

THE ECONOMIC TIMES

# POLYMERS

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**Mobil**  
Presents

THE ECONOMIC TIMES  
**POLYMERS**  
Awards 2021

**Excellence in Plastics**

**AGLOBALPERSPECTIVE**  
ROLE OF INDIAN PLASTIC  
INDUSTRY, GROWTH & SUSTAINABILITY  
BY MR. S.K. RAY

**SIAM'S TRADE REPORT**  
TRANSFORMATION IN  
AUTOMOTIVE SECTOR

**SURVIVAL OF THE FITTEST**  
SIGNIFICANCE OF  
INDIAN PHARMA PACKAGING

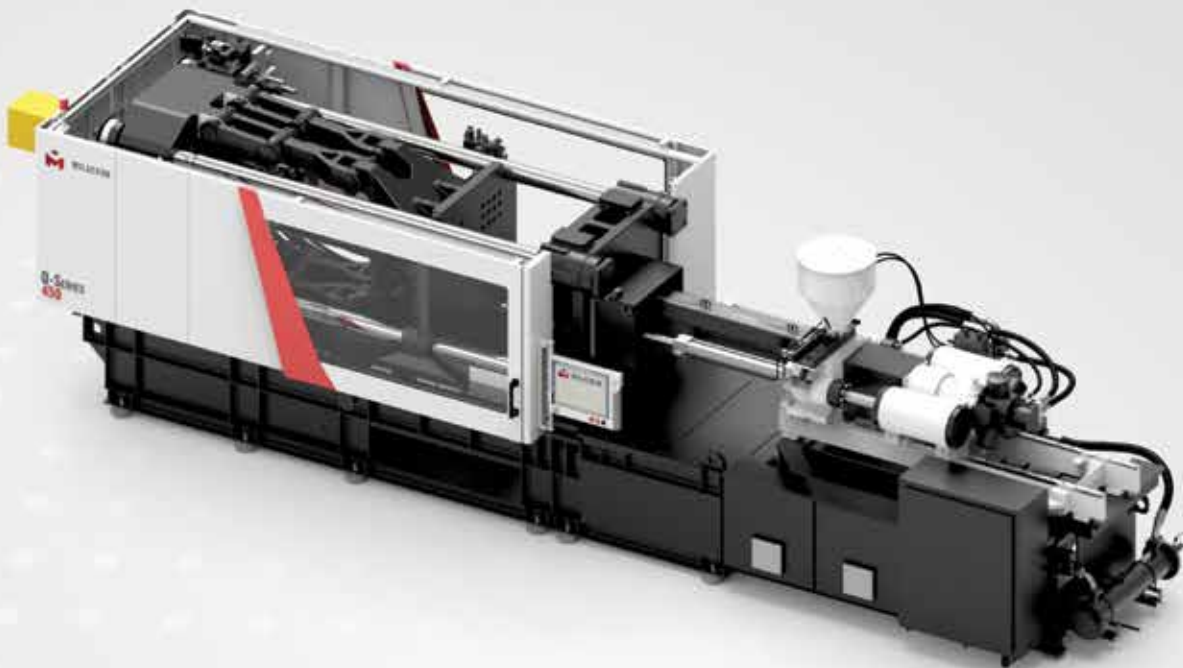


# HONOURING THE STALWARTS

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## Defining the new normal!!!

The versatility of Polymers has been proved time and again.

Plastic as a sustainable product possesses many characteristics and simultaneously act as an alternative. Minding other products, plastic holds certain positive aspects such as being light weight, reusable ensuring its sustainability, thus, creating a suitable environment. The unparalleled properties of a plastic have been the advantage of modern day society whether it is packaging, 3D printing or automation.

The three factors for which, plastics, have been the most preferred light weight, durable, and recyclable.

The present situation has pragmatically called for a number of variations in the sectors itself. The chain of plastic polymer industry has observed a drastic transformation keeping a close eye on buyers behavior. The automotive industry is looking at it as an opportunity to strengthen ties in the global territory.

With our processes and high end innovations, we are now expanding in the international markets. Soon, we will be scaling new heights. It is thus, the pandemic, that has taken a back seat on the industry. Though a tough time, still the opening of the first quarter seems positive.

While some industries witnessed a slack in the demand of plastic like construction; plastic stood as a warrior to the pharma and medical industries with more demand of PPE kits and other forms.

Gradually, we are pulling our strings to a more profitable environment. However, it is undeniable to have said, the polymer industry, has emerged as a source of empowerment towards the growth and sustainability and will continue to grow in times to come.

**With our processes and high end innovations, we are now expanding in the international markets**

**Harsha Masand**  
Consulting Editor

# Challenging Convention in a Smart Way

Reduced Footprint...Enhanced Productivity

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## Moglix Launches Supply Chain Finance Platform Credlix

Asia's largest B2B commerce company, Moglix, has announced its foray into the supply chain financing space with the roll-out of its digital platform Credlix. Credlix is a digital supply, currently, serving 15000+ suppliers is a financing platform from Moglix that provides quick collateral-free working capital solutions, exclusively to its suppliers, pan-India through its collaboration with banks. Moglix's decision to plug into digital supply chain financing is one of the many initiatives it has taken to secure the supply chain ecosystem from disruptions.

Credlix's supply chain financing platform makes it easy for suppliers to access collateral-free credit from enterprise buyers and banks/NBFCs through invoice discounting. Credlix allows suppliers to monitor all stages of invoice discounting and stay in control of their cash conversion cycle. From credit application and credit risk assessment to pay-



ment approval and final disbursement, suppliers will get a single platform to manage their early payment requests.

Offline models of credit underwriting have a high exposure to manual intervention and use under-reported financial metrics of suppliers. The offline underwriting system makes the credit cycle more risk-prone, and slower. Credlix is offering

a technology-driven supply chain financing system that will make it easier for suppliers to get just-in-time payments. Credlix is also building other products on its platform that will solve for other credit needs of suppliers, by partnering with financial institutions.

Elaborating on the launch of Credlix, Rahul Garg, Founder & CEO, Moglix said "MSMEs in India account for 11 crore jobs and 29% of the country's GDP. Unclogging the cash flow through the supply chain will be integral to fostering winning partnerships between MSME suppliers and large enterprise buyers and realizing the Government of India's vision for Aatmanirbhar Bharat. Credlix is on track to provide invoice discounting of INR 1000 Crores over the next 12 months and is aiming to touch INR 10,000 Crores discounting value over the next 3 years by scaling up to include more banks, suppliers, and geographies."

## Historic high for Motherson Sumi Systems Ltd

Motherson Sumi Systems Ltd. (MSSL) announced financial results for its fiscal 2020-21 with highest ever quarterly revenues of Rs. 17,923 crores, up by 15%.

Motherson Sumi Systems Limited (MSSL) is one of the world's leading specialised automotive component manufacturing companies for OEMs is a focused, dynamic and progressive company providing customers with innovative and value-added products, services and solutions. With a diverse global customer base of nearly all leading automobile manufacturers globally, the company has a presence in 41 countries across five continents.

Commenting on the results, Mr Vivek Chaand Sehgal, Chairman, Motherson Sumi Systems Ltd said, "Our global teams have put in tremendous efforts in challenging conditions to ensure uninterrupted supplies to our customers. These quarterly numbers are reflection of their hard work as well the trust of our customers on Motherson. With the rollout of COVID vaccine in different parts of the world, we are optimistic that the demand and positive sentiments will improve in the upcoming quarters"

## Power Mech Projects has received the Letters of Award for four different orders worth Rs.1068.36 Crores

Power Mech Projects Ltd., a leader among contemporary construction companies in India in the field of power sector, Infrastructure and Petrochemicals has announced that the company has received the Letters of Award for four different orders worth Rs.1068.36 Crores.

The first two orders are worth Rs 449 Crores each and are with reference to the water supply projects from the State Water & Sanitation Mission, Government of Uttar Pradesh. These 2 projects are awarded for a Joint Venture of Power Mech Projects Limited. Another order by Prayagraj Power Generation Company Limited in Bara, Uttar Pradesh worth Rs 100.36 Crores for the operation and maintenance work as well as an order of Rs. 70 Crores for the operation of Wagon Trippler and Truck Trippler for Tata Steel Bhushan Steel Limited in Angul, Odisha was awarded to Power Mech Projects.

The Operations and Maintenance project is for 3x660 MW TPP, "Field operation with Mech. and C&I Maintenance, BTG and BOP" Operation and Maintenance of CHP, its associated systems, Railway logistics and the railway yard operations and Weighbridge management works.

Power Mech Projects Limited (Power Mech), is one among the leading infrastructure-construction Companies based in Hyderabad, India with global presence and highly credited in providing spectrum of services in power and infrastructure sectors.





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Today if the company has delivered a processing capacity of 5.76 million metric tons per annum of PP and PE for customers across 92 countries, it's only because of efficient after-sales support and optimized cost of ownership for customers. Lohia Corp continues and in future too, will be committed to customers for great value and complete peace of mind.

# **LohiaCorp**



## LANXESS signs contract to acquire Emerald Kalama Chemical

Specialty chemicals company LANXESS is accelerating its growth course and signed a binding agreement to acquire 100 percent shares in Emerald Kalama Chemical on February 15, 2021. The US-based company is a globally leading manufacturer of specialty chemicals, especially for the consumer segment, and is majority-owned by affiliates of the US private equity firm American Securities LLC.

Emerald Kalama Chemical employs approximately 500 employees worldwide and runs production sites in Kalama, Washington (USA), Rotterdam (Netherlands) and Widnes (Great Britain). Emerald Kalama Chemical generates around 45 percent of its turnover in North Amer-



ica. “Emerald Kalama Chemical has a very efficient setup, bundling all its production activities at only three sites. That is why we expect to integrate the new business very quickly,” said Zachert.

Emerald Kalama Chemical generates about 75 percent of its turnover with specialties in the consumer

segment. These include preservatives for food, household and cosmetic applications, flavors and fragrances as well as products for animal nutrition. The remaining 25 percent of sales come from the specialty chemicals business for industrial applications, including the plastics and adhesives industries. With the acquisition, LANXESS is pursuing a targeted expansion

of its portfolio: The company has a strong position in the global business with antimicrobial active ingredients and preservatives, including for consumer protection products and animal hygiene. Examples are disinfectants effective against the Coronavirus or the African Swine Fever.

## Indiana Recycling firm acquired by Revolution Plastics

Jadcore, LLC acquired by Revolution, a sustainable plastic solutions manufacturer to expand its closed-loop manufacturing capabilities and further penetrate the Midwest market with environmentally-friendly plastic products and services.

Headquartered in Little Rock, Revolution has been manufacturing closed-loop, high-performance plastic solutions for over 20 years. Through its recycling and manufacturing system, Revolution offers a wide array of blown film products to the agriculture, construction, foodservice and retail sectors. The company then recovers and processes customers’ used plastic to create post-consumer recycled (PCR) resin, which is made into new products such as trash can liners, carryout bags and construction films or sold in resin form to businesses looking to add recycled content to their own product supply chain.

Jadcore was founded over 40 years ago in Terre Haute, Indiana, by the Doti family with a vertically integrated manufacturing platform focused on recapturing and recycling post-industrial plastic waste, which it supplies to other manufacturers as an economical alternative to virgin materials.

## Altair Enlighten Award Expanded to Honor Advancements in Sustainability

Altair, (Nasdaq: ALTR) a global technology company providing software and cloud solutions in the areas of simulation, high-performance computing (HPC), and artificial intelligence (AI), is pleased to announce the 2021 Altair Enlighten Award is open for submissions. Presented annually with the Center for Automotive Research (CAR), the Enlighten Award has expanded beyond light weighting to celebrate the greatest sustainability initiatives, which help reduce carbon footprint, mitigate water and energy consumption, and engage in material reuse and recycling.

“Year after year, the Altair Enlighten Award sparks growing interest from policymakers, educators, and engineers to industry leaders from all around the world, and we are proud to use this platform to showcase the most impactful innovations in light weighting and sustainability,” said James Scapa, founder and chief executive officer, Altair. “The convergence of simulation, high-performance computing, and AI solutions is empowering the automotive sector to produce smarter, more connected, sustainable vehicles, and we are proud to lead this evolution.”

Collaborating with Altair on the Enlighten Award is always an honor, and we are excited to see it evolve to acknowledge innovations in sustainability,” said Carla Bailo, president and chief executive officer, Center for Automotive Research. “As the industry moves forward with electrification, the drive for increased light weighting and sustainability is critical. This award co-sponsored with Altair demonstrates the breakthroughs needed to propel our industry forward.”





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## Platikcity and Weedon Group partner to provide a complete packaging solution

A complete corrugated packaging solution has been initiated by The Weedon Group in association with Plastikcity. The Weedon Group specialises in cost reduction through techniques such as right-sizing and the use of different technical board grades. A choice of box styles and board grades is therefore available to suit specific needs and to avoid expensive over-packaging. With its

in-house structural design team, the Weedon Group is able to offer innovative solutions, and its testing lab ensures that its packaging is always fit for purpose. The company has also developed a range of coatings that can be applied to corrugated board for specialist uses such as anti-static or water protection.

The Group's industrial packaging range includes: Industrial transit pack-

aging, Pallet boxes, XXL export boxes.

The range of pallet boxes offers a heavy-duty corrugated packaging solution for the transportation of bulk products or for long-term storage, and is designed to keep products safe throughout the supply chain. Compared with wooden alternatives, corrugated boxes offer significant benefits in terms of cost, ease of use and environmental protection.

## Waters Corporation Recognized By HRC Foundation's

Waters Corporation (NYSE:WAT) announced that it received a score of 95 out of 100 on the 2021 Corporate Equality Index (CEI), the Human Rights Campaign Foundation's annual scorecard for LGBTQ workplace equality. This first-time recognition for Waters is a testament to the company's ongoing global commitment to diversity and inclusion.

The Human Rights Campaign Foundation's CEI is the nation's foremost benchmarking survey and report measuring corporate policies and practices related to LGBTQ workplace equality. The CEI rates employers providing crucial protections to over 18 million U.S. workers and an additional 17 million outside of the U.S.

In 2019, Waters launched the employee-led, Pride Circle. Members serve as ambassadors and change agents to foster a workplace where diversity in all forms can thrive. Since its inception, the Pride Circle has worked closely with executive leadership to help make Waters more inclusive and supportive for employees and customers. This has included ongoing Pride Circle sessions on how to cultivate a more inclusive culture for LGBTQ+ employees, alterations to employee restrooms, expanded benefits for same-sex spouses and partners along with gender transition guidelines.



## ENI signs agreement with X-Elio

With new renewable projects, ENI expands its projects in Spain. Eni has signed an agreement with X-Elio for the acquisition of three photovoltaic projects in southern Spain for a total capacity of 140 MW.

X-Elio is one of the world's leading renewable energy developers with significant presence in Spain, where it has developed and built more than 1 GW. The firm has currently 250 MW under construction in the country, over 650 MW through PPAs (Power Purchase Agreement) and over 1.5 GW under development. According to the agreement, the transfer of the projects will be subject to customary authorization starting from the second semester of 2021. Eni will be responsible for the construction of the plants and for the electricity commercialisation. The agreement adds to the other recently signed by Eni gas e luce, 100% subsidiary of Eni, with Grupo Pitma for the acquisition of 100% of Aldro Energía Y Soluciones S.L., that operates in Spain and Portugal selling electricity, gas and services to household customers as well as large, medium and small businesses.

## Gulf Oil Mexico partners with Biofriendly Corporations provide Green Plus energy transition fuel

The Gulf Oil Mexico has partnered with Biofriendly Corporation, the green solutions company, looking forward to providing Green Plus energy transition fuel for gas stations across Mexico. This partnership helps Gulf Oil Mexico get another step closer to reaching the Sustainable Development Goals set by the United Nations for 2030. Since partnering with Biofriendly in July 2020, Gulf Oil

has seen a 35% increase in sales, proving that energy transition fuel is resonating with customers.

Biofriendly's Green Plus is an Energy Transition fuel that is added to the gasoline at Gulf Gas Stations. By adding Green Plus to gasoline, the emissions from the gasoline are reduced resulting in a product that is better for the environment than gasoline alone.



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#### **HUNTSMAN APPOINTS GURMEET KAUR AS HEAD OF STRATEGIC MARKETING FOR POLYURETHANES INDIA**

Huntsman, the global manufacturer and marketer of differentiated chemicals, announced the appointment of Gurmeet Kaur as the Head of Strategic Marketing for the Polyurethanes India sub-continent business, effective February 15, 2021. In her role, Gurmeet is responsible for the execution of Huntsman's strategy for Polyurethanes division to achieve differentiated growth and create effective value proposition for customers through sustainable delivery of solutions based on evolving market trends.

With over fifteen years of experience in marketing and strategy development, Gurmeet has worked with renowned organizations where she was responsible for driving the development and execution of business strategy and growth initiatives in India. Her most recent stint was with Honeywell as Marketing Director for Transportation Systems Business. Gurmeet is a Post-Graduate in Management from the Indian School of Business (ISB), Hyderabad and Bachelor of Technology in Chemical Engineering from Harcourt Butler Technological Institute (HBTI), Kanpur. At Huntsman, Gurmeet will report to Rahul Tikoo, Managing Director – India sub-continent, Huntsman Corporation.

#### **PPG ELECTS NALLY, NOVO TO ITS BOARD OF DIRECTORS**

PPG's Michael Nally and Guillermo Novo has been appointed as executive vice president and chief marketing officer, Merck & Co., Inc., and chief executive officer, Ashland Global Holdings Inc. The two will serve as on the Audit Committee and the Technology and Environment Committee of PPG's board and the Audit Committee and the Officers-Directors Compensation Committee.

Since, joining Merck in 2003, Nally has served as president, global vaccines; managing director, United Kingdom and Ireland; and in a variety of key management positions in strategic initiatives, commercial operations, business development and investor relations.

Novo has served in his current role with Ashland, a \$2.3 billion global manufacturer of specialty materials for customers in a wide range of consumer and industrial markets, since December 31, 2019.

#### **DEBRA L. DIAL AND LUIS A. MORENO JOINS DOW**

Dow Board appoints Debra L. Dial, Senior Vice President and Controller, AT&T Inc. and Luis A. Moreno, former President, Inter-American Development Bank will be a part of the elections to Dow's Board of Directors at the Company's Annual Meeting of Stockholders on April 15.

Ms. Dial brings more than 20 years of leadership and corporate financial experience in a global Fortune 10 telecommunications/media company, including financial reporting, accounting policy, long-term financial planning, strategy and integration planning, and risk management.

Mr. Moreno brings more than two decades of expertise and leadership in areas including public policy and social, economic and institutional development with focus on initiatives in topics of global importance including renewable energy and the environment, climate resilience and adaptation, sustainable cities, and digital connectivity and innovation.

#### **JOE FORLINE RETIRES FROM PSE&G**

The announcement of Joe Forline, Vice President of Gas Operations, PSE&G to retire on March 5 and will move to its next stint. Brian Clark, senior vice president of Fossil Operations, PSEG Power, will replace Forline and will lead Gas Operations. Clark's role will become effective once PSEG's Strategic Alternatives process has concluded, which is anticipated by the end of 2021. Forline worked for PSE&G for 35 years in electric and gas operations, customer operations, and beyond-the-meter services, including the growth of PSE&G's WorryFree appliance service business. Clark has been with PSEG for 22 years and has held several leadership roles throughout the Fossil and Nuclear organizations, with oversight of operations, construction and finance, among other organizations.



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# Challenging Times

The automotive Sector formulates for the new tide

By Harsha Masand

**A**utomotive industry has been battling to achieve a smooth and steady growth even before the pandemic entered the market. As 2020, took a toll on the financial losses, consumers are now etching for safety and security, shifting its base in terms of behavioral aspects. The new normal has emerged as a fresh wave of demand in this sector. However, taking into consideration numerous factors the consumers buying capacity and approach has changed drastically. There is a huge demand for personal transportation with budget cars in place.

Yet, compared to 2014-2015, the sales continue to have a decreased value.

SIAM (The Society of Indian Automobile Manufacturers) recently released a report mentioning the parameters based on striking values in the market.

SIAM works towards supporting sustainable development of the Indian Automobile Industry with the vision that India emerges as the destination of choice in the world for design and manufacture of automobiles. It provides economic and statistical information as well as technical and public policy services to the stakeholders on behalf of Indian Automobile Industry.

Commenting on the January 2021 data, Mr Rajesh Menon, Director General, SIAM said "In the month of January 2021, 2.77 Lakhs Passenger Vehicles were sold, clocking a CAGR growth of just 1.61% over the previous highest sales in



**"SALES OF THREE-WHEELERS CONTINUED TO SUFFER A DE-GROWTH OF (-) 56.76%, COMPARED TO JANUARY 2020, PRIMARILY ON ACCOUNT OF LOWER OFF-TAKE OF PASSENGER THREE-WHEELERS. SUPPLY CHAIN CHALLENGES**


**INCLUDING RISING PRICE OF STEEL, UNAVAILABILITY OF SEMI-CONDUCTORS AND HIGHER CONTAINER CHARGES, CONTINUE TO BE OBSTACLES IN SMOOTH FUNCTIONING OF THE INDUSTRY"**

**Rajesh Menon, Director General, Siam**

January 2018 of 2.64 Lakhs, while in January 2020 the total sales were 2.49 Lakhs. As far as Two-Wheelers are concerned 14.30 Lakhs units were sold in January 2021, which results in a de-growth of (-) 5.32% CAGR from the highest sales in January 2018 of 16.85 lakhs, while in January 2020, the sales of Two-Wheelers were 13.41 Lakhs units. However, the total sales from April to January period of Passenger Vehicles were still below 2014-15 levels and for Two-Wheelers it is below 2013-14 levels. Sales of Three-Wheelers continued to suffer a de-growth of (-) 56.76%, compared to January 2020, primarily on account of lower off-take of Passenger Three-Wheelers. Supply chain challenges including rising price of steel, unavailability of semi-conductors and

higher container charges, continue to be obstacles in smooth functioning of the industry."

The transformation from an offline experience to online experience has built a trajectory in the consumer's mindset. Today, buyers are looking for doorstep services, flexible payment modes and more preferences. The premium as well as the economical category of original equipment manufacturers have learnt this technique of consumers and are constantly building upon it. Also, the lightweight vehicles received a more preferred response.

Plastic and automotive sector work parallel to each other. The form and functionality of both these sectors have long been associated with each other. There are many manufacturing units that are considering various qualities of polymers to reduce cost of the automobile in order to increase sales. Simultaneously, they are also considering innovative techniques for protective measures, thus, influencing a spike in demand. 

**THE TRANSFORMATION FROM AN OFFLINE EXPERIENCE TO ONLINE EXPERIENCE HAS BUILT A TRAJECTORY IN THE CONSUMER'S MINDSET**





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# A New Chapter

**Honda's new CB350RS adds a feather to the CB legacy of India**

**T**he automotive sector has constantly pledged for newer technological innovations. With the fast paced world, the industry is venturing into best products ensuring safety security along with performance, comfort, style technology and reliability.

The triumph to manufacture more and more products/vehicles domestically has brought an energetic wave in terms of a futuristic growth in this sector. Honda's thought of 'Made in India for the World' is an adding more feathers.

Reviving up the mid-size 350-500cc motorcycle segment, Honda Motorcycle & Scooter India Pvt. Ltd. with its new addition of CB350RS is a derivative of an amalgamation of contemporary style and superior stance, CB350RS is the second new introduction in the CB family, which is 'Made in India for the World'.

Speaking on the rich legacy of CB Brand, Mr. Atsushi Ogata, Managing Director, President & CEO, Honda Motorcycle & Scooter India Pvt. Ltd. said, "Brand CB stands for realizing dreams of a true motorcycle enthusiast. Since the launch of the CB92 in 1959, it has pushed the boundaries of technology. It is a beautiful overlap of performance, comfort, style, technology and reli-



road with a sailing feel & comfort for the rider. The CB350RS is crafted to suit the rider's lifestyle with its sophisticated urban style and a powerful advanced 350cc engine. It's a call to all the riders to gear up and 'Live Your Story'."

The manufacturers are now looking at more sustainable measures with more accurate methods and techniques in

**CARRYING FORWARD THE LEGACY OF CB BRAND, THE ALL-NEW CB350RS IS BASED ON "ROAD SAILING CONCEPT - RS"**


**Yadvinder Singh Guleria**

ability. Last year, Indian riders got a chance to experience 'made in India' CB brand and elevate their pride of fun riding. Today, we are excited to add another chapter to the CB series. Exhibiting the true legacy of CB Brand, the CB350RS will add value for the Indian customer by providing contemporary style and superior stance, further enhancing the fun biking culture."

Elaborating on CB350RS, Mr. Yadvinder Singh Guleria, Director - Sales & Marketing, Honda Motorcycle & Scooter India Pvt. Ltd. said, "Carrying forward the legacy of CB brand, the all-new CB350RS is based on "Road Sailing Concept - RS". It defines the character of the bike's smooth performance on the

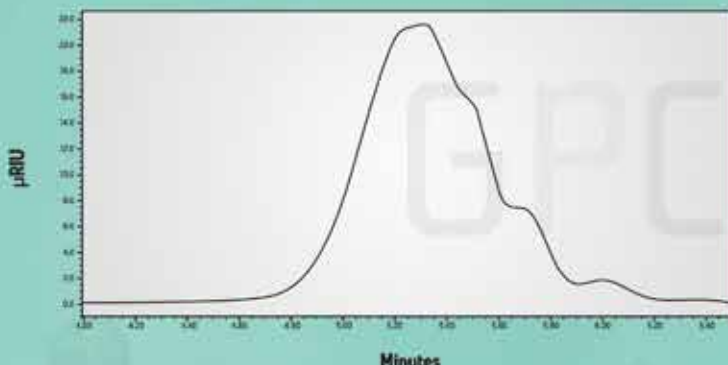
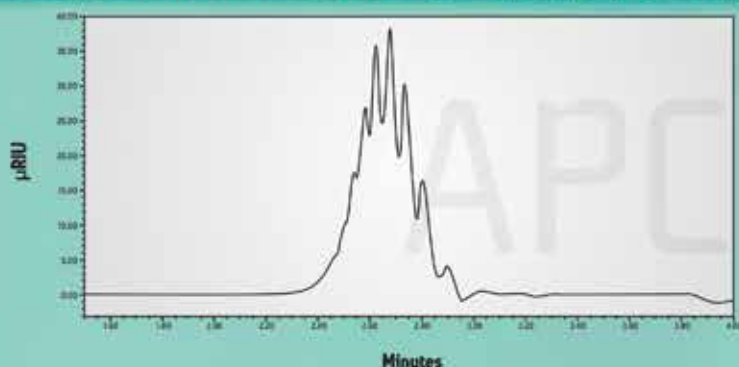
place. The overall shield i.e. features of a vehicle carry a major role in defining the purpose and state of the art vehicle structure with massive, aggressive design.

CB350RS stands out from every direction that accentuates the look and helps CB350RS shed an overall weight and give a sportier image.

The advanced PGM-FI system using on-board sensors, constantly ensures optimum fuel delivery to the engine as per the riding conditions allowing efficient combustion and lesser emissions. It delivers a category leading max torque of 30 Nm@3000 rpm, which makes it an easy-going versatile motorcycle for urban daily city commute. The engine uses offset cylinder position that reduces the sliding friction and asymmetrical connecting rod ensures minimum energy loss while combustion. It uses closed crankcase with a wall between crankcase and transmission reducing energy loss due to internal friction. 

**SINCE THE LAUNCH OF THE CB92 IN 1959, IT HAS PUSHED THE BOUNDARIES OF TECHNOLOGY. IT IS A BEAUTIFUL OVERLAP OF PERFORMANCE, COMFORT, STYLE, TECHNOLOGY AND RELIABILITY**

**Mr. Atsushi Ogata**

APC vs. GPC with narrow standard polystyrene  $M_p = 510$ 

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# Ensuring a productive environment

Recognised as one of the 'Best Workplaces in Manufacturing' Whirlpool of India stands in the TOP 30 Great Place to work

A workplace builds the environment. They trace the backbone of an organizational structure. Hence, a great workplace leads to increase productivity and an energetic environment. The manufacturing sector in recent times have ensured a safe and secure environment along with great working cultures. The set up of a manufacturing company is certainly distinctive of other sectors. Reflecting credibility, respect, fairness, pride and camaraderie in all its endeavors, Whirlpool has once again showcased that success of an organization is directly proportional to an inspiring workplace. By creating meaningful opportunities for employees, their wellbeing and their professional growth, the company has stood testimony to its philosophy of Every Day, Care for all.

The world's leading kitchen & laundry appliance company has been recognized as India's Best Workplaces in Manufacturing by Great Place to Work among 30 reputed manufacturing companies in India out of 110 shortlisted organizations.

Commenting on the achievement, Mr. Vishal Bhola, MD, Whirlpool of India, said, "We take immense pride in our legacy and this recognition is a reaffirmation of a highly motivated workforce that we have built over time. Abiding by the highest standards of personal, professional and legal conduct with our employees has led to a positive work culture and resulted in exceptional



COMMENTING ON THE ACHIEVEMENT, MR. VISHAL BHOLA, MD, WHIRLPOOL OF INDIA, SAID, "WE TAKE IMMENSE PRIDE IN OUR LEGACY AND THIS RECOGNITION IS A REAFFIRMATION OF A HIGHLY MOTIVATED WORKFORCE THAT WE HAVE BUILT OVER TIME. ABIDING BY THE HIGHEST STANDARDS OF PERSONAL, PROFESSIONAL AND LEGAL CONDUCT WITH OUR EMPLOYEES HAS LED TO A POSITIVE WORK CULTURE AND RESULTED IN EXCEPTIONAL BUSINESS PERFORMANCE"


business performance."

"I take immense pride in leading the People Function at Whirlpool. Authentic leadership combined with utmost transparency and an inclusive culture are the key reasons why employees are motivated to do their best each day. Adding purpose and value to our business offerings, employees are our greatest assets" said Ms. Rachna Kumar, Vice President – Human Resources, Whirlpool of India.

Whirlpool Brand in India is the symbolic representative of the spirit that drives and inspires us to be consistent with what we do best, making Home Appliances with advanced and intuitive technology to give our customers better than expected results every time

The brand designs their product with advanced technology which is intelligent, intuitive and innovative. Their core focus is sustainability. They ensure:

- Deliver high performance and aesthetically designed products while reducing the company's environmental footprint. Continuously work towards bringing resource-friendly appliances to the market that are more efficient than their predecessors.
- Truthfully declare energy and water consumption, where applicable.
- Abide by current and future legislations on use of ozone depleting, global warming and hazardous substances.
- Implement processes at our facilities that will eliminate waste and drive operating efficiencies.
- Reduce impact to the environment by responsibly handling end-of-life products.

Whirlpool of India Ltd, a subsidiary of Whirlpool Corporation, the world's leading kitchen & laundry appliance company has been featured as India's best workplaces in manufacturing for the third time in a row showcasing its continuous endeavour to become a people's organisation. It has been constantly evolving its employee offerings through collaborative exercises and up-skilling programmes. 

BY CREATING MEANINGFUL OPPORTUNITIES FOR EMPLOYEES, THEIR WELLBEING AND THEIR PROFESSIONAL GROWTH, THE COMPANY HAS STOOD TESTIMONY TO ITS PHILOSOPHY OF EVERY DAY, CARE FOR ALL

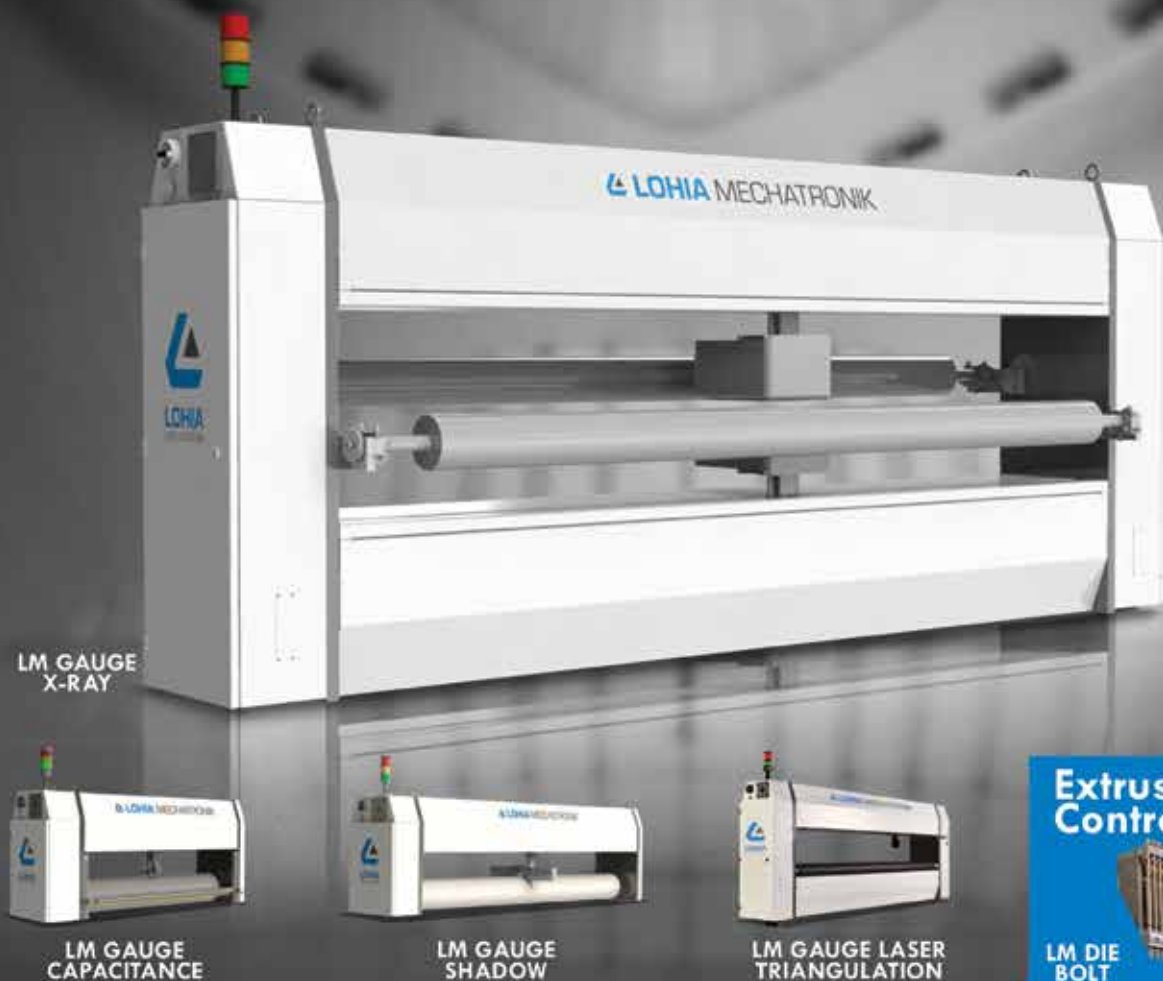


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## A Global Perspective

Started in 1976, with a marketing job at erstwhile Indian Petrochemical Corporation Limited (IPCL), later on acquired by Reliance Industries Limited, **Mr. S.K. Ray** and his odyssey with polymer has been a fascinating journey. He spearheaded many projects including the launch of polypropylene business for the Reliance Group. In a candid conversation with Mr. Ray; he highlights; the role of Indian Polymer Industry in the global context, its growth and sustainability.

By Harsha Masand

The Covid-19 pandemic has brought in unprecedented crisis across the globe in all the facets of human endeavor. The plastic industry was no exception. While global demand for plastics has increased 3-fold in past three decades, the growth had been spectacular in the developing countries. Demand in India increased nearly 18-fold during this period. Main drivers for growth had been the rapid changes in both demographic and economic factors. The versatility and affordability of plastics helped not only in replacement and supplementation of traditional materials in conventional markets but also creation of new products on plastics material platform. A case in point is the unprecedented growth in IT hardware ushering in global digital revolution supported largely by engineering plastics and specialty polymers. Polymers are used in all sectors of economy. Growth in global demand has since stabilized. It is now a notch ahead of GDP growth.



**POLYMERS ARE USED IN ALL SECTORS OF ECONOMY. GROWTH IN GLOBAL DEMAND HAS SINCE STABILIZED. IT IS NOW A NOTCH AHEAD OF GDP GROWTH. DUE TO THEIR SUPERIOR FUNCTIONALITY, LOWER MATERIAL AND ENERGY FOOTPRINTS, THE PREVAILING PACE GROWTH IS LIKELY TO CONTINUE**

Due to their superior functionality, lower material and energy footprints, the prevailing pace growth is likely to continue.

The industry, at this juncture, is facing a strong headwind caused by visible pollution of plastic waste. This can become a major disruptive force shifting the industry from a linear trajectory of “make, use and discard” to a circular path of capturing waste and channelizing it back by recycling and regeneration in the

loop. Biodegradable packaging solutions are emerging as a major opportunity for polymer. We have a few world scale flexible packaging players who may be able to play a leadership role in this field. However, sustained demand for bio-degradable packaging solutions still appear bit hazy. It would take a while for this haze to lift and offer a clear view of future direction in this segment.

### The Growth Parameters and Impact on the Industry:

Plastics are a new family of materials compared to metals, glass, paper and other traditional materials. These are synthesized using the knowledge of chemistry unlike traditional alternatives, which are mainly extracted from nature. The process of synthesis enables chemist and engineers to produce highly versatile, occasionally custom made, materials at affordable costs. These attributes have helped



rapid growth in demand for plastics in all sectors. It has also provided the material platform for cutting-edge technologies and cost-effective material solutions in packaging, industrial and many other commodity applications.

The rapid growth in consumption during past 5-6 decades has left far behind establishment of commensurate infrastructure and behavioral changes needed to manage plastic waste. The society and the industry are collaborating to bridge this gap. High visibility of plastic waste is as much an eyesore as an opportunity to manage this efficiently and effectively.

A robust waste management infrastructure and consumer awareness against littering are the twin silver bullets to meet plastic pollution challenges. In the interim, unfortunately, segments of the industry are facing existential crisis despite providing consumers with more desirable products when viewed through sustainability lens. These are broadly clubbed under the pseudonym of SUPs. The meta-analysis carried out by United Nations Environmental Program (UNEP) implicitly underscores the impact of littering on plastic pollution crisis.

To place Indian industry in the global arena, a shift in policy framework would help. While subsidizing export in the short term may yield momentary results, these are not sustainable. Such subsidies also invite counter measure from local manufacturers present in those export markets. There is no alterna-

tive to building core competencies, harnessing technology, entrepreneurship and providing a conducive regulatory framework to help Indian industry play a significant role in global market place.

Considering its potential, India is a laggard in international trade in plastics. Our share in global trade in polymers is very small and that too is largely contributed by imports. This can change in a supportive regulatory ecosystem and upgraded infrastructure. Globally plastic industry is currently navigating through a turbulent phase. The pandemic and media narrative surrounding plastic have created a haze that would take a while to clear up. This can be a major challenge to the new generation of plastic industry leaders. These can be seized by agile business organizations to successfully navigate through this tough time.

### Initiatives & Sustainability:

Globally plastic industry is now nav-




Garden Bench from Recycled Plastic Packaging waste

Circularity in Plastics

igating through a turbulent phase. The pandemic combined with media narrative surrounding plastic have created a haze that would take a while to lift. This can be a major challenge to the new generation of industry leaders. Even during this hard time, we can feel some tailwinds in few sectors, which are embracing circular economy, in their business pursuit. There are many business opportunities that are at present obscured by the prevailing uncertainties. These opportunities can be seized by agile businesses to successfully navigate through this tough time.

No one can do this better than our young energetic leaders.

Some segments of the industry catering to food, health and hygiene sector performed exceedingly well. These segment not only rose to meet social needs but also navigate through myriad of business and logistic challenges. There have been hardly seen any startups that entered the industry during this challenging time. Due to its versatile nature, switching product portfolio to capture new opportunities in this industry is relatively easier and faster. This can offer start-ups more flexibility and greater agility in their operations. 

**THERE ARE MANY BUSINESS OPPORTUNITIES  
THAT ARE AT PRESENT OBSCURED BY  
THE PREVAILING UNCERTAINTIES**



# Towards meaningful innovation

**“The current pandemic has sparked a wave of innovation amongst a number of our customers and associates. One such customer is an entrepreneur who manufactures baby diapers and sanitary napkins using Kandui’s breathable film compound. This customer has developed an innovative PPE coat made from non-woven fabrics and a breathable film for the protective gear worn by doctors. Due to the breathable film used, heat escapes seamlessly and the doctors stay cool.”** says **Ashwin Agarwal**, Managing Director, Kandui Industries Pvt. Ltd.

By Niranjan Mudholkar

**K**andui Industries started its journey in 2006. Currently, a trusted name in the masterbatch sector, it caters across the globe with the state of art technology. Kandui’s holistic approach marks its significance in providing world class quality products and services.

## How has the company evolved in the last 14 years?

Our initial focus was being cost effective but now the focus has shifted more towards meaningful innovation keeping the customer in mind and with the target to make benchmark products in the industry.

## What have been the highlights of this journey?

Foraying into the challenging business of manufacturing master batches for man-made fibers, initially, we ventured into Black & White in 2011 & Colors in 2015. Since these masterbatches are extremely critical to produce & even small mistakes can prove to be very costly, this helped us in enhancing the overall quality of all our products. Our R&D facility got accredited by The Department of Scientific and Industrial Research (DSIR) in 2013. In 2017, we established a separate unit for Filler MB with 35000TPA capacity and in 2019 we donned the pride of being a BIS member, the only 2nd master batch company to be included in this elite group and in 2020 entered into a JV with Okeanos with focus to reduce



**“OUR INITIAL FOCUS WAS BEING COST EFFECTIVE BUT NOW THE FOCUS HAS SHIFTED MORE TOWARDS MEANINGFUL INNOVATION KEEPING THE CUSTOMER IN MIND AND WITH THE TARGET TO MAKE BENCHMARK PRODUCTS IN THE INDUSTRY.”**

the amount of plastics in packaging.

## How has the Covid-19 pandemic affected Kandui Industries and overall the master batches segment in India?

Definitely, there was a dip. The pandemic had taken charge of the market by April and it was an unpleasant situation for everyone. But September onwards, positivity flew into the atmosphere and business started moving again. New sectors knocked new opportunities. By this time, the demand for masks and PPE kits were of importance, primarily made from PP non-woven. The current pandemic has sparked a wave of innovation amongst a number of our customers and associates. One such customer is an entrepreneur who manufactures baby diapers and sanitary napkins using Kandui’s breathable film compound. This customer has developed an innovative PPE coat made from non-woven fabrics and a breathable film for the protective gear worn by doctors. Due to the breathable film used, heat escapes seamlessly and the doctors stay cool.

**You started off a partnership with Okeanos in the early part of 2020.**

## What’s the progress on that front?

We have been working with some big brands but our trials got delayed due to the pandemic. We are expecting all the stages of trials to be complete by the end of 2021 and to launch products commercially by 2022.

## Amongst the wide range of products that you have, which ones are the best sellers and why?

**Techno Coat™:** It’s special filler used to be designed in an extrusion coating layer. The end applications include: Composite cans, Drinking Cups, Flexible & Liquid packaging board.

**Kandui Firefighter™:** It’s RoHS compliant innovative Low Halogen fire retardant suitable for thin & thick PP applications such as Non-Woven, Fiber, Sheet, Film and Moldings. It passes stringent regulations even at dosage as low as four percent. This would find usage in automotive parts, electrical appliances, pipes, non-woven apparel and mats, etc.

**Techno breath:** It’s a breathable film compound suitable for both blown and cast films. It is used in hygiene products like diapers, sanitary napkins and PPE suits.

**Thermo chromic Master batches:** This additive makes the articles

change color with temperature. These find usage in toys, party shirts as well as in anti-counterfeiting applications.

**Antimicrobial MB:** This master batch contains ingredients, which kills microorganisms & stops their growth. This is used in a variety of daily use items such as commode covers, hygiene products (such as protective gear worn by doctors), etc.

**Master batch for PET Bottles:** We have a wide range of opaque, translucent and transparent colors master batch for PET Bottles including amber color for the pharma industry which are available in micro granule form.

**UV for agriculture film application:** It's a special type of UV additive, which does not lose its effectiveness by the insecticides and pesticides used in the agricultural process. It's mostly used in products like Shade net, Mulch Films and Green House Films.

#### Tell us something about Kandui's overall manufacturing capacities and capabilities.

Kandui's best-in-class facilities, having a manufacturing capacity of 45,000 TPA based in Daman, India is spread across two units with a combined area of 2,00,000 sq. ft. Both facilities are equipped with automated machinery that helps minimize human errors during the production process. The company's cutting-edge global technology helps achieve high standards of quality in manufacturing and provides the cus-



tomers with world-class products.

Kandui's finest products are manufactured on the best machinery from: Coperion (Germany), Farrel Pomini (USA), Krauss Maffei Bertsch (Germany), Mixaco (Germany) and Steer (India).

#### What does innovation mean to you? Tell us about your R&D activities.

By innovation we mean to create products where the customer is able to derive meaningful value. We are focusing on our R&D in two ways:

- 1) We work closely with the customer, wherein the customer shares a challenge that they are facing and we try to jointly find a solution.
- 2) Based on inputs gathered, attending conferences & exhibitions, we have a core team, which sets the focus without any compromise on standards and quality of the products. Simultaneously, we shall also concentrate on which are the products that we need to focus on in the next: a) one year, or b) three years. We monitor the progress of this on a monthly basis. We take help from academic institutions such as UICT (earlier known as UDCT) as and when required.

Our R&D facility includes testing machines like: TGA, DSC, FTIR, Laboratory spinning lines,

Texturizing machines, Washing fastness tester, Filter Pressure tester, Melting point Apparatus, QUV Weatherometer, Color Spectrophotometer, Injection Moldings

Machine, Blown film machine, Dart Impact tester, Two roll mill Hydraulic press, MFI Test Machine, Moisture Analyzer, Muffle Furnace, IV measurement apparatus.

#### What is your domestic to exports ratio?

Our domestic to exports sales ratio is 3:1.

#### Which customer sectors are giving you more business?

Value wise it's the textile industry and volume wise it's the raffia sector.

#### What is your take on the 'Atmanirbhar Bharat' campaign?


#### Which aspects do Indian companies need to focus on to make this programme a big success?

It has started with the electronics and other sectors, but it is yet to come to the plastic and chemical sector. We are hopeful that the government will roll out some schemes for the plastics sector soon. Indian companies need to focus on quality to meet international standards and need to come out of the "jugaad" mentality."

#### We are almost at the end of the financial year. How do you see Kandui performing for this fiscal?

Keeping in mind the current situation, we shall keep our targets similar to last year's, whilst improving the margins.

#### Kandui is now in its 15th milestone year. Where do you see it heading in the next five years from now?

We expect to double our turnover in the coming five years by maintaining a CAGR of 15 percent. 

WE HAVE BEEN WORKING WITH SOME BIG BRANDS BUT OUR TRIALS GOT DELAYED DUE TO THE PANDEMIC. WE ARE EXPECTING ALL THE STAGES OF TRIALS TO BE COMPLETE BY THE END OF 2021 AND TO LAUNCH PRODUCTS COMMERCIALY BY 2022.

# Sparkling around the Globe!!!

Contributing to India's journey of sustainable development and self-reliance  
'Vedanta SPARK' initiates global corporate and innovation programme

**D**igital India is progressing towards advanced technological innovations. Vedanta Group, one of the world's leading Oil & Gas and Metals company with its latest initiative 'Vedanta SPARK' aims at accelerating growth in new start ups.

Vedanta aims to reimagine the role of entrepreneurship to catalyse innovation by enabling the technology talent and entrepreneurial ambitions of India's youth by seeding world-class technology ventures through the Vedanta Spark program.

'Vedanta Spark' launched with the objective of triggering a tech-revolution, by partnering with early-stage, growth stage, and venture stage Digital Tech start-ups to build and grow technology capabilities for achieving strategic goals in various aspects.

Speaking about the Group's innovative initiative, Mr. Akarsh Hebbar, Digital Alchemist and Anchor, 'Vedanta Spark' said "Through Vedanta Spark, our effort is to trigger a tech-revolution by empowering the global start-up ecosystem. Through this strategic partnership, the budding high-potential startups can bring immense value to the global marketplace through progressive and sustainable solutions. It is indeed ex-

**"THROUGH THIS STRATEGIC PARTNERSHIP, THE BUDDING HIGH-POTENTIAL STARTUPS CAN BRING IMMENSE VALUE TO THE GLOBAL MARKETPLACE THROUGH PROGRESSIVE AND SUSTAINABLE SOLUTIONS"**

**Mr. Akarsh Hebbar, Digital Alchemist and Anchor, 'Vedanta Spark'**


citing to see the tremendous interest from start-ups, and we look forward to partnering with them while encouraging and enhancing them with industry exposure"

Start-ups are equally excited to join hands with Vedanta in this journey. According to R. Ramanan, Mission Director - Atal Innovation Mission: "Becoming the world leader in the digital future of the global energy & resources sector will require Indian multinationals to harness the speed and scale of delivering innovation and driving transformation on offer from start-ups, both domestic and foreign. Vedanta Spark has the potential to deeply catalyse India's start-up sector in the above areas, accelerating the realisation of PM's vision for Digital India & Atmanirbhar Bharat."

"We are very excited about the Vedanta Spark program! It is great to see established miners, like Vedanta actively engaging with start-ups to

transform their business. The focus on commercializing developing technology through a proof-of-concept pathway is excellent. We will continue to work with Vedanta as they develop this partnership program for strategic innovation, says Bibhrajit Halder, Founder & CEO - SafeAI, Inc. (USA & Australia).

According to Daniel Raj, Founder, and CEO of Detect Technologies (India & US): "At Detect Technology, our vision is to revolutionise safety, operations and asset integrity through the infusion of latest technologies, thereby helping our clients uncover new areas of growth and facilitate accelerated competency development. Vedanta SPARK is an exciting opportunity and a perfect breeding ground for start-ups. The wide-spread presence of Vedanta across various sectors provides a unique opportunity to collaborate with users of our applications and therefore shape our products across industrial sectors."

The program roadmap is towards scaling up the engagement models with Innovative start-ups, whose partnership provide Vedanta with the potential to combine the speed, cost, scale, and scope advantages of Start-ups in Innovation with the scale reach, production, distribution, financial, and commercial capacity of Vedanta Limited. 

**"VEDANTA SPARK IS AN EXCITING OPPORTUNITY AND A PERFECT BREEDING GROUND FOR START-UPS. THE WIDE-SPREAD PRESENCE OF VEDANTA ACROSS VARIOUS SECTORS PROVIDES A UNIQUE OPPORTUNITY TO COLLABORATE WITH USERS OF OUR APPLICATIONS AND THEREFORE SHAPE OUR PRODUCTS ACROSS INDUSTRIAL SECTORS"**

**Daniel Raj, Founder, and CEO of Detect Technologies**





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# Converging paths for future

## Addressing Expanded Cybersecurity in the Indian Automotive Industry

By Dick Bussiere, Technical Director, Tenable

India's rapidly growing automotive industry currently contributes about 7.5% to the domestic GDP and is expected to grow to \$280 billion by 2026. This will make India the world's third-largest automotive producer.

Automobile production employs a high degree of industrial automation in order to provide high quality, consistent products at an affordable price. To help extract even greater efficiencies, vehicle manufacturers are embracing the concepts of Industry 4.0, which requires tight integration between the manufacturer and their supply chain partners, customers, dealers and distribution channels. This integration requires real-time network interconnectivity between various partners on an unprecedented scale, allowing for dynamic interaction between parties to respond to ever-changing market requirements.

While the benefits of Industry 4.0 are clear, it also creates new challenges as previously isolated produc-

tion systems that weren't designed with security in mind are now intertwined with partner systems and even the Internet. This convergence of networks exposes formerly remote industrial automation systems to risks and vulnerabilities which they were not designed to cope with.

Given that passenger cars are manufactured with more technology and precision than ever before, the slightest deviation in the manufacturing process can cause catastrophic failures and massive recalls. So let's take a look at some of the conditions that can interfere with industrial control systems (ICS) in India's automotive manufacturing industry.

### Cybersecurity challenges in auto manufacturing

1. Exposing existing production systems to interconnected IT systems creates potential attack vectors that can, and have been, leveraged to interfere with or disrupt the production process.

Attacks against a seemingly unrelated IT system can rapidly cascade to adjacent production systems, causing major disruptions. A common example of this is a ransomware attack disrupting PC-based engineering workstations, blinding operators as to the state of the production processes and forcing extremely expensive downtime.

2. The number of electronic components containing computer code in modern vehicles has dramatically increased over time. Cars are now run by a set of tightly integrated computers, interconnected over a "Control Area Network" or CAN bus. Manipulation of the code within these embedded devices can have catastrophic and lethal consequences. For example, the firmware in the computer controlling an anti-lock braking system could potentially be manipulated in a way that prevents the brakes from working during a panic stop.
3. These very same components are manufactured by third-party suppliers, extending the risk to the entire supply chain. Third parties involved in the production process are susceptible to the same vulnerabilities as the main plant. Code in supplied components could be manipulated by a bad actor and installed in vehicles on the main production line. Of course, such "supply chain attacks" would have dire consequences for the original equipment manufacturer (OEM) as those maliciously modified parts are installed into finished vehicles.

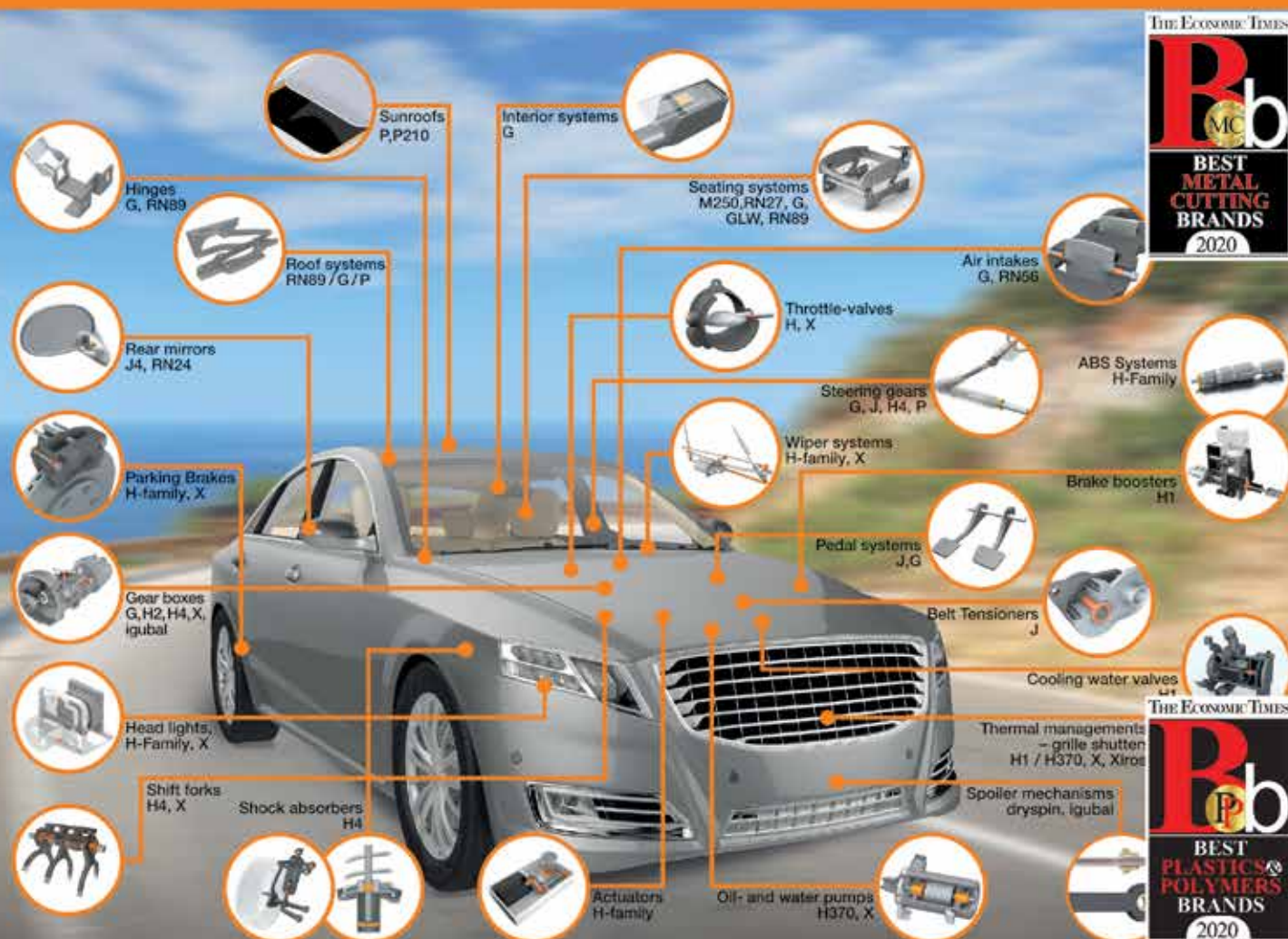


**WHILE THE BENEFITS OF INDUSTRY 4.0 ARE CLEAR, IT ALSO CREATES NEW CHALLENGES AS PREVIOUSLY ISOLATED PRODUCTION SYSTEMS THAT WEREN'T DESIGNED WITH SECURITY IN MIND ARE NOW INTERTWINED WITH PARTNER SYSTEMS AND EVEN THE INTERNET**



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4. Many modern automobiles have integrated internet connectivity. This facilitates such conveniences such as remote starting, in-vehicle WiFi and even “over the air” updates to the automobiles firmware. Such features also form another vector for attacks.
5. Disruption to the production process is extremely costly. It is estimated that 1 minute of downtime costs automakers \$22,000 USD or \$1.3 million USD per hour. Some estimates are as high as \$50,000 per minute.<sup>1</sup>

### Ways to mitigate cybersecurity attacks

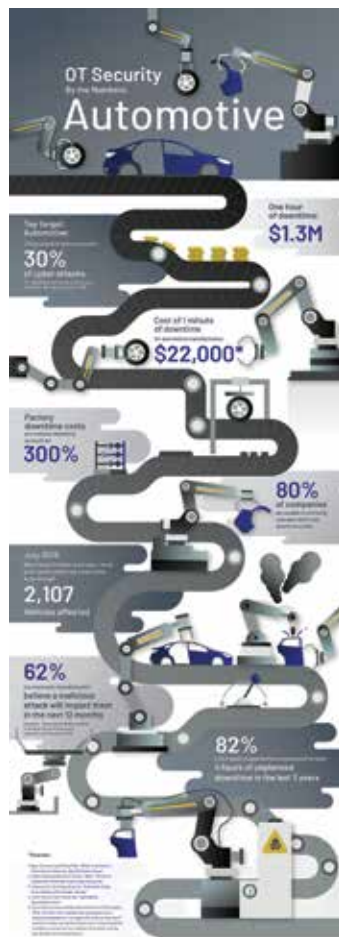
**Mitigate automotive risks through full IT and OT visibility, security and control**

#### Full visibility

To mitigate risks, automotive manufacturers require full visibility into all assets that are involved in procurement, fabrication and assembly processes. Deep knowledge of all types of devices, both traditional IT computing platforms as well as OT devices that control the production process is required. This visibility should include configuration, vulnerability and threat information, the combination which gives the manufacturer a thorough understanding of their complete cyber exposure.

#### Vulnerability Prioritisation and Control

The process of identifying risks, vul-



nerabilities and threats must be continuous - not just a periodic exercise. This allows for early detection of risk before these can be used in an attack. Vulnerabilities must be eliminated as soon as possible, through patching, correction of misconfigurations, or the employment of compensating controls.

That said, the operation of assembling vehicles must continue un-

impeded. That means that it's not always possible to eliminate risks with patching since this requires downtime. Suitable infrastructure must be deployed in the form of OT specific security and risk mitigation capabilities to mitigate risks when patching is not possible.

#### Effective Security and Threat Detection

When it comes to threat detection, the most effective process combines multiple detection engines:

- Traffic mapping and traffic visualisation: Identifies normal communications for a particular network and alerts users of any deviations.
- Anomaly detection: Pinpoints traffic that is malicious from its frequency, randomness or volume.
- Signature-based detection: Identifies published threats and leverages crowd-sourced alerts of previously unidentified threats.
- Deep situational awareness that goes beyond the network down to the device level to identify and arrest many attacks where they start.

#### Securing India's automotive legacy

To continue innovating at a breathtaking pace to meet customer demands of tomorrow, Indian manufacturers need to embrace the risks to which they are exposed and continuously narrow the gap between capability and security. The convergence of IT and OT systems, while undoubtedly has irresistible benefits, also exposes automotive manufacturers to cyber threats. To stay ahead of bad actors, modern organisations must have a sound cyber security plan that provides full visibility, security and control. If manufacturers don't find the security gaps on the road to innovation, someone else will. 📍

**TO MITIGATE RISKS, AUTOMOTIVE MANUFACTURERS REQUIRE FULL VISIBILITY INTO ALL ASSETS THAT ARE INVOLVED IN PROCUREMENT, FABRICATION AND ASSEMBLY PROCESSES. DEEP KNOWLEDGE OF ALL TYPES OF DEVICES, BOTH TRADITIONAL IT COMPUTING PLATFORMS AS WELL AS OT DEVICES THAT CONTROL THE PRODUCTION PROCESS IS REQUIRED**



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## THE ECONOMIC TIMES **POLYMERS** Awards 2021

**Excellence in Plastics**

# Honouring the Stalwarts

**The ET Polymers 5th Edition set to scale new heights**

**T**he 5th Edition of ET Polymers Awards is set to be held in the month of March, 2021 in Mumbai. The forum will felicitate the stalwarts from the industry as well as the recognized organization for their tremendous support and encouragement towards the plastic industry. The event is held annually as a one

stop shop to network and explore opportunities within the fraternity.

The last four editions garnered much appreciation. Celebrating the success, this edition looks forward to scale new heights. Although, the unprecedented times have affected the plastic industry, yet, we stand strong to our commitments and endeavor to bring out the best from the

industry, whilst, continuing to acknowledge the heroes of the polymer industry.

Recognizing excellence in the plastic industry, it aims to bring the fraternity under one roof to discuss and address the nuances of polymers post pandemic.

The focus shall lay emphasis on response to the pandemic, its cause and effects on the plastic industry from micro and macro point of view. Simultaneously, shall also discuss future trends and growth and innovations. The veterans will give us a walk-through the industry.

Sharing some insights about the Polymer Industry, Mr. S.K. Ray, jury

**THE FORUM WILL FELICITATE THE STALWARTS FROM THE INDUSTRY AS WELL AS THE RECOGNIZED ORGANIZATION FOR THEIR TREMENDOUS SUPPORT AND ENCOURAGEMENT TOWARDS THE PLASTIC INDUSTRY**





member comments, “Plastics play critical roles in medical and health-care sector. Covid-19 pandemic has brought “Plastic Paradox” under sharp focus. On one hand disposable masks, PPEs and other plastic products are offering critically needed safety and protection, on the other hand waste generated in their disposal is provoking widespread concerns and condemnation. In this clutter, the need to rapidly scale up waste management infrastructure and pursuing urgently needed behavioral changes against littering are getting drowned. The crisis has shown that it is possible to realize both these much needed changes if we recognize them and strive for solutions.”

### RECOGNIZING EXCELLENCE IN THE PLASTIC INDUSTRY, IT AIMS TO BRING THE FRATERNITY UNDER ONE ROOF TO DISCUSS AND ADDRESS THE NUANCES OF POLYMERS POST PANDEMIC

#### WHY YOU SHOULD ATTEND


The Economic Times Polymers Awards’ is a platform created to recognize and celebrate the excellence achieved by Indian plastics processing industry. The recipient of these awards would be decided by a special set of jury.

The one of its kind awards honours the efforts into diversified categories such as:

#### WHO SHOULD ATTEND:

Every sector under the global plastic industry including Automotive, Consumer Durables, Electricals & Electronics, Toys & Playing Equipment, Housewares & Kitchenware, Packaging, Medical Devices & Healthcare Equipment and Recycling.

The event is subjective of each and every individual or organization associated with plastic including pharma, logistics, packaging, manufacturing, printing, etc. to name a few. It has been conceptualized to appreciate organizations and individuals towards the progress of the Indian plastics industry.

The previous four editions of the awards having the who’s who of the plastics industry gathered under a single roof to celebrate the success of the innovations in the plastics industry. In the glittering ceremony the awards were bestowed upon the winners who excelled in the use of plastics in the respective categories. 

#### For organizations (Two segments – Large & SMEs)

- Automotive (OEMs & Auto Components)
- Consumer Durables & Electrical & Electronics
- Packaging
- Recycling
- Housewares & Kitchenware
- Toys & Play Equipment
- Medical Devices & Healthcare Equipment
- Open Category

#### For individuals (Open – Editorial Choice Awards)

- The Economic Times Polymers CEO of the Year
- The Economic Times Polymers Entrepreneur of the Year
- The Economic Times Polymers Next Generation Leader
- The Economic Times Polymers Lifetime Achievement Award

# Waters APGC-MS/MS System Accepted for Advanced Dioxin and Furan Analysis

**Environmental labs can now use Waters Xevo TQ-XS APGC-MS/MS system for routine, highly sensitive testing with improved robustness**

**W**aters Corporation, one of the leading companies in specialty measurement introduced Xevo™ TQ-XS mass spectrometer. The Xevo TQ-XS atmospheric pressure gas chromatography (APGC) mass spectrometry (MS) platform is an accepted alternative for the identification and quantification of dioxins and furans in environmental samples. Dioxins are a byproduct of human industrial activity and their effects on human health are well documented<sup>1</sup>.

The alternative technology provides for the identification and quantification of dioxins and furans in environmental sample under SGS AXYS Method 16130 featuring an atmospheric pressure gas chromatography (APGC) ionization source.

"We are extremely thankful that after a lot of hard work with the team at SGS AXYS, the USEPA has opened the door to APGC-MS/MS as an acceptable alternative for dioxin analysis," said Warren Potts, Senior Director, Food & Environmental Business, Waters Corporation. "This is a great step forward in recognizing the value of performance-based analytical methods and it will translate



APGC-MS/MS comes after a two-year collaboration with SGS- AXYS. Analytical Services Ltd. recognizing the need for a more efficient solution, Waters served as a key collaborator of SGS AXYS Analytical Services in the validation of APGC-

**"WE ARE EXTREMELY THANKFUL THAT AFTER A LOT OF HARD WORK WITH THE TEAM AT SGS AXYS, THE USEPA HAS OPENED THE DOOR TO APGC-MS/MS AS AN ACCEPTABLE ALTERNATIVE FOR DIOXIN ANALYSIS"**

**Warren Potts, Senior Director, Food & Environmental Business, Waters Corporation.**


to increased sensitivity and robustness in the laboratories performing dioxins and other persistent organic pollutants (POPs) analysis."

The routine challenges of complex matrices are overcome by the Xevo TQ-XS which providing reproducible results injection after injection despite difficult sample matrices. To put it simply, it redefines the way that one operates the instrument with the new atmospheric pressure ionization probes available on the Xevo TQ-XS, thus maximum optimization of time.

The USEPA's acceptance of

MS/MS as an approved method for dioxin testing. The standard method, gas chromatography coupled with high-resolution magnetic sector mass spectrometry (GC-HRMS), is associated with large, aging, expensive instruments that are costly to run and maintain.

"As part of the SGS AXYS 'think tank', we were excited to collaborate with the team from Waters Corporation alongside the EPA over the course of two years to develop the SGS AXYS Method 16130," said Coreen Hamilton, a Senior Scientist with SGS Environmental, Health and Safety who worked on the project. "This method is an important piece of the puzzle in the modernization and diversification of testing for dioxins and other toxic contaminants."

Acceptance of the APGC-MS/MS method frees laboratories to deploy modern instrumentation that is less expensive, more sensitive and easier to operate. 

**THE USEPA'S ACCEPTANCE OF APGC-MS/MS COMES AFTER A TWO-YEAR COLLABORATION WITH SGS- AXYS. ANALYTICAL SERVICES LTD. RECOGNIZING THE NEED FOR A MORE EFFICIENT SOLUTION, WATERS SERVED AS A KEY COLLABORATOR OF SGS AXYS ANALYTICAL SERVICES IN THE VALIDATION OF APGC-MS/MS AS AN APPROVED METHOD FOR DIOXIN TESTING**



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# 'Mobil DTE™ 20 Ultra delivers next-level performance, a game-changer among hydraulic oils'

**Launched first in India, ExxonMobil's cutting-edge lubricant Mobil DTE™ 20 Ultra Series offers up to 2X oil life and significantly boosts productivity, while reducing equipment failure**



**Rupinder Paintal**  
Director of Marketing, India

**T**he launch of Mobil DTE™ 20 Ultra Series by ExxonMobil in Mumbai marks the beginning of a new era in the Indian lubricants sector. Developed with Mobil's cutting-edge technologies available around the globe, the India-first launch of Mobil DTE 20 Ultra Series reflects the lubricant major's top priority towards India as a high growth region. In an exclusive interview, Shankar Karnik, General Manager, Industrial Lubricants, ExxonMobil India, talks about the new offering and shares the company's plans for India:

**The Mobil DTE 20 Ultra Series has been launched first in India. Is it a strategic decision on part of ExxonMobil™?**

India is among the fastest growing economies in the world, with phenomenal potential for economic and industrial growth. The country is turning out to be one of the major manufacturing hubs. Building

on its Make in India and Skill India initiatives, the new government has announced an investment of Rs. 100-lakh crore in the core sectors, of which Rs.30-lakh crore has been earmarked for infrastructure alone.

This is a fantastic opportunity and this is the market to be. ExxonMobil sees significant potential for growth in India and we want to be the early birds in bringing the best technology to the industries here, with products, distribution and application to tap the huge potential. India is the third largest lubricant market in the world and within lubricants, 40 per cent of it is hydraulic oils. So, it's only befitting that we introduce our finest new hydraulic oil product in India first, before we take it to the rest of the world.

**Speaking about Make in India, is the Mobil DTE 20 Ultra Series manufactured in India?**

Yes, this product comes from our blending facility near Mumbai, with R&D and technology inputs from our laboratories and units around the world. Even as we are helping our customers to make world-class products that compete with the best on the global scale, we are setting an example by making Mobil DTE 20 Ultra series in India – a best-in-class lubricant with global benchmarking. The new series of hydraulic oils is designed for all industries with hydraulic oil applications – manufacturing and injection moulding, wind turbines in energy, mining, construction, steel, cement, paper, petrochemicals and even some marine applications.

With this launch, we have a solid portfolio for the Indian market - right from low-cost lubricants



to premium synthetic oils, covering the entire spectrum of the market, with layered offerings to address varying customer needs. We are now perfectly poised for a massive pan-India expansion for a larger share of the Indian market with our expanding portfolio. Towards this, we are appointing distributors across the country and setting up regional warehouses.

**Can you tell us what makes Mobil DTE 20 Ultra Series a game-changer in the lubricant market?**

The Mobil DTE 20 Ultra Series, with ExxonMobil's new breakthrough hydraulic oil technology, offers an additional edge over anything that is available in the market. The new series' advanced formulation reduces hydraulic oil consumption significantly, and delivers 72% better wear protection for extending the component life and 89% better deposit control for maintaining precision operations. It is compatible with all types of hydraulic systems and components such as close clearance servo-valves and high accuracy numerically controlled (NC) machine tools. Extensive testing has shown that it comes with better water handling and filter rating. According to Eaton 35VQ25 Test – an industrial test recognized for hydraulic-fluid qualification, the oil provides >72% better wear protection. The Mobil DTE 20 Ultra Series significantly lowers the maintenance frequency thus minimizing man-machine interaction, which makes the site safer for industrial workers.

Designed to deliver up to 2x longer oil life and exceptional performance in harshest conditions, the new series will not only help industries achieve unprecedented



performance goals, but also support environmental care by reduction in hydraulic oil consumption.


**Technology and innovation have been a strong point with Exxon-Mobil when it comes to meeting the customer's needs. In this context, how does Mobil DTE 20 Ultra Series address the challenges that manufacturers face?**

Mobil DTE 20 Ultra Series caters to any application across the manufacturing spectrum - whether it is hydraulic press or any hydraulic requirement in the system. While the life of a lubricant can vary depending on the severity of an application, today if Mobil DTE 20 Series oil runs for five years in a plastic injection moulding machine, Mobil DTE 20 Ultra has the potential to go beyond 10 years. And it's not just about lifespan. What is important to understand is that when we talk about double the life, we are also talking about keeping the equipment clean, producing less deposits, creating less wear of materials like pump elements in the system, generating

less varnish on servo valves - thereby improving pressure discharge and delivery significantly. The oil retains its hydraulic efficiency which ensures that the machinery performs efficiently. Eventually, this translates into better productivity per hour per day, and extended over the 10-year lifespan of the oil, it adds up to a huge saving. An oil that costs less than one per cent of the machine cost, can deliver an ROI – that is the impact that a technologically superior product like Mobil DTE 20 Ultra delivers to our customers.

**How suitable is Mobil DTE 20 Ultra Series for the construction and mining sector?**

The Mobil DTE 20 Ultra Series is perfectly suited for severe applications in mining and mobile equipment, whether it is material handling machines like cranes or earth-moving machines like excavators, or even piling rigs at metro sites. In these situations, the pressures are high because of shock loads and the temperatures are high because of exposure, which demands very high filterability. The filterability of the new oil series is unmatched, in terms of its ability to manage shock loads and wear. For each of these performance parameters, Mobil DTE 20 Ultra exceeds expectations, going way beyond the product data sheets, delivering much more than our 2X commitment.

Another pertinent point is moisture, which is one of the biggest enemies of hydraulic functions. Mobil DTE 20 Ultra has excellent demulsibility properties. It has secured the tough GB-rating in China, which is a big endorsement for Indian companies that have Chinese machines. 

# Survival of the fittest

**The pharma industry has witnessed an increase in the supply proving its worth across the globe. The utmost motivated sector in tough times stays strong and continues to rise**

By Royston Noronha

**T**he Covid-19 pandemic has put a spotlight on Indian manufacturing capabilities and particularly in the pharma space. Voices across the world have expressed their confidence in India and its biotech companies for producing and supplying Covid-19 vaccines and medicines used for treating pneumonia. India is a country with one of the largest pharmaceutical manufacturing capabilities in the world and is the largest exporter of generic medicines. Surge in overseas demand for Indian pharma products has created an incremental demand for primary and secondary packaging companies in the country.

Pharmaceutical packaging in India plays a crucial role not just from the point of view of national economic interest but also from a global supply chain perspective. India is home to some of the largest pharmaceutical companies with substantial export business. Accord-



ing to industry analysts the pharmaceutical industry in India has grown at a CAGR of 14.5% in the last 11 years to reach an estimated value of 55 billion in 2020. The industry offers a larger economic benefit to the country through its export volumes that amounted to US\$ 20.5 billion in FY2020. In a global virtual expo organised by FICCI, Ravi Uday Bhaskar, Director General of Pharmaceutical Export Council of India

(Pharmexil), stated that the pharmaceutical industry is expected to contribute US\$ 25 billion in FY2021. With such robust growth trajectory, pharmaceutical packaging represents huge business opportunity and a potential for product innovations.

Over half of pharmaceutical exports are supplied to highly regulated and developed markets such as Middle East, North America, and the European Union region. These markets are already marked with the presence of multinational pharmaceutical and packaging companies that are equipped with advanced technological and production facilities. Ability to compete and serve highly regulated and developed markets substantially, proves the competence of Indian pharmaceutical manufacturers and their packaging partners.

**AS THE PHARMACEUTICAL INDUSTRY RELIES ON THE PACKAGING SECTOR FOR RESOURCEFUL TECHNOLOGY AND DESIGNS FOR PROTECTING THEIR PRODUCTS, THE PHARMACEUTICAL PACKAGING INDUSTRY TOO DEPENDS ON STRONG MATERIAL CAPABILITY LYING IN THE PLASTICS INDUSTRY**



As the pharmaceutical industry relies on the packaging sector for resourceful technology and designs for protecting their products, the pharmaceutical packaging industry too depends on strong material capability lying in the plastics industry. Plastics such as polyvinyl chloride, polyethylene, polystyrene, and polypropylene have emerged as the most widely used materials for developing packaging solutions for pharmaceutical products due to numerous advantages that plastic offers in combating challenges arising in modern day supply chain.

Pharmaceutical products are packed and delivered in number of plastic packaging solutions such as bottles, vials, ampoules, syringes, blisters, etc. Packaging production technologies such as moulding and forming have conveniently adopted plastics to deliver quality and reliable solutions for encasing, protecting, and transporting pharmaceutical products across the world.

As pharmaceutical and biotech companies in India export to highly regulated markets, labelling and anti-counterfeit features of packaging help strengthen the market attractiveness of the products. Plastic materials with their greater printability allow low-cost printing and labelling for information disclosure and compliances requirements.

A major turning point anticipated in India's packaging industry is incorporating sustainability goals and blueprints. Sustainability has long been only a talking point in the industry with very few product

## PHARMACEUTICAL PACKAGING COMPANIES IN INDIA WILL NEED TO STRIKE A FINE BALANCE BETWEEN SUSTAINABILITY AND CONSUMER VALUE TO STAY GLOBALLY COMPETITIVE AND RELEVANT TO THE EVOLVING INDUSTRY STANDARDS

innovations taking place in terms of biodegradability or recyclability. To maintain product integrity pharmaceutical packaging serves complex functions such as temperature control, moisture resistance, light resistance, and product protection. Packaging solutions for pharmaceutical goes beyond product integrity to serve additional functions such as tamper evidence, labelling compliances and user-friendly product disposal. Fundamental functionality in pharmaceutical packaging requires complex multi-layer structures, surface printing and labelling that heavily restrict recyclability of pharmaceutical packaging.


Some ways in which packaging companies are already incorporating sustainability is through streamlining operations and optimizing material and energy usage. Going forward companies will have to innovate into product development through sustainable materials. Sustainable plastics such as polylactic acid (PLA), polyvinyl alcohol (PVOH), polyhydroxyalkanoate (PHA) and many other home compostable plastics have made inroads in different consumer and industrial applications but are yet to make impactful inroads in pharmaceutical applica-

tions.

Pharmaceutical packaging companies in India will need to strike a fine balance between sustainability and consumer value to stay globally competitive and relevant to the evolving industry standards.

Beyond sustainability, a major challenge in the immediate future for manufacturers of pharmaceutical packaging products is to deliver smart and innovative solutions to the ever-growing pharmaceutical industry. New product development and designing in pharmaceutical packaging is subject to heavy research and development efforts along with capital intensive investments. However, the year 2021 will see range of advancement being increasingly delivered by pharma packaging manufacturers in India.

A major trend in 2021 will be large scale commercialisation of QR enabled medicine packaging for better information communication. Temperature control will move beyond structural design to include smart sensors for detecting humidity and in-packaging atmosphere. Pharmaceutical companies are demanding smart solutions such as Radio-frequency identification (RFID) and near field communication (NFC) to improve adherence, tracking and better customer experience.

As the world is steadfast in delivering billions of vaccine doses to global population in 2021, Indian pharmaceutical and packaging manufacturers will look forward to usher a new dawn in the pharma value chain. 

**NEW PRODUCT DEVELOPMENT AND DESIGNING IN PHARMACEUTICAL PACKAGING IS SUBJECT TO CAPITAL INTENSIVE INVESTMENTS AND SMALLER MANUFACTURERS WILL HAVE TO STAY AGILE TO STAY COMPETITIVE IN A MARKET DOMINATED BY HANDFUL OF LARGER PLAYERS.**

# Sailing through tough times

Operational visibility and automation central to maritime logistics of the future

By Mr. Huseni Vohra, Regional Sales Director - Ocean Insights



While we can say with relative certainty that we are at the tail end of the COVID-19 pandemic—courtesy of the vaccines—the consequences of the pandemic are yet to be lived through. As with several industries, the COVID-19 impact on the supply chain industry has been total. The pandemic wreaked havoc on every segment of the value chain, forcing uncertainties within freight demand and capacity availability.

The maritime ecosystem suffered as oscillating freight volumes and grounded container lines crippled stakeholders financially, even as they lay burdened with added pandemic-based expenses over worker health and safety. However, as the pandemic's first wave subsided and economies reopened for business, pent-up demand came rushing back, peaking at the year-end holiday season.

The sustained increase in container demand on trans-Pacific and Asia-Europe lanes saw freight rates

more than double their usual levels. As carriers struggled to get empty containers back to Asia, cargo rollovers continued to increase globally across all major transshipment ports.

The shipping world went on to the next level of dynamism during the last quarter of 2020. In India, several containers transhipped via Mundra & Krishnapatnam ports rolled over to the second or the third vessel. On an average, in the South Asia market, the rollover ratios tend to increase by the second half of the year. However, the steep rise in demand after the lockdown effect needs to be factored in as well.

An earlier-than-anticipated recovery saw Chinese manufacturing back on track in the second half of 2020, posting a 54.9 on its Purchasing Managers' Index (PMI) in November — numbers never seen in a decade in China. With several



**THE MARITIME ECOSYSTEM SUFFERED AS OSCILLATING FREIGHT VOLUMES AND GROUNDED CONTAINER LINES CRIPPLED STAKEHOLDERS FINANCIALLY, EVEN AS THEY LAY BURDENED WITH ADDED PANDEMIC-BASED EXPENSES OVER WORKER HEALTH AND SAFETY**

vaccines in various stages of development and production, manufacturing centers across other countries that currently suffer from the pandemic will reopen in the first half of 2021, streamlining global container trade and stabilizing ocean freight rates.

That said, the impact of COVID-19 would inevitably strengthen several technological trends within the maritime ecosystem, like automation. Port automation trends are accelerating, buoyed by bottlenecks faced during the peak-pandemic season due to lack of adequate workforce. Aside from reducing the overarching labor dependence, automation helps lower overall operational inefficiencies and increase safety and terminal productivity.

The need for data-based insights is not lost on the industry, as maritime stakeholders increasingly recognize the 'technology edge' that data analytics brings to logistics operations. Segments like data intelligence and cloud-based technology that have mushroomed over the last few years will continue to gain relevance within the industry. The Internet of Things (IoT) technology is now ubiquitously used across supply chains, as they provide stakeholders real-time visibility into freight movement and its immediate environment.

Operational visibility has been elusive within supply chains, primarily due to companies working in complete siloes and skeptical of sharing data amongst other stakeholders

**THE NEED FOR DATA-BASED INSIGHTS IS NOT LOST ON THE INDUSTRY, AS MARITIME STAKEHOLDERS INCREASINGLY RECOGNIZE THE 'TECHNOLOGY EDGE' THAT DATA ANALYTICS BRINGS TO LOGISTICS OPERATIONS. SEGMENTS LIKE DATA INTELLIGENCE AND CLOUD-BASED TECHNOLOGY THAT HAVE MUSHROOMED OVER THE LAST FEW YEARS WILL CONTINUE TO GAIN RELEVANCE WITHIN THE INDUSTRY. THE INTERNET OF THINGS (IOT) TECHNOLOGY IS NOW UBIQUITOUSLY USED ACROSS SUPPLY CHAINS, AS THEY PROVIDE STAKEHOLDERS REAL-TIME VISIBILITY INTO FREIGHT MOVEMENT AND ITS IMMEDIATE ENVIRONMENT**


in the value chain. The interest in data intelligence has fostered supply chain connectivity, with several consortiums created within maritime networks — notably bound by blockchain technology.

Blockchain consortiums like the Maersk-IBM venture TradeLens put interoperational visibility under greater focus. TradeLens meshes together a network of cargo owners, container lines, freight forwarders, ports, and other associated stakeholders, creating an ecosystem that builds trust implicitly through a decentralized ledger system.

As large swathes of the transportation corridor stayed idle in early 2020, the world could concretely envision the positive impact consistently low carbon emissions can have on the environment. With the U.S. witnessing a change in administration this January, the trans-

portation industry would likely feel the push to keep their carbon footprint low.

Sustainability within logistics is expected to be taken up on a larger scale, with digitalization and automation being prime movers of such operations. Ports and terminals are some of the largest nucleated sources of carbon emission within the logistics ecosystem. The situation is worsened as major ports often find themselves close to densely populated cities, strengthening their need to oversee 'greener' operations next year. This could be done by general electrification of terminal cargo handling equipment like cranes and forklifts.

Overall, 2021 would define how global economies break free from the pandemic's shackles. As the proverbial 'mid-mile' of supply chains, the maritime industry will have to rise to the occasion. In many ways, the pandemic served as a wake-up call to maritime logistics, hastening the adoption of technology in an industry mired in archaic operations. Visibility would be a defining theme, with stakeholders across the value chain leading concerted efforts to effect change and eliminate opacity-related inefficiencies. 

**SUSTAINABILITY WITHIN LOGISTICS IS EXPECTED TO BE TAKEN UP ON A LARGER SCALE, WITH DIGITALIZATION AND AUTOMATION BEING PRIME MOVERS OF SUCH OPERATIONS. PORTS AND TERMINALS ARE SOME OF THE LARGEST NUCLEATED SOURCES OF CARBON EMISSION WITHIN THE LOGISTICS ECOSYSTEM**



# Towards a sustainable future

**We are witnessing a gradual recovery and we hope to see the business pick up as the overall Indian economy is picking up, says **Randhir Chauhan**, Managing Director - Netafim India and Senior Vice President - Netafim Ltd**

**By Niranjana Mudholkar**

## **Tell us briefly about Netafim's journey in India.**

Established in 1997, Netafim India is a wholly owned subsidiary of Netafim, the global leader in smart irrigation solutions for sustainable productivity. Netafim India with three manufacturing facilities, over 1000 employees and an exclusive network of over 2500 dealers across all the major states has provided an irrigation system for over 10 lakh hectares of land over the years covering wide range of crops. The company has successfully offered an extensive agronomic, design, after-sales support, and agri-extension services to ensure sustainable prosperity to over 9.5 lakh farming families to date. Netafim India is an active partner in several government projects like GGRC, APMIP and TANHODA. In 2013, the company was conferred with one of the Asia's largest community irrigation project in Ramthah, Karnataka. The company had also been an indispensable part of introducing the first of its kind turnkey community irrigation project in Erravalli, Telangana in 2016.

## **Where do you stand today and what is your vision?**

Netafim India operates across the length and breadth of the Indian subcontinent, offering a broad array of products such as micro-irrigation, greenhouse, community irrigation and digital farming. As the global leader in micro-irrigation, we aim to drive mass adoption of smart irrigation solutions to fight scarcity of food, water and land. Together with our partners, we have striven and will continue to endeavour for a

sustainable future by revolutionising micro-irrigation practices. Our work in India, however, is grounded in the objective that the opportunity to assimilate latest technological innovations in farming should not escape any farmer. It goes without saying that we are strongly committed to enable farmers grow more with less and through our technology and products, take it to the next level of growing even more with even lesser.

## **Tell us about your manufacturing capacities and capabilities in India.**

We currently operate through one head office, four regional offices, 11 state offices and three manufacturing facilities - two at Vadodara, Gujarat and one at Chennai, Tamil Nadu in India. Through our 13 warehouses across India, we distribute drippers & driplines, sprinkles, valves, connectors & fittings, providing end-to-

end solutions from the water source to the plant roots. Our products also include filtration equipment and automation products among other farm accessories. Over the years, the company has developed products that have been tailored as per the nature of landholdings of the farmers, crop specifications and the overall cultivation environment.

## **How important is the role of innovation in Netafim India's growth and progress? Can you brief us about your R&D activities?**

Technological innovations have disrupted countless arenas of work. Even a sector as manual as agriculture has not been left untouched. Being farmers' cultural anthropologist, Netafim India's work has predominantly focused on empowering farmers to grow in a more sustainable way through most innovative and advanced drip irrigation system. Netafim's products have evolved to become more convenient and hassle-free and have lent greater autonomy to the farmers over their own fields. Even in the harshest conditions and most challenging locations, we have aimed to help communities of all sizes to prosper and flourish. This relationship has manifested itself in the trust that farmers have been able to instil in Netafim, because of which the company has been their preferred choice.

**Netafim has extensively deployed the concept of 'digital farming' to make irrigation faster, smoother and more accurate. How are Indian farmers responding to the same?**  
To take micro irrigation in India to



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the next level and help Indian farmers optimise crop yields, we have introduced our digital product NetBeat. Combining everything into one closed-loop platform - irrigation, fertigation and crop protection, the digital farming solution enabling Indian farmers to monitor, analyse and control the irrigation system from anywhere. The NetBeat interface was developed with real farmers in mind. It has been designed to cover all your bases in a simple and user-friendly manner. NetBeat software gives farmers the ability to manage their activities from their smartphones, while also granting them unprecedented access to a super computing brain with multiple benefits. The platform with over 50 years of agricultural and hydraulic knowledge offers real-time recommendations to the farmers. From the advanced corporate farms to smallholders, NetBeat has a solution to fit the needs of any farmer. We have numerous success stories where farmers have really taken up and leverage the digital farming solution on their fields. It is not just an improvement in their yield and agricultural productivity but it also makes life simple for them having more time available for other things in life.

## How has the Covid-19 pandemic affected Netafim's business and operations? How have you been dealing with the same?

The year brought about inimitable changes to the sector, from a grueling economic slowdown to an unbidden pandemic, Covid-19. While the challenges remained mostly common across the economy, the impact on each sector varied dramatically. The agriculture sector faced significant challenges, particularly in the initial stings of the lockdown. Many of its vulnerabilities were exposed but the resilient sector emerged with



some positive results at the back of immediate interventions by the government. The need of the hour was and is still is to adapt to the new normal. As a preferred brand in micro-irrigation, Netafim India remained committed to offer an unmatched modern farming solution to Indian farmers. During the toughest time, our agronomists engaged in real-time with Indian farmers through knowledge series Netafim Krishi Samvaad, Netafim Ki Paathshala and Netafim Tip of The Day. The digital information-sharing tools in terms of audio, text and video messaging in respective local language were highly effective in disseminating critical information to farmers despite limited physical access. The company could tap a community of almost 8.5 million farmers across the country by relaying essential pre-sowing-related advisory services. To make #FarmingSimplified and boost next-generation farming in India, we had launched our revolutionary mainline and sub-mainline piping solution - FlexNet for above and below-ground drip irrigation system.


## How has been the ongoing financial year in terms of business numbers?

The pandemic has affected agribusiness with varying degrees of intensity across different geographies, com-

modities and created disruptions to the value chain. The constraints of limited availability of transport and workforce, production and movement of agriculture inputs created a challenge for farmers during the very main season of sowing. The delay in subsidy payments and reduced agriculture budget for the current year resulted in a cash crunch at a crucial time for business operations. However, announcements by the government for agriculture and allied sectors in wake of the

COVID-19 calamity are significant and will have a multiplier effect on the agriculture economy in days to come. We are witnessing a gradual recovery and we hope to see the business pick up as the overall Indian economy is picking up.

## How does Netafim look at campaigns like 'Make in India' and 'Atmanirbhar Bharat' in the context of your industry?

The Make in India and Atmanirbhar Bharat campaigns have confirmed the government's focus on the sector, with many initiatives targeted towards improving the state of agriculture in India. The focus is on job creation and skill enhancement. The initiative also aims at high quality standards and minimising the impact on the environment. It also hopes to attract capital and technological investment in India. Netafim India's success is rooted in the innovation and quality of the product as well as services that the company delivers. Since inception, we wanted to locally manufacture products and to this end, we have established three manufacturing facilities across India. Most of our products that we sell in India get produced at our manufacturing facilities. We have designed the plants so that they can always be adapted to changing production requirements and market needs. 



## The new robolink IP44 from igus: a robot that defies wet elements!

**igus has developed a Low Cost Automation solution made of polymer and stainless steel for environments with splashing water**

Damp and wet environments can quickly degrade the mechanics of a robot. This prompted igus to launch a Low Cost Automation innovation on the market, which can easily and cost-effectively implement simple tasks and at the same time be allowed to come into contact with splash water. "From discussions with customers, we learned that many users are looking for an economically affordable solution that can also be used in splash water environments, for example, when emulsions have to be removed", explains Alexander Mühlens, Head of Automation Technology at igus GmbH. "We then developed a robot that is suitable for this purpose." The new robolink makes use of the advantages of two materials: stainless steel and high-performance polymers. For



**| Splash water is no problem, at least for the new robolink IP44.**

the first time in an igus robot, the joining links are made of V2 or V4 stainless steel and the joints of the proven lubrication-free tribo-polymers. The user does not need an expensive additional covering, because the absence of lubrication in the joints means that no grease can be washed out and escape into the envi-

ronment. The new robolink meets protection class IP44 at least, and is therefore resistant to splash water. It can carry up to three kilograms, has a range of 790 millimetres with five axes and can make 7 picks a minute. Thanks to the use of motors with encoders of protection class IP65, the robot can also be easily used for outdoor inspection. Further application scenarios are possible, for example, in the food and beverage industry, in the chemical and pharmaceutical sector, or even for tank and container cleaning operations.

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## Gourav Luminaries develops high quality polymers through Industrial waste

The three decade company, Gourav Luminaries Pvt. Ltd. believes in delivering high quality polymer keeping in mind the environmental aspects. They have effortlessly risen to become one of the largest manufacturers and distributors of electrical goods in Tier 2 cities. With five manufacturing units, the core strengths are research, innovation in Indian manufacturing and direct distribution.

Highlighting the same, Gaurav Khanna, Chief Executive Officer of Gourav Luminaries Pvt. Ltd. mentions, "In polymers, I see circular future for LED industry. Our R&D team has successfully been able to develop few high quality polymers



through industrial waste, which are

being used in cabinets/housings of Hilyt LED Lights. This enables us to not only cut down our product cost but also save our planet! "

With 20,000 retail touchpoints, Gourav Luminaries has penetrated the Indian market owing to its cost-effective and innovative products.

One of the few eco-conscious brands, focuses on minimizing the use of plastic in packaging and daily production. Some of the products by the brand that have changed the market landscape are Otto Switches, Fucon Wires, Yodha Switchgears and Hi Lyt LED Lights. The way forward for the brand is going to be a testament to the power of local, Made in India products.



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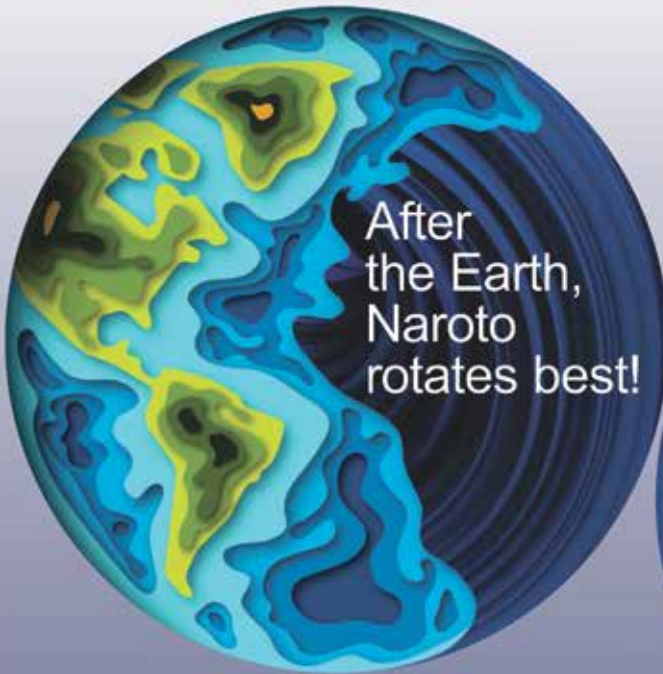




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