earlier. Today, we have the lowest cost per horse power in the world, we are only company to make a BS III vehicle with an inline mechanical pump, we are only one with the BS IV with the EGR in the world. These innovations are the hallmark of Ashok Leyland. But these are no longer relevant! Not only I have to invest in the right things but also get the organisation ready," he explains.

Having said that, Dasari believes it is the most exciting period in the entire automotive history by far. He doesn't want his people to get scared about it. "I want them to get excited about it and embrace it. We are best suited to embrace it because we are on a strong platform," he says. While Dasari has great faith in India's manufacturing prowess, he believes that the country's design capabilities could be the game changer. "Today, we are the only ones in India who design and make their engines in India. Our engines are designed by us, developed by us and manufactured by us. That's why we are able to create what is required in India. PM Modi's 'Make in India' campaign is very good but if you want to make it successful then you will also have to 'Design in India,'" he says. 



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Robotics 2.0 is knocking: Here's what it means

By 2020, we may see robots taking on tasks that were never thought to have the potential to be automated.

By Vikrant Yadav

Being a part of an industry that is expected to grow four-fold in the next four years in like being on a swing only goes up. This is India's e-commerce industry. According to a May 2016 ASSOCHAM-Forrester study, India's e-commerce revenue will jump from US \$30 billion in 2016 to US \$120 billion in 2020, growing at 51 percent per annum, the highest in the world.

Smartphone savvy millennials looking for a superior experience, competitive pricing and shopping on the move seem the surface reasons for this massive growth. However, there is something beneath the surface: warehousing costs for an e-commerce player can be as much as 25 percent of their total supply chain costs. Therefore, it is essential for e-commerce and logistics companies to automate their warehouses by deploying robotic systems to make their supply chains more effective and efficient.

With selling propositions like same-day delivery, four-hour delivery, the level of automation at warehouses becomes the key differentiator for e-commerce players. Think of a warehouse the size of a football stadium with over 10,000 different types of products. Manual sorting of shipments based on delivery desti-

nations can be cumbersome, inaccurate, and inefficient. Instead, a robotic sorting solution can read the barcodes on the packets, and sort them according to customized parameters such as first-in-first-out, delivery address, same-day delivery etc., thereby, speeding up the process almost 10 times, with higher accuracy.

Not just e-commerce and logistics, robotics will disrupt several other industries in the next few years. For instance, only about 1,000 robot-assisted surgeries were performed around the world in 2000. The number had dramatically gone up to about 5,70,000 in 2014 and is well expected to have crossed the two



As demand surges, we will see large industrial zones that will co-locate all these elements at one place, just like an industrial hub for automobile manufacturing.

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million mark by 2015. High precision procedures during the surgery can be handled by robots (under human supervision) to increase the chances of success of a surgery. Similarly, when you are in Japan the next time, try checking into the Henn-na hotel in a Netherlands-themed amusement park in Nagasaki. The hotel is completely staffed by multilingual robots that can process language to understand the orders and requirements of its guests and take care of them.

These examples are merely the tip of the iceberg. Robotics can do much more to reignite the global industrial growth. Here's how:

Robotic development zones

In order for an industry to flourish, it requires a conducive ecosystem. Currently, all the robo-developers work in silos, looking to source the required components, finding the right vendors, setting up manufacturing and assembly plants, and looking for the right talent to man the operations. As demand surges, we will see large industrial zones that will co-locate all these elements at one place, just like an industrial hub for automobile manufacturing. This will reduce the elementary barriers (infrastructure, talent, and choice of vendors etc.) and bring down the overall cost of development of robotics solutions.

Ease of Prototyping

Prototyping is the process of developing a work-in-progress system that helps in understanding the requirements and functionality of the solution. For large and complex robotic systems, building iterative prototypes helps get a real sense of the system without actually having developed one. Therefore, there are higher chances of developing the final product that meets the requirements of the potential user. However, currently it is a very expensive and time-consuming process.

As the robotics industry grows in terms of volume, the economy of scale will play a part to bring down the cost of prototyping. Moreover, rapid advancements in 3D printing will further inspire the maker-culture. Combined with the power of augmented reality, the future 3D printers will not only be able to bring to life the sketch of a robotic system or a synthetic drug but also make it function in a virtual environment, thus cutting down the cost and time of prototyping to a great extent.

From algorithm to intelligence

Most of us were first introduced to the concept of machine learning somewhere in the early 90s when Hollywood science fiction movies depicted robots whose coding had gone awry. With intelligence and processing power exceeding human capabilities, these humanoids tried to overthrow cities. Even now, we are nowhere close to such threatening robots in real life. However, systems equipped with machine learning can capture the usage patterns of the past and optimize future performance. This helps in self-customization of the systems to get desired results. Therefore, rather than being deployed for 'predictable', 'routine' jobs, new age robots can take up more complex tasks.

Consider a robotic pick-and-put system in a warehouse that reads the historic data patterns to understand that the sale of certain apparel brands goes up during the Diwali festive sales. Right before the festive season, it can place the racks that store these items in front and push back the racks of slow selling items to the other end of the warehouse. This can optimize the time for pick-put, cut down the processing time for shipments, and enable e-commerce companies to handle their 'Big Billion Sales' seamlessly.

Machines speaking to each other

Currently, IoT initiatives are mostly about connecting devices such as mobile phones, home appliances, and automobile with each other using data enabled smart sensors. Going forward, the Internet of Robotic Things (IoRT) will connect robotic devices of various configurations with each other, making them leverage each other's data seamlessly. The idea of a smartphone application that enables a doctor to control a robotic arm from miles away and perform complex heart surgery will no more be a leaf out of a Hollywood flick. As data processing becomes faster, reliable, and more affordable, connected robots will work autonomously and require human intervention only for troubleshooting.

The trends indicate that robotics is set to see major disruptions in the near future. By 2020, we may see robots taking on tasks that were never thought to have the potential to be automated. All I can say is that we are set for some exciting times. 🤖

The author is Country Manager, India, GreyOrange



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Intelligent production for the new Sprinter

For the upcoming start of production of the new model of the iconic Sprinter van, Mercedes-Benz Vans brings new connected series-production technologies online.

Mercedes-Benz Vans has been holding a leading position in the area of intelligent production among the van manufacturers already for years. Now the business division is lighting the next stage: For the upcoming start of production of the new model of the iconic Sprinter van, Mercedes-Benz Vans brings new connected series-production technologies online. The reasons behind this are increasing requirements on flexibility and efficiency. For one, the variety of variants will increase further – for example, as the result of manufacturing electrified vans. In addition, the global production network of Mercedes-Benz Vans has been utilised near capacity for years, and sales are rising continuously. The employees benefit from the increasing digitisation in production by being relieved of routine tasks. This is to give them more and more time for higher-end tasks.

Between 2017 and 2025, Mercedes-Benz Vans plans to invest more than 200 million euros in the expansion of intelligent production. Frank Klein, Head of Operations Mercedes-Benz Vans, recently presented key new technologies in running production operations in a press workshop at the Sprinter plant in Ludwigsfelde near Berlin.

By the end of the year, the first vehicles are to be able to operate freely and thus flexibly in the buildings thanks to optical sensors. Currently, the AGVs still follow predetermined paths.

New milestone on the road to full connectivity

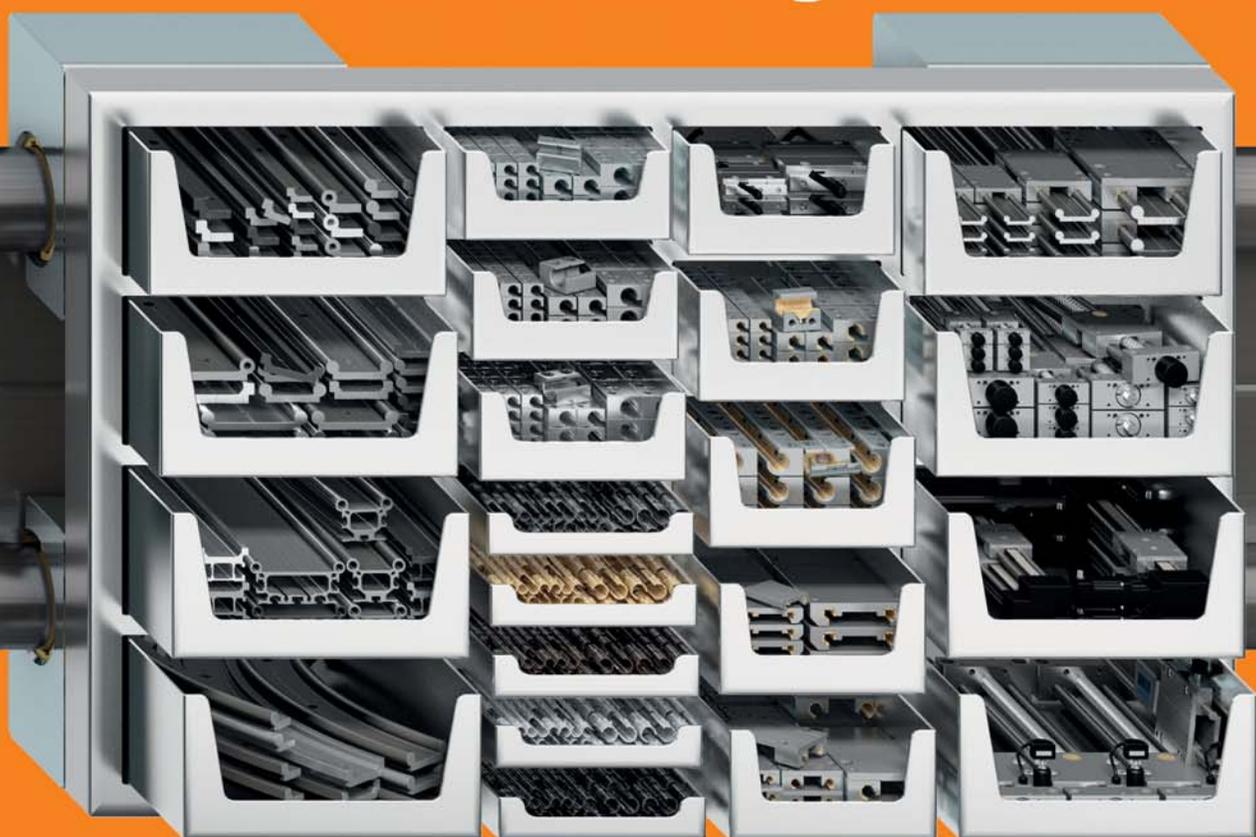
“We will take the next logical step in the advancement of intelligent production at Mercedes-Benz Vans with the upcoming new Sprinter,” says Frank Klein. “We already accomplished a great deal in recent years. With the paperless factory, self-driving transport systems and a host of other projects, we have set the course for the future. As part of our ‘IntelligentProduction@VANS’ strategy, we are now setting another milestone on the road to the fully connected ‘factory of the future’ for more efficiency and flexibility. We want to realise potentials throughout the entire production process with new technologies such as RFID. Our production operations around the world are to be fully digitised by 2025”.

RFID technology for even better production processes

For employees in logistics and production, it has been a long-pursued goal: knowing exactly where a particular component is at any given time. The benefits are obvious: This information allows them to respond flexibly to changes in the sequence, such as caused by delays in certain areas, and change plans on short notice. In addition, they always know the current warehouse stock. The quality assurance employees are consequently also always informed whether the right component was installed in the right vehicle. All that is already reality in the Mercedes-Benz Ludwigsfelde plant. In a pilot phase, the so-called RFID technology (radio-frequency identification) is used to track and identify the door mirrors and seats automatically and contactlessly via radio waves. This happens from the moment they are received to the time the Sprinter rolls off the lines. The project is being implemented in close cooperation with the Fraunhofer Institute for Factory Operation and

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Automation (IFF). The goal in Ludwigsfelde is to digitally connect up to 40 parts with the production system via RFID in the next few years. With the ramp-up of the new Sprinter, the technology will become an integral part of series production in Ludwigsfelde. Other locations of Mercedes-Benz Vans are also to be equipped with this technology.

Relieving employees of routine tasks

“New digital technologies such as RFID offer the major advantage of relieving our highly qualified production employees of routine tasks such as documenting work steps”, says Klein. “Our employees have extensive experience and know-how in the production of globally successful vans. They should also be able to use both to full effect in their day-to-day work.”

In the past, the employees in Ludwigsfelde had to manually and repeatedly scan barcodes on the mirrors and seats at various stations – in addition to their actual production job. The RFID solution eliminates a total of seven documentation-related work steps per vehicle for these two components alone. RFID consequently relieves the employees of this routine task and thanks to automatic checks gives them peace of mind knowing they installed the right parts.

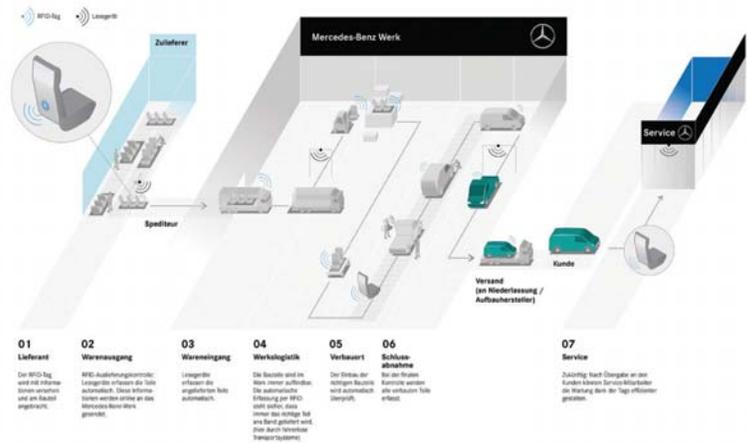
RFID from supplier to the van customer

The implementation already starts far outside the gates of the Mercedes-Benz plant: at the suppliers. They attach the electronic labels required for RFID – so-called RFID tags – to the components. As a result, the suppliers are the first to benefit from the advantages of the technology in their own logistics and production operations and are able to identify and track parts via radio waves. The labels are computer chips roughly the size of a postage stamp, which can store and send information. To track the components with these transponders, readers are located at key points of the logistics and production operations. The wireless contact is established by radio waves generated by the readers. The waves power the chips and thereby prompt them to send their information. RFID also offers advantages in after-sales, when the vehicle later is in customer hands. It allows service employees to use information stored in databases to retrace which parts are installed with the greatest of ease.

Additional self-driving transport systems for Sprinter

The Mercedes-Benz Ludwigsfelde plant already has extensive experience with RFID. Since 2012, automated guided vehicles (AGV) have been deployed effectively in the assembly operations in Ludwigsfelde – currently around 20 vehicles. They are controlled for one by being connected to the IT system, but for another also by RFID. To this end, the transpond-

Radio Frequency Identification (RFID) bei Mercedes-Benz Vans



ers are in the floor of the factory buildings and contain driving commands. Ten more AGVs will be used and additional routes will be developed with the start of production of the new Sprinter. For about a year now, the second generation of the AGVs has already been operating in the plant. These vehicles communicate with each other via Bluetooth to coordinate their actions autonomously. This ensures a smooth traffic flow even when several AGVs cross paths. Up to now, simultaneous coordination was only possible between a few vehicles. By the end of the year, the first vehicles are to be able to operate freely and thus flexibly in the buildings thanks to optical sensors. Currently, the AGVs still follow predetermined paths. The AGVs of the first generation also are able to recognise obstacles such as forklifts or pedestrians via laser scanning. In this case, they stop automatically.

New IT architecture for global data networking

New digital systems such as AGVs or the parts connectivity via RFID require a highly effective IT infrastructure. A lot of data must be acquired, processed and provided to other areas in real time. For example, the RFID data are sent to Equipment Monitoring, Production Control, Quality Inspection, and Parts Scheduling. Experts from Mercedes-Benz Vans have now developed a completely revised IT architecture together with partners. The central element is a “data highway”, which all systems can access at the same time. In addition, the different IT platforms of the plants worldwide will be harmonised to ensure a global exchange can take place.

Furthermore, the architecture makes it possible to quickly add new digital applications – just as the ‘app’ principle of smartphones. This means that once the RFID pilot project is completed successfully, other plants will be able to use the finished software immediately. Mercedes-Benz Vans will gradually roll out the new IT architecture globally starting next year. 

Source: Daimler AG

Production and new orders increase in September 2017

Favourable economic conditions and strong underlying demand were linked by survey respondents to greater production.

September saw a sustained expansion in the Indian manufacturing sector, supported by increases in both output and new orders. However, the rates of expansion eased slightly in both cases. Reflecting greater inflows of new work, Indian manufacturers raised their staffing levels, and at the fastest pace since October 2012.

Meanwhile, post-production inventories reduced during September at a survey record pace. Cost burdens increased further over the month. Consequently, firms raised their output charges to pass on higher input costs to customers. At 51.2 in September, the Nikkei India Manufacturing Purchasing Managers' Index (PMI) was unchanged from August.

The reading was indicative of a modest improvement in manufacturing sector business conditions in September, and one that was below the long-run trend (54.1). The PMI has now registered above 50.0 for two successive months. Growth in the consumer and intermediate goods categories offset a contraction in the investment goods sector.

Inflows of new orders increased for the second month in succession during September. The rate of growth softened from the preceding month and was marginal overall. Where an increase was registered, firms cited stronger domestic demand conditions.

Those panellists that recorded lower new business commented on the negative impact of GST. Meanwhile, new export orders decreased, thereby ending a three-month period of expansion as demand from international markets reduced.

Mirroring the trend for new orders, output increased for the second consecutive month as the manufacturing sector continued to rebound from July's decline. That said, the rate of growth softened from the prior month, and was modest. Favourable economic conditions and strong underlying demand were linked by survey respondents to greater production.

Reflecting improvements in new orders (and subsequent capacity pressures), manufacturing producers continued to increase their payroll numbers in September. In fact, the rate of employment growth quickened to the fastest since Octo-

ber 2012. Staffing levels have risen in three of the past four months. That said, the rate of employment was modest.

The introduction of GST, and greater prices for steel and petroleum products reportedly caused cost pressures to intensify during September. The rate of inflation was modest, and remained below the long-run series average. Firms raised their selling prices to protect margins amid higher inflationary pressures. Nonetheless, due to competitive conditions, firms were only able to increase output charges at a marginal pace. Destocking continued at the end of the third quarter, with both pre- and post-production inventories reducing. The latter decreased at the most pronounced rate observed since the incep-

tion of the series. Survey respondents reported that orders had been fulfilled directly from existing stocks.

Commenting on the Indian Manufacturing PMI survey data, Aashna Dodhia, Economist at IHS Markit and author of the report, said: "September data painted an encouraging picture as the sector continued to recover from the disruptions caused by the introduction of the GST in July. This sustained amelioration reflected expansions in new work and output, supported by stronger domestic demand conditions. Subsequently, business confidence strengthened among

manufacturers as they reportedly anticipate long-term benefits from recent government policies. This was confirmed as the sector experienced meaningful gains in employment. That said, output and new business growth remained weak in the context of historical survey data. "The strengthening of the Indian rupee may put a strain on efforts to rejuvenate demand for Indian goods from export markets. Meanwhile, cost pressures intensified during September, but inflation remained weaker than the long-run trend. "The lingering effects of recent economic shocks continue to cast a shadow on economic growth as IHS Markit downgrades its real GDP growth forecast to 6.8 percent for fiscal year 2017/18. It will be interesting to see if India's new economic advisory council will bolster its path to recovery."



Source: Nikkei India Manufacturing PMI



Maharashtra and Gujarat on top of manufacturing chart: ASSOCHAM Study

Various parameters considered include number of factories, output value, etc.

Maharashtra and Gujarat ranked among top states in terms of manufacturing emergence in mainstream states across India, noted a recent study conducted by apex industry body ASSOCHAM.

“While Maharashtra has topped with highest growth in entrepreneurs memorandum (EM) part-II filed by micro, small and medium enterprises (MSMEs), Gujarat has performed very well on parameters like change in capacity utilisation, operational ratio, value addition and input cost,” stated an ASSOCHAM study titled ‘Manufacturing Excellence and Emergence in India: The state level analysis.’

The ASSOCHAM Economic Research Bureau (AERB) had considered various parameters like number of factories, output value, working capital, net fixed capital formation, fixed capital, finished goods, capital invested, total inputs and others to ascertain the states’ performance in terms of manufacturing sector.

The data was taken for each state from sources like Annual Survey of Industries, Ministry of Statistics and Programme Implementation, Government of India website for a five year period between FY10 and FY15.

The study also highlighted various challenges being faced by India’s manufacturing sector – competitive cost and technology being offered by countries like Bangladesh, China, Indonesia, Korea, Singapore and Taiwan.

While development process in other countries follows a transition from agriculture to manufacturing and then towards services sector, however India’s growth has been services sector-led as such there have always been concerns about sustainability of such a growth.

The ASSOCHAM study also stressed upon the importance of increasing share of manufacturing sector in India’s gross domestic product (GDP) to absorb a young workforce as bulk of population relies on agriculture for employment.

“The Union Government must address issues relating to poor product quality, infrastructural bottlenecks and inadequate efforts at research and development from a holistic macro perspective as they have collectively taken a toll on India’s manufacturing competitiveness,” said D.S. Rawat, Secretary General, ASSOCHAM while releasing the findings of the study.

“Considering that majority of investment projects in the manufacturing sector are stuck in different stages of implementation, we at ASSOCHAM have time and again suggested the Union Government to develop a strong plan to prioritise speeding-up the process by creating a target-oriented roadmap,” said Rawat.

“At the same time private investors must also be held accountable and be penalised if projects get delayed or stuck due to improper planning, change of ownership, lack of finance, absence of co-ordination with contractors and other related issues,” added ASSOCHAM’s secretary general.

Maharashtra:

With a ratio of 1.29, Maharashtra has emerged on top with growth in terms of EM part-II filed by MSMEs at District Industrial Centres in FY15 over FY13. The state has also performed decently well on various parameters with third highest ratio in terms of change in return on capital, operational ratio, value addition and input cost.

Besides it is ranked fifth in terms of change in total factor productivity, fixed capital income ratio and in terms of growth in manufacturing gross value addition (GVA) in FY15 over FY13. However, Maharashtra must





focus more towards improving capacity utilisation (8th rank) and efficiency (11th rank).

Gujarat:

Gujarat is ranked second among top states in India in terms of change in capacity utilisation, operational ratio, value addition and input cost. State has also performed decently with fourth and fifth position in terms of change in return on capital and efficiency respectively.

It must focus on improving growth in manufacturing GVA (8th rank) and in filing of memorandum by entrepreneurs (14th rank). Besides, improvement is also needed on fronts like factor productivity (15th rank) and fixed capital income ratio (16th rank).

“The Union Government must address issues relating to poor product quality, infrastructural bottlenecks and inadequate efforts at research and development from a holistic macro perspective as they have collectively taken a toll on India’s manufacturing competitiveness.”

D.S. Rawat, Secretary General, ASSOCHAM while releasing the findings of the study.

The aforementioned parameters are explained as follows:

- EM-II-Growth rate in EM-II filed by MSMEs at District Industrial Centres in 2014-15 over 2012-13; high ratio is better.
- Return on capital-Profit as a proportion of invested capital; high ratio is better.
- Operation ratio-How much of the value of output has transformed into net income; high ratio is better.
- Value addition-How much of the value of output is net value added in current year; high ratio is better.
- Total factor productivity-Value of output as a proportion of the total of invested capital and total person engaged; high ratio is better.
- Fixed capital income ratio-How much of the invested fixed capital is transformed into output value; high ratio is better
- Manufacturing GVA-Growth rate in manufacturing GVA in 2014-15 over 2012-13; high ratio is better.
- Capacity utilisation-How much of the invested fixed capital has transformed into fixed capital formation; high ratio is better.
- Efficiency-How much of the working capital is being converted into value of output; high ratio is better.
- Input cost-Total input cost as a proportion of value of output; low ratio is better. 

Source: *The Associated Chambers of Commerce & Industry of India*



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Manufacturing for Industry 4.0

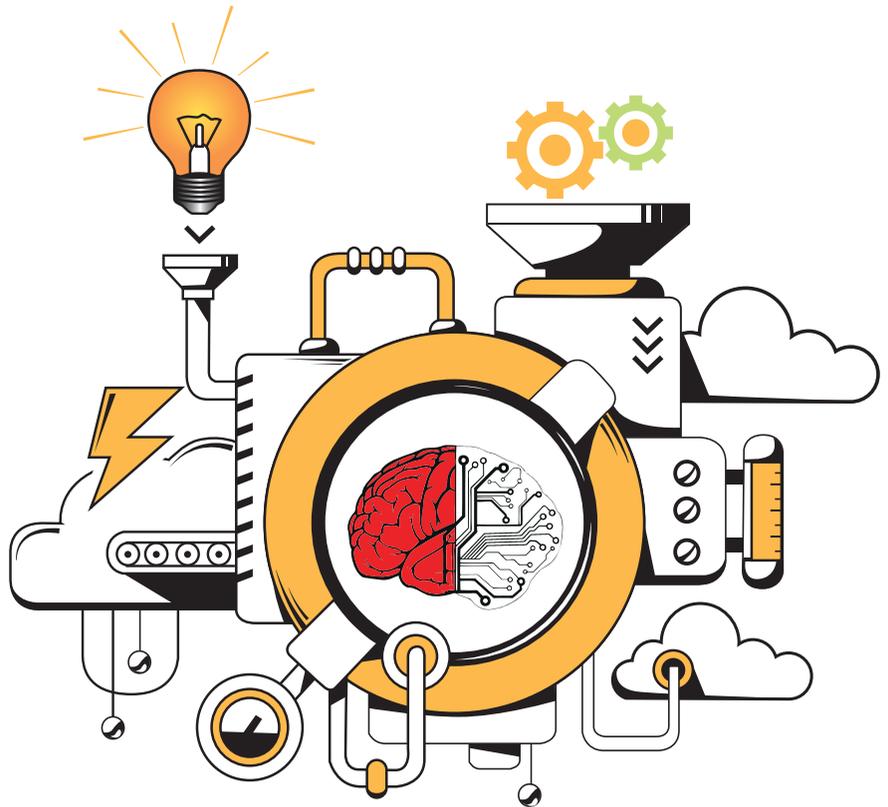
With the gradual shift in technology and internet penetration, the fourth industrial revolution is all set to ride the digital wave of growth and expansion, with automation and robotics at the heart of it.

By Vijay Wadhwan

Manufacturing over the past few years has been focal to the government's ambitions of making India an attractive destination for investment. Its much fabled 'Make in India' campaign has dedicated itself towards establishing the nation as a perennial powerhouse in the global manufacturing segment. Today, India is the sixth largest manufacturing country in the world, with FDI (foreign direct investment) inflows touching \$60 billion in 2016-17, the highest ever annual inflow. Its manufacturing sector accounted for just 16-17 percent of gross domestic product (GDP), a testimony of the nation's untapped market potential.

Global manufacturing landscape on the other hand is rapidly being transformed by digital technologies such as the 'internet of things' and 'robotics' which collectively are being referred to as the 4th industrial revolution or 'Industry 4.0'. The term was coined six years ago in Germany from a national government project, which sought onto improving the computerisation and innovation of manufacturing in the country. Whilst the revolution that preceded it was all about automation of isolated machines, industry 4.0 concentrates on end to end digitisation of all physical aspects that make up the digital ecosystem. This concept is the heart and soul of the smart factory which constitutes of real time connections between humans, machines and objects.

With the gradual shift in technology and internet penetration, the fourth industrial revolution is all set to ride the digital wave of growth and expansion, with automation and robotics at the heart of it. Although the very idea of automation has shaken some economies, because of the predicted disruption it will cause within the walls of the employment market, a much acceptable response for the same is 'Robots should be able to do what humans can't'. What industry 4.0



"India has a number of factors running in its favour which includes a huge growing market, large labour workforce with diverse skills, demographic dividend, R&D centres of over 1000 multinationals and the world's third largest technology start-up base."

is essentially doing, is altering the cost of economics of manufacturing and competitiveness some countries possess due to the low cost of their labour. Large amounts of efficiency and productive gains are being realised through cost reductions, quality improvements and customisation.

At 27 percent, our nation stands slightly behind the global average of 33 percent in terms of level of digitisation encapsulated within its economy. However, India has a number of factors running in its favour which includes a huge growing market, large labour workforce with diverse skills, demographic dividend, R&D centres of over 1000 multina-



“What Industry 4.0 is essentially doing, is altering the cost of economics of manufacturing and competitiveness some countries possess due to the low cost of their labour.”

tionals and the world’s third largest technology start-up base. These factors when merged with India’s advantageous ecosystem can have far reaching implications on productivity, employment and holistic well – being. They are leading to structural shifts in global manufacturing such as: blurring lines between products, services digital services have become the growth drivers for manufacturers across. The rapid growth of exchange of products on digital platforms such as Amazon is enabling the creation of a digital marketplace, which in turn is reducing the focused investment on individual asset supply chains.

India has the potential to become the digital factory of the world by being at the forefront of change and adoption of the global digital revolution. For that to materialise, the country needs a new policy to incentivise the adoption of such technologies and develop the infrastructural ecosystem whilst meeting the requisite skills gap, and ensuring employment for

millions entering the job market.

The new facets of ‘Make in India’ should now focus on growing digital services. Worldwide the trade in digital services is growing faster than trade in goods and traditional services. The mass availability of devices with the capability of working under the concept of IoT and advancement within the sphere of 3D printing, is shifting the potential

India has the potential to become the digital factory of the world by being at the forefront of change and adoption of the global digital revolution.

life cycle value from equipment manufacturers to service providers.

India is looking ahead towards capturing 20 percent of the \$300 billion IoT market by 2020, as the value of digital services continue to bolster we will now have to leverage the advantage we have built globally within the IT sector. By reiterating the requisite set of skills and pushing them in the direction of areas such big data analytics and cyber security, will help us win a considerable pie of the global digital services and aid in digitising our economic and manufacturing capabilities. 

The author is Business Head, SSD, Panasonic India

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Training: A Need of the hour!

Unskilled workforce is one of the major challenges that the Indian manufacturing industry is currently facing. Here is how various companies are emphasising on training to skill their employees and upgrade their skill sets.

By Swati Deshpande

India is currently facing a huge challenge with regard to lack of skilled workers. Commenting on the same, Bharat Vishnani, Managing Director, thyssenKrupp Elevator (India) said “While highly developed nations boast an astounding skilled manpower of between 60 per cent to 90 per cent of their total workforce, India’s situation suggests only 5% of workforce has formal vocational skills.”

In this regard, the government is taking steps to improve skills of the future professionals and make them industry ready at the end of the course. “While the government can provide

a comprehensive roadmap to push forward the broad agenda of skilling, the training initiative has to be implemented with private sector being involved in every part of the process. They need to actively participate as they know and define which skills are required,” Vishnani continued.

Skill India

Is the Government of India’s Skill India program helping the industry? To answer this, Ashish Budhiraja, CEO, AB Sea Container Pvt. Ltd. said, “Skill India program is a correct initiative taken by the government, and it was long awaited. With this program, we truly believe a new revolution can come to India, which can also be taken to foreign markets. Educated masses is still a problem in India which in turn conclude to unemployment. But some the skill programs, which are being offered, do not even require an educational background. And that is very good to make sure that if a person has missed on education for some reason, but can attain required skills that will help him/her to get a job.”

On this backdrop, Vishnani opined, “We understand the Indian Government’s skill development program is currently in the initial stage, with a country-wide rollout expected in the next few years to achieve its 2022 targets. As an industrial group with a large, highly specialised workforce, we applaud



“Training & development is indeed the corner stone that keeps our workforce efficient and effective to manage our manufacturing processes optimally and with required quality.”

Harpreet Kaur, Senior Vice President & Head - Corporate Personnel & Administration Godrej & Boyce.



“Training & Development leads to better customer service, improved work safety practices and productivity improvements. It also helps employees rapidly rise within the organisation taking on bigger roles thereby turning into a valuable asset for the company.”

Bharat Vishnani, Managing Director of thyssenKrupp Elevator (India)

the government’s efforts to improve the skill base of the population on such a large scale. However, providing the skill set required for a particular role is mainly the responsibility of corporate entities, as they best know their own requirements. Therefore, for any skilling initiative to become successful, it is crucial that the private sector becomes an active participant.”

Clearly training and development is a way ahead having Government and industry playing their respective roles. “Training & development is indeed the corner stone that keeps our workforce efficient and effective to manage our manufacturing processes optimally and with required quality,” mentioned Harpreet Kaur, Senior Vice President & Head - Corporate Personnel & Administration Godrej & Boyce.

Emphasising on the significance of training, Vishnani continued, “Training plays an extremely important role for any organisation as it increases the overall business performance and profit while enhancing staff morale. It leads to better customer service, improved work safety practices and productivity improvements. It also helps employees rapidly rise within the organisation taking on bigger roles thereby turning into a valuable asset for the company. In the Indian context, training and development is even more important since availability of manpower resources is huge, however, the quantum of skilled manpower is limited. Hence, it becomes necessary for the organisation to take initiatives towards training of its existing employees. Organisations can also recruit unskilled workers and invest time and effort towards providing them the necessary training. Offering necessary training also ensures that the employee attrition rate is kept under control.”

Further he explained how training is conducted in the company. “We at thyssenkrupp on our part have set up our SEED Campus in India with an intention to provide specialised training of global standards, to not only our employees but also a large number of engineering graduates fresh out of colleges. Our SEED campuses are renowned globally for the specialised training and practical industrial exposure provided to its students. It is a pool out of which we are developing engineers for our elevator division, bringing up well qualified maintenance and service personnel and train and educate new

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“Training employees to adapt new trends and ways of executing operations, and further developing machinery or infrastructure to assist in the operations is a sure short way of success.”

Ashish Budhiraja, CEO, AB Sea Container Pvt Ltd

starters. Hence, in our own way, thyssenkrupp’s SEED Campus supports the development of local skills and knowledge, although on a smaller scale.”

Speaking about steps that Godrej & Boyce takes, Kaur explained, “We have a comprehensive developmental approach on competency based functional and leadership approach. We first identify gaps and the programmes to address these gaps. There are structured programmes like General management/ Technical programmes at junior management and programmes like VLFM, Tic-ups with IIMS or specialisations and General Management programmes for mid to senior management programmes.”

AB Sea Container Pvt Ltd as well organises training programs. Speaking on the same, Budhiraja said, “For the management, we have leadership training courses, which occurs every year. For supervisors and other levels of divisions we provide trainings for time management, trust activities, whistleblower, natural disaster and special skills training for labours.”

Upgrading skills

Apart from gaining knowledge and specific skill sets, upgrading and polishing existing skills is also equally important. In

this regard, “thyssenkrupp Elevator India has set up SEED Campus at its Multi-Purpose Facility, Chakan Pune, for centralised training. Training activities are also conducted at zonal level in six major cities of India. SEED integrates into thyssenkrupp Elevator’s global network of 17 seed campus locations. Apart from the usual classroom and AV training, this centre is well equipped with the latest digital technologies and simulators to deliver quality learning to not only the management and office staff, but also to the field technicians who are responsible to install and maintain our elevators,” added Vishnani.

In this aspect Budhiraja replied, “All our employees are trained to constantly adapt new changes and developments introduced by the management or latest technology. No doubt, initially when a change is introduced, retaliation is surly present as well. But all of the employees have been trained to adjust and understand the pros of new technology and cons of already existing technology from day one. Technological advancement is the only survival tool that organisations have today. Without constant research and development of new ways of executing work and new technology available for betterment of operations, success surly cannot be achieved. Employees surly are acknowledged with this fact that advancement of technology is for the betterment of efficiency only. Above than this we ask from employees to suggest the new ways of executions and new technologies available, which they can suggest to simplify their work. With this practice, employees are constantly engaged in the activities of exploring new ways to execution. In the end concluded with very minor retaliation to new mechanism, changes and technology.”

To conclude, Budhiraja said, “Training and development is very essential in the role of taking any organisation to success. With constant training of new skills and new technology, better and more efficient ways of operations can be attained.

While on the other hand, to implement new skills and technology acquired by training, development is further essentially required. Training and development are the most important factors which aids an organisation to get better in terms of efficiency and then to better results and finally success. Training employees to adapt new trends and ways of executing operations, and further developing machinery or infrastructure to assist in the operations is a sure short way of success. With the help of training, an organisation can derive many benefits not just monetary, but it help in identifying characteristics of leaders as well as employees. How adaptable the management and employees are, how do they work under pressure, how they respond to new theories and changes and above than that how loyal and supportive the whole organisation is when changes are introduced.” With this whole process new leaders can be discovered as well as shortcomings in the present management can also be identified. 





Expanding the market!

Not resting solely on water purifiers and air purifiers, Kent RO is now diversifying into other categories as well and plans to introduce 3-4 products across categories every year, says Dr. Mahesh Gupta, Chairman of Kent RO Systems Ltd.

By Niranjan Mudholkar

Q How's been the first half of the ongoing financial year? How would you compare the performance vis-à-vis last year? What kind of revenues are you looking at by the end of this fiscal?

For the year ended 2016-17, the company registered a turnover of Rs.800 crore up from Rs.680 crore recorded in the previous year – registering a CAGR of about 20 percent. For the next year we are targeting a turnover of Rs.1000 crore.

Q You have recently entered into the GCC market. What is prompting this expansion drive?

People in Dubai prefer drinking bottled water, due to taste and purity concerns of tap water. However, the consuming bottled water is not convenient, as women find it difficult to lift and install the bulky 20-litre cans on water vending machines. Moreover, it is costly to purchase bottled water as well. Here, our purifiers are compact and convenient and purify tap water to better than bottled water quality, at a very low cost. Besides being economical and convenient, purifying tap water at home using our system, is much safer as compared to bottled water, and is tasty also.

The brand's wide range of household appliances will be available at LuLu Hypermarkets. The company has joined

"It has taken us 18 years to grow the overall market to Rs.3500 crore but the penetration levels are still at 2 percent to 3 percent. Once we cross four percent, I believe the growth will be exponential."

hands with UAE's Sands International for the distribution of its products across the GCC. The move is a part of the company's broader expansion plans into the Middle East and North Africa (Mena) in the next few years. Recent research indicates that the region's demand for water purifiers is growing at more than 7 per cent per annum and the market could reach nearly half a billion dollars by 2020. We have been steadily expanding into the international markets. Kent's association with Sands International and LuLu Hypermarkets will kick-start a new business era for us in the GCC market.

Q Currently, what is the domestic to overseas ratio of your revenues? How do you see it changing with the recent developments?

The company is looking to double its exports in next two years. Our export turnover is about Rs.25crore and we are



targeting at Rs.50 crore in the next two years. The company exports products to Bangladesh, Sri Lanka, Nepal and a few of the Middle Eastern Countries.

Q Kent RO has introduced the 'Save Water Technology'. Tell us about this innovation.

The RO purification process is essential to remove dissolved impurities like arsenic, fluorides, heavy metals, etc., as they are harmful for health. Conventional RO purification technology, while purifying, rejects a very high percentage of water (around 80 percent) and only 20 percent purified water is recovered. Balance water is wasted and goes down the drain.

First of its kind, Kent's Save Water Technology™ will boost pure water recovery from 20 percent to more than 50 percent. The heart of this technology is a computer controlled process wherein the membrane is washed automatically and more than 50 percent of water intake is recovered as purified water. The balance rejected water is stored in a separate 'Reject Water Tank', which can be utilized by consumers for household purposes.

On the whole, conventional RO water purifiers require 40 litres of raw water to produce 10 litres of pure and drinkable water, so you can very well imagine how much water is being flushed away daily. Realising this huge problem and technology lag country wide, Kent RO systems Limited has come up with this innovative "Save Water Technology". This is unde-

"For the year ended 2016-17, the company registered a turnover of Rs.800 crore up from Rs.680 crore recorded in the previous year – registering a CAGR of about 20 percent. For the next year we are targeting a turnover of Rs.1000 crore."

nably one of the biggest source to save wastage of drinking water at house hold level. As the global demand for water is encroaching on its supply, there is a need for recycled water. To improve efficiency in corporate water use, we need to innovate around water reuse technology and enhance water education and outreach. To make a viable option for clean water resources in the country, sustainable forms of cooperation between the private sector and government bodies are essential.

Q What kind of R&D activities and infrastructure does Kent RO have?

We have an R&D Centre and corporate office in Noida, where our whole team is working on innovations and technology.

Q Kent RO has also recently forayed into the small kitchen appliance segment. How do you see this new business shaping up?

Not resting solely on water purifiers and air purifiers, Kent RO

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is diversifying into other categories as well. We plan to introduce 3-4 products across categories every year. The company already has products like Vegetable & fruit purifiers, Air Purifiers, Car Air Purifiers, Vacuum Cleaners, Cold Pressed Juicers in its portfolio. And is in the process of adding products to its Small Appliance category like Noodle & Pasta Maker, Rice Cookers, Pizza & Omelette Maker, Chilla Maker, Turbo Blender. Focusing on health & hygiene, we are constantly diversifying our portfolio. With our range of products, we plan to change the way people cook in the country today.

The market for vegetable and fruit purifiers as well as for cold pressed juicers has not picked up yet but we believe that these products are ahead of their times and whenever they catch the consumer's attention; the company will be ready to serve them. We feel these products will take 4-5 years to get accepted by consumers. Meanwhile, company is soft launching them in the market.

Q I understand that your fourth manufacturing unit is coming up near Delhi. How much have you invested in this plant and by when will it be operational?

Overseeing the setting up of our new manufacturing facility in Noida, the company is preparing for future. The company already has a facility in Roorkee to make 5,00,000 RO units annually and 5,00,000 gravity based water purifiers running on a single shift, yet it has chosen to invest in another Greenfield facility near Noida, when a scale up in production could have been affected by simply extending the shift at the existing plant. It has taken us 18 years to grow the overall market to Rs.3500 crore but the penetration levels are still at 2 percent to 3 percent. Once we cross four percent, I believe the growth will be exponential. Investment in the new facility, which is expected to be operational by the year 2018, is expected to cost the company about Rs.100 crore.

Q What products will you be manufacturing at the new plant and how will it impact your overall production capacity?

We will be manufacturing air purifiers and small kitchen appliances at our new plant. It will double the capacity of manufacturing.

Q The issue of counterfeit products is a big challenge that Kent RO is facing. How are you dealing with it?

To caution the duplicators and counterfeit RO manufacturers, we conduct raids. In last couple of months Kent has taken a strict action against such manufacturers, suppliers and traders who are involved in selling and stocking duplicate Kent brand RO purifiers. These companies put your health at risk just to make some quick money. So, Kent is forcefully enforcing stringent legal action by way of lodging of FIR and ensuring arrest against the duplicators who are selling spurious product by illegal copying models and designs of Kent Purifiers as well as using substandard filters & parts in said look-alike purifiers.

Q What is the motivation behind your new CSR initiative – the short film called ‘Vaadi E Kashmir’. How will you contribute to this cause further?

Vaadi-e-Kashmir, a short film celebrating the Valley's warmth and oneness, has been dedicated to the nation. The vision of this short 6 minutes film is to make our brothers and sisters in Kashmir feel that the rest of the country stands with them and also open many more doors to bring us closer to each other.

We do a lot of CSR (Corporate Social Responsibility) activities. We thought Kashmir, as a subject, will bring about a change in the minds of the people and that is how this film was conceived. So, this is not at all an ad campaign or a brand film, but rather a CSR initiative and we are not spending any money for its promotion. One should not relate this film to Kent RO except for the fact that it was produced by the brand.

The film was released by Home Minister Rajnath Singh on various online platforms including Facebook, Twitter, Instagram, and YouTube. Soon renowned personalities such as PM Narendra Modi, Salman Khan, Sri Sri Ravi Shankar, Amitabh Bachchan and Hema Malini took to twitter to share the link of the song to display their love for Kashmir. 



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Digital Transformation

An event that explained how fourth Industrial revolution a.k.a Industry 4.0 is changing the interface of the Indian manufacturing industry.

By Swati Deshpande

Industry 4.0 has a great impact on the Indian manufacturing industry as it is changing the way industry works. In order to discuss changes that are taking place and challenges that CIOs are facing in the implementation of these solutions, Microsoft presented The Economic Times Digital Transformation Series – The Economic Times ChangeMakers Consortium. This event was held in Mumbai.

R. R. Dasgupta, Digital Advisor, Microsoft Corporation (India) Pvt Ltd opened the proceedings of the event with the topic of ‘Getting beyond the Hype of Industry 4.0 and making Make in India a Reality.’ During his presentation he narrated the scope of Industry 4.0 in the Indian context. While elaborating on it, he narrated a paragraph from The Fourth Industrial Revolution by Klaus Schwab – “Characterised by a much more ubiquitous and mobile internet, by smaller and more powerful sensors that have become cheaper, and by artificial intelligence and machine learning. It is the fusion of these technologies and their interaction across the physical, digital and biological domains that make the fourth industrial revolution fundamentally different from previous revolutions.”

Another interesting session was ‘A Page from the Book of Dreams’, which was moderated by Virendra Chaudhari, C+E Global Black Belt, IoT Sales Head, Microsoft Corporation (India) Pvt Ltd. In this session Anil Phillip, Head of Electronics & Control Systems, ACG Pam Pharma technologies Pvt. Ltd.; Navin Joshi, Head – Engine plant (Powertrain Division), Fiat India Automobiles Pvt. Ltd. and Leslie Khanapur, AIMS – Operations Manager, Amphenol India presented their experiences on implementing Industry 4.0 solutions in their plants. While summing up the session, Chaudhari mentioned that depending on the use and ultimate results to be achieved the solution and approach towards Industry 4.0 solutions vary from the plant to plant.

A round table discussion on Meeting the Issues of ML and automation in Indian Context was moderated by Merrill Cherian, Director – Risk Consulting, KPMG. The panellists



A round table discussion on Meeting issues of ML and automation in the Indian context

A holistic event that explained the concept of Industry 4.0 and went on to discuss its implementation and real-life challenges that occur on the way.

Bishwanath Ghosh, CIO – Enterprise, Mfg System & Corporate Functions, Mahindra & Mahindra, Venkat Iyer, Group CIO, Wockhardt and Mayank Baldi, Executive Assistant to CEO & MD, Tata Motors discussed on how Indian manufacturers can optimise the workforce efficiency and effectiveness from anywhere on many devices. Also, it touched upon topic of how one can increase the operations of assets, health and performance.

UnConferencing Session was held by Vishnu Bhavaraju, Industry Market Development, Microsoft. This interesting session brought various challenges pertaining to implementation of Industry 4.0 in light as the floor was open for the present delegates.

In all, it was a holistic event that explained the concept of Industry 4.0 and went on to discuss its implementation and real-life challenges that occur on the way. The event was organised by ET Edge.

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Felicitation of CEO Panellists of GMS 2016, New Delhi



Hall of Fame Honour given to Rajan Nanda of Escorts at GMS 2016

Manufacturing 4.0 – Skilled, Smart, Safe, Successful

Know more about The Machinist Global Manufacturing Summit (GMS) 2017 that is scheduled to take place on November 16, 2017 in Indore.

After two successful editions of The Machinist Global Manufacturing Summit (GMS) in Bangalore and Delhi, the knowledge sharing platform is set to move to another industrial hub of the country – Indore, Madhya Pradesh. Besides, being an industrial hub, the city is also surrounded by other industrial clusters such as Dewas, Dhar, Pithampur, etc.

The conference is to take place on November 16, 2017 at Sayaji Hotel will be on the theme of “Manufacturing 4.0 – Skilled, Smart, Safe, Successful”. The one-day conference program is crafted carefully with the intention to discuss new age challenges and issues of the industry. The eminent



CEOs from will talk on “Evolving economic scenario and its impact on Indian manufacturing industry.” This will help delegates understand the economic scenario of the country and its possible impact on the manufacturing sector.

On the other hand, GMS 2017 will also witness a power-packed panel discussion on “Manufacturing 4.0

- Smart Solutions for a Smart Industry” This unique panel discussion will bring solutions providers and users on a single platform. Solution providers will present solutions they have to offer and users’ perspective will help delegates understand and its advantages. As the Industry 4.0 unfolds, co-ordination between human and machine comes to a point where they complement each other for increased productivity and better products. This scenario demands change in the role of humans i.e. operators and plant heads and so we will see changes in the required skill sets. Focusing on this need of the hour, the panel discussion is planned on the topic of “Manufacturing 4.0 – Evolving role of the Plant / Manufacturing Head”. This panel discussion will talk about expectation from plant heads, managers, supervisors and operators.

To top it all, The Machinist is bringing an interesting contest for delegates, which can help them win exciting prizes. So, be there! 

As the Industry 4.0 unfolds, co-ordination between human and machine comes to a point where they complement each other for increased productivity and better products. This scenario demands change in the role of humans i.e. operators and plant heads and so we will see changes in the required skill sets.

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New benchmark for centric grippers

SCHUNK PZN-plus centric gripper is equipped with a permanent lubrication in the multi-tooth guidance

After the spectacular re-launch of the SCHUNK PGN-plus parallel gripper, the competence leader for clamping technology and gripping systems has now rolled out the superior features of its flagship product for inclusion in the 3-finger gripper series. This way, the new SCHUNK PZN-plus centric gripper is equipped with a permanent lubrication in the multi-tooth guidance which, under normal, clean operating conditions, ensures lifelong maintenance-free operation. With short strokes in particular, the continuous lubricant pockets produce a particularly fast and even distribution of lubricant along the entire multi-tooth guide contour. By enlarging the supporting dimensions between the six load-bearing shoulders of the patented multi-tooth guidance, higher moments can be accommodated and thus longer fingers can be used. In order to ensure a perfect accuracy of fit, each individual base jaw was carefully manually ground and individually fitted to its casing. In addition, the large piston drive area produces maximum gripping force. Compared with conventional T-slot-guided centric grippers, the new SCHUNK PZN-plus enables up to 50 percent longer gripper fingers, and a finger load up to 120 percent higher. Versatile screw-on options, matching those of the previous model, ensure complete compatibility and maximum flexibility with the process and system design.



An enlarged supporting dimension of the multi-tooth guidance and continuous lubrication pockets in the multi-tooth guide contour distinguish the maintenance-free SCHUNK PZN-plus centric gripper.

spectrum of conceivable automation applications can today be achieved in a reliable process, from machine and system loading in the machining industry and foundries through to assembly applications in the automotive and electrical industries as well as sensitive handling tasks in medical technology and the pharmaceutical industry. The universal grippers are equally well-suited for use in areas with high temperatures, contamination, and aggressive media, as well as for cleanrooms. Optionally, the energy supply can be connected with screws or using a hose-free direct connection. On request, the modules are available with spring safety, mechanical gripping force maintenance, compensation units for compensating angular misalignment, dust-proof versions, or as special high-precision versions. Furthermore, a wide range of sensors is available, from inductive proximity switches and magnetic switches through to position sensors for querying and monitoring stroke position. Instead of many isolated applications,

users can reduce their coordination costs with the standardized gripper program, in addition to speeding up their parts procurement process. The SCHUNK long-life warranty for the pneumatic SCHUNK PGN-plus and PZN-plus modules even enables TCO planning of the total costs throughout the entire life of a system.

Comprehensive accessories

As part of the universal SCHUNK gripper module, the new SCHUNK PZN-plus centric grippers benefit from a range of accessories which is unique in its scope. Almost the entire

For more information, please contact

Satish Sadasivan

SCHUNK INTEC India Pvt Ltd

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True RMS power clamps

The FLIR CM83 and CM85 are industrial-grade power clamp meters engineered with advanced power analysis and variable frequency drive (VFD) filtering functions to meet the needs of electrical troubleshooters. The CM83 and CM85 meters offer additional features including Bluetooth technology to connect compatible mobile devices for remote viewing and sharing, and METERLiNK technology, to wirelessly embed electrical readings into radiometric infrared images on compatible FLIR thermal cameras.

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For more information, please contact Flir at flirindia@flir.com.hk





DF range of CVD diamond coated end mills

Mitsubishi Materials Corporation, Advanced Materials & Tools Company has expanded the DF range of CVD diamond coated end mills. The DF end mill series has received a favourable reception in the market as a tool that realises optimum performance and that are ideal for milling graphite electrodes, copper alloys, aluminium and FRP. It exhibits an excellent resistance to wear when machining graphite materials that are extremely brittle and flammable. To expand the options available to customers, a long overall length type and ball nose end mill with a long neck will be added to the middle length flute type in the DF series.



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UPDATES

Industry veterans launch smart LED venture iBahn

Rajeev Chopra, former Philips India CEO and former Global CEO, Business Group Home, Philips Lighting BV, has announced the launch of a Smart LED Lighting venture - iBahn Illumination. The company has been formed along with the core leadership team that includes Arjun Shahani, Kunal Chaudhuri, and Sudeshna Mukhopadhyay.

A brainchild of the team that pioneered LED Lighting in India, iBahn, which has raised its first institutional round of funding from Sequoia India, aims to disrupt the market with its brand of 'Smart LED Lights,' Svarochi.

Announcing the launch, Rajeev Chopra, Co-Founder & CEO, iBahn Illumination said, "Our aim is to disrupt the market by offering a range of smart LEDs based on Bluetooth mesh technology, which will enable users to control the intensity and colour of their lights through our easy to use Smartphone app. We believe the 'Smart LED' market is likely to be a Rs. 40,000 m (\$600m) market by 2022. Our brand 'Svarochi' will offer innovative products that are high on functionality, easy to use, locally relevant and affordable."

Speaking on the market scenario, Arjun Shahani, Co-Founder & COO, iBahn Illumination said "We envision that Smart LED Home Lights in India will replace 'standard' LEDs in the next 10 years. We are looking to leverage the team's track record in execution and driving innovation at affordable costs to revolutionize the market, and have greater adoption of Smart LEDs in India."

We believe the 'Smart LED' market is likely to be a \$600m market by 2022.

Rajeev Chopra, Co-Founder & CEO, iBahn Illumination

Abhay Pandey, Managing Director, Sequoia Capital India Advisors, said "Smart LEDs are the next frontier in lighting solutions. iBahn has identified a massive opportunity that exists in the LED Lighting market today and created a product that is easy to use and very locally relevant. Sequoia India is excited about partnering with this team in a high potential market."

"Svarochi" is a Sanskrit word which means "brilliant appearance" and "own ray". Svarochi Smart Lights aspire to make spaces beautiful creating the perfect lighting effect for



every room and every occasion using your Smartphone. All aspects of the product, right from the software to design and technology are conceptualized, developed and manufactured in India. Aiming to become a Rs. 5,000 million company in six years, iBahn will roll out its offerings pan India in a phased manner.

iBahn will be launching a series of 'Lamps' and 'Down-lighters' this month, with more to follow. These lights can be controlled through their app that will be available on Android and iOS.

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