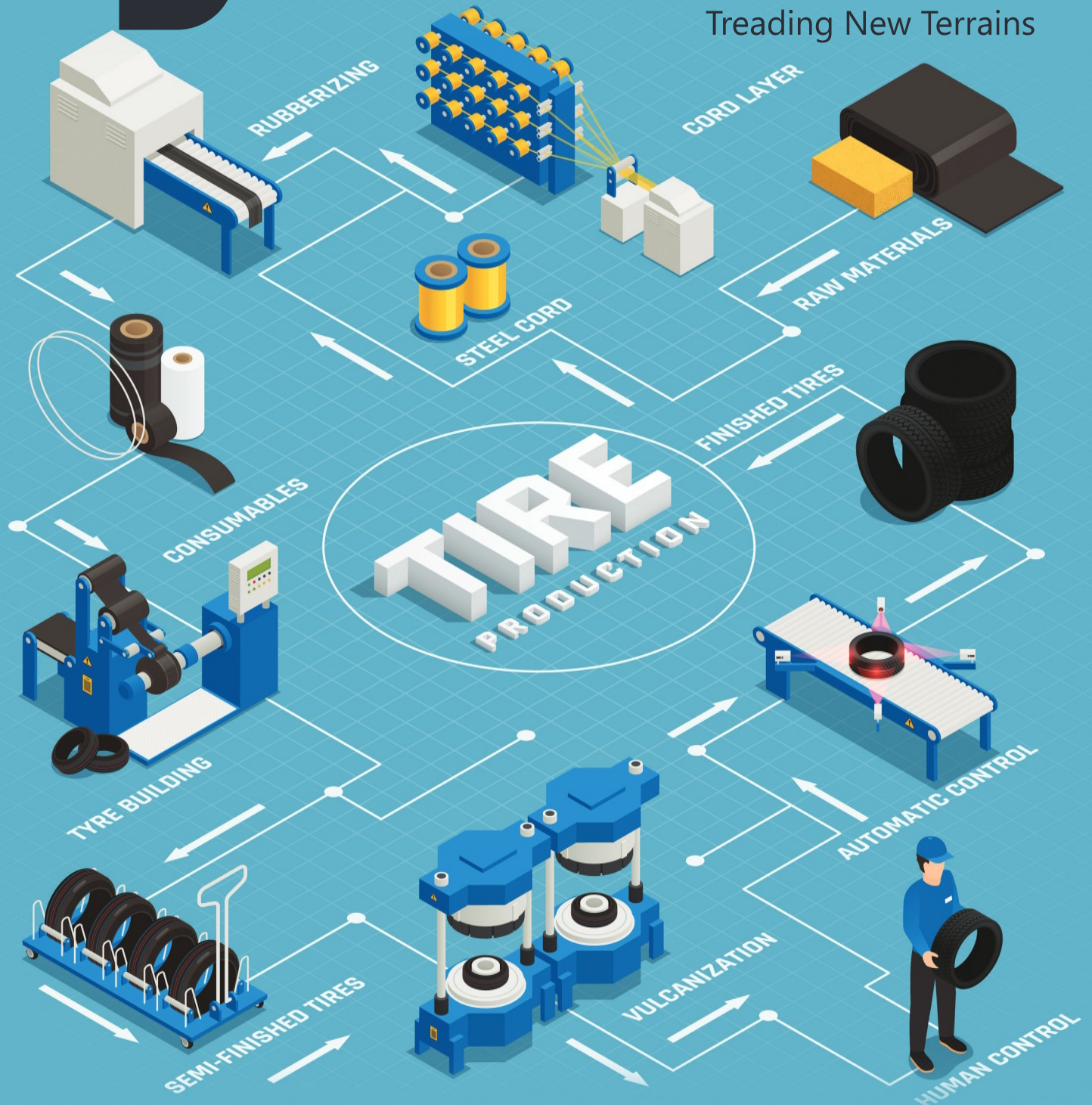


TyreTrends

Treading New Terrains

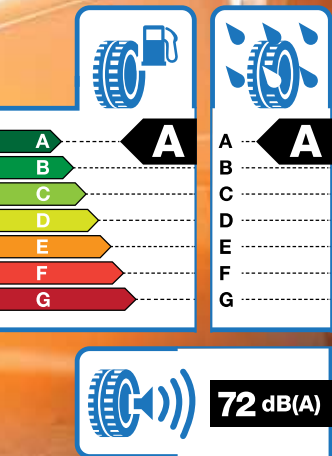


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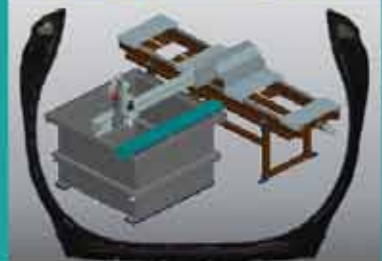
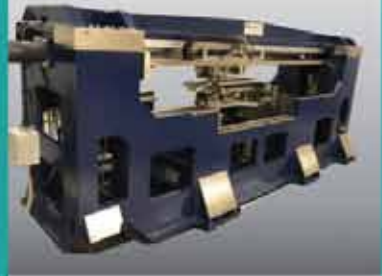
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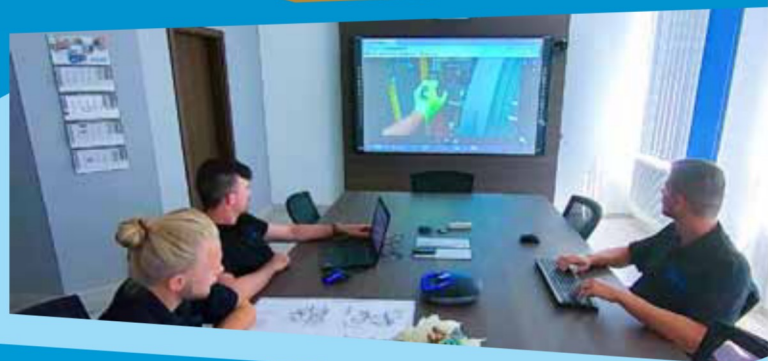
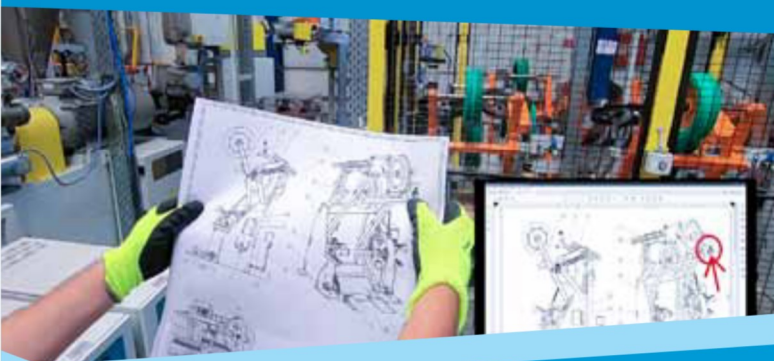
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Editor: Raghav Varma

BACK ON TRACK, AND SPEEDING

Now that it is accepted that there is going to be no quick end to the continuing waves of the Covid 19 attack, the focus needs to be on how the industry is handling it. The signs are not merely positive, but inspiring. The global tyre industry is definitely back on track and speeding. This is what the Third Quarter financials of various companies show. Sales and revenue are on the rise and demand from the market is also on an upward swing.

This is amazing – the basic nature of the global mobility industry. It is impervious to crises, manmade or otherwise, that adversely affect many other industries. Tourism, for example, and the hospitality industry in general, are so closely tagged with social gatherings as compared with social distancing, are having a nightmare time with people keeping a distance from their favourite holiday destinations.

On the other hand, the mobility industry, where tyre is a vital element, has to work no matter what happens. Lockdowns are temporary, but roads can never afford to remain empty for long. This is what makes the industry robust and shock-absorbing.

In India, which saw some of the globally worst days of virus-created mayhem, the automotive industry has picked up fast. The Society of Indian Automobile Manufacturers (SIAM) says vehicle sales recorded nearly 45% increase in January 2021. That obviously means a greater number of tyres on the road. According to a SIAM senior, the problem is lack of enough tyres available. This increase in demand is a dreamy situation for the tyre industry.

Also, the Indian government has brought in draft norms for tyre makers that stipulate standards with regards to rolling resistance, wet grip and rolling sound emission, helping make the Indian norms internationally compliant. This is a positive development that helps the industry be at par with global standards.

The global scene is surely one of return-to-track for the tyre industry. The underlying question is how much the industry has imbibed the lessons the pandemic taught in making itself stronger to face similar or worse challenges in the future. ■

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BULLETIN

NOKIAN TYRES SPAIN TEST CENTRE OPENS



The new test centre already has a nickname: Hakka Ring. In an internal name competition, Nokian Tyres' employees suggested around 150 different nicknames for the new test centre. Hakka Ring was the winner as Hakka and Hakkapeliitta are the well-known products brands by Nokian Tyres, and as the most famous tracks in the world are called 'Ring.'

The location in Spain enables year-round testing of summer, all-season, and winter tyres.

In the 300-hectare area, there are several test tracks for dry and wet testing, as well as the high-speed oval enabling testing in the speed of up to 300 km/h.

The centre uses many environmentally friendly technologies, such as over 1,000 solar panels, water recycling, and white roofs. ■

Nokian Tyres has begun testing in the new test centre in Santa Cruz de la Zarza, Spain. All 10 tracks are being used to test the tyres in extreme conditions, and the crown jewel of the test centre is the 7-kilometer-long oval track that circles the area.

"All our test centres are investments in innovativeness, and the expansion of testing activities is a big and important leap for us. The versatile tracks and modern equipment of the Spain test centre enable us to test tyres on wet and dry, so that heavy rain or intense heat will not bring any surprises. The Spain Test Centre, combined with our Ivalo winter test centre in Lapland, takes our overall testing capability to the highest possible level," says Olli Seppälä, Head of R&D.

The centre enables the company to speed up the product development cycles and to strengthen its position as a manufacturer of premium tyres.

ATMA WELCOMES NEW TYRE NORMS

Automotive Tyre Manufacturers Association (ATMA) has welcomed the draft norms for tyre industry released by the Ministry of Road Transport & Highways (MoRTH). The new norms will be incorporated as part of the Automotive Industry Standard (AIS 142) and require tyres to comply with rolling resistance, wet grip and rolling sound emission, helping make the Indian norms internationally compliant.

ATMA stated that the new tyre norms are a step in the right direction and will help improve road safety. However, ATMA requested the government to provide the industry with a feasible timeline for adapting the new norms as many SKUs need to be tested to arrive at a practical threshold limit that suits the Indian conditions.

ATMA also mentioned that the wet grip and rolling sound emission tests have to be performed on test tracks

and their availability and readiness will influence the implementation of the new norms.

According to the draft notification, the new norms will apply to all new tyre designs from October 1, 2021 and for all existing tyre design by October 1, 2022.

Commenting about the new norms, Rajiv Budhreja, Director General, ATMA, said, "Tyre Industry's growth is underpinned by a sharp focus on technical and environmental parameters. The new draft norms will further align Indian standards with the best in operation internationally. As a key segment of Indian manufacturing that has proved its credentials globally, Indian Tyre Industry will be keen to adopt these norms at the earliest." ■



FASTEST SUPERCOMPUTER FOR FALKEN TYRES

Falken Tyres is all set to develop long-lasting vehicle tyres required for future mobility using the new 'exascale' Fugaku supercomputer.

Falken's parent company, Sumitomo Rubber Industries (SRI), has become one of the first industrial sector users to access the world's most powerful and fastest supercomputer. SRI will use the computer to expand its materials simulation capabilities at the smallest particle level and help Falken in tyre development.

The companies will use the supercomputer to advance Performance Sustaining Technology (PST), helping prevent the decline in tyre performance over time due to wear and tear. Fugaku supercomputer will help engineers understand the chemical changes occurring within rubber at the molecular level during tyre usage to help control the

chemical changes and enhance the tyre life.

Before the Fugaku supercomputer, Falken and SRI engineers used Japan's K-supercomputer to launch its 4D NANO Design process that led to a step change in the performance of Falken's tyre range, resulting in an ever-growing list of accolades and OE fitments.

Dr Bernd Löwenhaupt, Managing Director, Sumitomo Rubber Europe, said, "As we look to the near future, the role of tyres will change. With more autonomy and connectivity, tyres will be smarter, responding to scenarios and changing conditions with less input from the driver. They will also need to perform over a longer lifespan. Fugaku provides a crucial tool for us to deliver those attributes and continue to be a leader in advanced rubber technology." ■

Birla Carbon launches Continua

Birla Carbon has launched a first-of-its-kind sustainable carbonaceous material with the launch of 'Continua,' a ground-breaking step forward towards sustainable solutions in the carbon black industry.

The company hopes to make 73,000 tonnes of Continua annually for use in a wide range of applications including tyres, mechanical rubber goods, plastics, and many more, over the next five years.

A life cycle assessment conducted according to ISO 14040 and ISO 14044 demonstrates that at full capacity, 228,000 tonnes of direct and indirect CO2 emissions will be eliminated on an annual basis when compared to the conventional carbon black process.

Speaking at the announcement, Dr Sanrupt B Misra, Chief Executive Officer, Birla Carbon, said, "As leaders in our industry, it is our responsibility to make a difference through our focus on sustainability and innovation. We are now ready to share sustainable solutions with the world. With the launch of 'Continua', we hope to deliver consistent, sustainable carbonaceous materials to our customers to take their circularity aspirations closer to reality." ■

CEAT extends warranty period

CEAT Tyres announced its decision to extend the warranty period of CEAT products in India by an additional three months. The decision was taken by the company to support the customers amidst the second wave of the Covid-19 pandemic.

The warranty extension is applicable for the products with a standard warranty expiring between April 1, 2021 and June 31, 2021.

Amit Tolani, Chief Marketing Officer, CEAT Tyres, said, "We understand our customers will be facing restriction in movement in several states due to the recent wave of Covid pandemic. The three-month extension on all our products ensures that our customers continue to get the benefit of the warranty during these trying times."

All the nationwide dealerships of CEAT Tyres will pass on the benefits of an extended warranty to all its customers. ■



SPOTLIGHT



G. Mohan Kumar

MOHAN KUMAR, MICHELIN INDIA, SUCCUMBS TO COVID-19

G. Mohan Kumar, Head of Business, Michelin India and SAARC, lost his battle with COVID 19. He had recently been unanimously elected the Vice-chairman of ATMA.

Kumar, a Mechanical Engineering graduate from NIT, Tiruchirappalli, and Marketing and Finance graduate from IIM Bangalore, joined Michelin in 2005 and has held various leadership positions in both India and the US. In 2017, he took over as the head of business for Michelin India and SAARC nations. ■



Nico Rosberg

NICO ROSBERG IS CONTINENTAL BRAND AMBASSADOR

Nico Rosberg, the 2016 Formula 1 World Champion and sustainability entrepreneur, has signed up as new brand ambassador for Continental, one of the main sponsors of the Extreme E racing series and recently helped Rosberg's team to victory in the opening round of the series. Continental designed and developed special off-road tyres for the racing series conceived to draw attention to the effects of climate change and to combat them by promoting climate protection projects on site.

Talking about Rosberg's signing, Philipp von Hirschheydt, Head of Business Unit Replacement Tyres EMEA, said, "Nico Rosberg and Continental make a perfect fit. Nico Rosberg has achieved massive success in motorsport, personifies elite-level driving performance at the limit and displays a multi-faceted commitment to environmental protection. ■

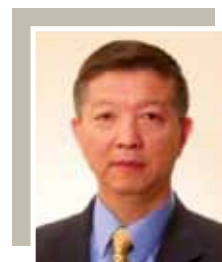


Paolo Ferrari

PAOLO FERRARI NAMED BRIDGESTONE GLOBAL CSO

Paolo Ferrari, CEO & President, Bridgestone Americas, has been appointed as Global Chief Business Solutions Officer (Global CSO) at the company, effective July 1, 2021. Ferrari has been a member of the Bridgestone Global team since 2016, and was named CEO of Bridgestone Americas in January 2020.

Ferrari began his executive career at luxury brand Zegna in New York in 1994, gaining experience in sales, marketing and retail. Over the following years, he built his expertise in general management, technology and finance and M&A at companies such as Credit Suisse First Boston in London and Telecom Italia (TIM) Group in Italy, Germany and France, where he also managed assets in Latin America and Southeast Asia. Ferrari's experience in automotive, tyres and mobility began in 2012, when he was appointed Chairman and CEO of Pirelli North America and later CEO of Pirelli Latin America. ■



Dr. Lin Kung

LIN KUNG JOINS TMSI AS CTO

TMSI has appointed Dr. Lin Kung as the CTO. As a 30+ year veteran in tyre and auto industry, Dr. Lin Kung has been an active member in

different institutions dedicated to the research and development of the tyre mechanics, and his experience in Nexen, Kumho, Continental, General and Firestone will make him a key contributor to the group, TMSI said in a statement.

In his role as CTO, Dr. Lin Kung will work closely with the engineering team, as well as count with the collaboration of Dr. Gerald (Jerry) Potts, Senior Technical Advisor and part of TMSI Board of Directors.

His knowledge in tyre mechanics and tyre industry will be of great value to TMSI Llc. as it continues to move forward in developing new technologies by listening to customers and to offer solutions to specific requirements.

"I am glad to be part of the TMSI team, to work with one of the best teams in the industry, and to keep innovation moving forward," said Dr. Lin Kung. ■



Tomohiko Masuta

MASUTA APPOINTED MD OF FALKEN, SUMITOMO

Falken Tyre Europe and Sumitomo Rubber Europe announced the appointment of Tomohiko Masuta as the managing director of both companies. He will supervise the SRI group companies in the EMEA region and Falken businesses in Europe. He joined Sumitomo Rubber Industries in 1985 in the Product Development department. In the 1990s, he worked in the Original Equipment (OE) department before going to support the development of the Dunlop brand in Europe. He was appointed general manager of OE tyre business for SRI in 2015. His most recent role was as the general manager of the Automotive System Division.

Masuta said, "I am proud to have contributed to the company's success as a top supplier to Japanese OEMs, and I am excited to lead the business as we push to grow our European OE customers.

My personal motto is simply to 'make the customer happy'.

Together with this excellent team around me, we can provide the best products and services to ensure our customers are constantly satisfied, resulting in more premium vehicles factory-fitted with our tyres and long-term stable profits for the company." ■

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VIEW POINT

By Adam Gosling

COVER YOUR 'ANALYSE RISK SAFETY' EVERY TIME, NEVER ASSuMe!

What is not very well understood by back-office personnel is that tyres are influenced by, and actually influence, the successful operation of the vehicle, be it a wheel barrow, a tri-cycle, a rigid truck or road train even a giant haul truck



Adam Gosling

For any enterprise involved in on road operations there are quite a number of risks and always a degree of risk. How to mitigate the risk potential is always a challenge and in some larger businesses involving a dedicated risk manager.

Many trucking companies look at risk exposure as a necessary evil and utilise insurance packages to reduce the financial ramifications of such exposures.

Now, what if, a risk mitigation strategy that provided positive financial outcomes was available for just a little investment? Does this spark interest in those who drive the abacuses in the back rooms?

Tyres form one of the highest cost centres for a transport operation be

the activities on road or in a mining operation. Fuel is usually the largest and is tightly controlled as the abacus jockeys understand that every last millilitre of fuel must be accounted for. Granted there is a percent here or there for spillage but as fuel companies demand payment prior to delivery for almost all operations the bean counters are onto it without delay. Tyres?

When we consider the humble tyre so many ASSuMe that the tyre just performs the required duties without any (at worst) attention or with just a little attention, perhaps a kick every now and again or being slapped with a pipe or bar to confirm the tyre isn't totally flat.

Tyre, the influencer

What is not very well understood by back-office personnel is that tyres are influenced by, and actually influence, the successful operation of the vehicle, be it a wheel barrow, a tri-cycle, a rigid truck or road train even a giant haul truck. If the tyres aren't "right" then the operating costs will rise. Consider a delta percentage on fuel burn of 3 – 5%, a wheel end bearing life reduction of 10%, a tyre life deficit of 10%, decreased suspension component life as the tyres are being dragged not rolling, at what cost does the "head in the tyre" influence the profits of the business?

So, when we "Cover Your Analyse risk SAFETY" every-time (CYA) we consider all the contributing aspects of tyre

use and how risk mitigation practises can be employed to grow the return on the investment our businesses make in tyres. All successful transport companies maintain a close log on the consumption of mechanical items such as fuel and spare parts. Labour costs are also rigidly overseen and as every driver well understands there are events on the road that result in a later delivery than was planned, a traffic event that turns the usual highway into a car park. When the driver returns to base and lodges the work hours there is always a cry from the accounting department why has this person worked overtime, why are we paying more than normal?

Yet, for tyres it seems too often the humble servant is treated as a mere consumable commodity and just turned over or replaced without any consideration as to how life can be extended. Why? When tyres influence so many of the unseen factors for a transport operator why are they not used as the reporter, the data logger of operations? A tyre does not lie about the experiences they have endured, they cannot suddenly grow tired to cover misalignment or a brake lock up, the evidence is in our faces IF we simply observe what the tyres are telling us.

Tyre management

There are many valued publications from around the globe that have photos of tyres that have worn in a certain manner or exhibit various conditions that relay the root causes

of the damage to the observer. The tyre scrap heap is the first place we visit when determining the tyre management capacity and capability of a new client. How many tyres with more than the minimum legal tread depth are in the scrap heap? If there are records of tyre performance what is the tread consumption rate for the tyres consumed? What is the frequency of the various scrapping reasons the business using tyres is experiencing? Why? What is the distance per tread unit rate? What is the fuel burn rate per tread unit consumption? What if these questions can't be answered? Then a risk mitigation practise is obviously not in practise. Exposure is certain, a matter of when not if.

A simple tree diagram or spider web drawing outlining the various risk aspects a tyre could experience with each branch drawing down into detail of how, what and why can assist in the mitigation process. The risk on the underside of the branch with the solution on the top provides a simple but effective illustration of the potentials available.

The TyreSafe Australia policy known as the 6M Principle is engaged in not only tyre performance enhancement but right through the various aspects of the transport business. Before you can MANAGE you have to be able to MEASURE. With measurements (read data) one can MONITOR to know when to MAINTAIN the equipment therefore actually MANAGING in order to MAKE MONEY! The 6M principle is simple but it requires diligent and dedicated systems

within the workplace. There are many principles such as that espoused by Dr William Deming who developed the PDCA process, PLAN, DO, CHECK, ACT where the a/ versus b/ consideration was created

a) When people and organisations focus primarily on quality, defined by the following ratio;

$$\text{Quality} = \frac{\text{results of work efforts}}{\text{Total costs}}$$

quality tends to increase and costs fall over time.

b) However, when people or organisations focus primarily on costs, costs tend to rise and quality declines over time.

Bill Smith who introduced the 6 Sigma philosophy in the 1980's also recognised the same avenue of opportunity. The basis of 6 Sigma is the improvement of the output quality by recognising and eliminating the root causes of defects and so minimizing the impacts using statistical processes, ie managing by measuring monitoring and maintaining!

The TyreSafe Australia 6M principle is closely aligned with these well recognised philosophies and commences with the simple recognition that tyre inflation pressure control is the absolute basis for the desired performance outcomes a transport related business will experience. How do you analyse the risks, what mitigation processes are in place?

Safety is not just about well-being of personnel. If a business doesn't employ safe practices, is it going to be sustainable? Not just from the human factor but also consider the financial aspects. A business engaged in risky financial undertakings will probably collapse sooner than later.

So why not start the process from the ground up by ensuring that the foundation of the modern motor vehicle, the humble tyre is indeed operating at optimum levels. With modern electronics there is no excuse for not completely understanding (and so appreciating) what the tyres you use are providing to your business profits. If you are not measuring, how are you managing?

Ensure that your tyres are not a drag on your operation, ensure the rolling resistance is as low as possible and this will ensure there is an even flow of dollars into your account. Utilising real time tyre monitoring is now a standard practise for successful businesses who utilise tyres in their operations.

Cover Your, Analyse Risks Safety Everytime!

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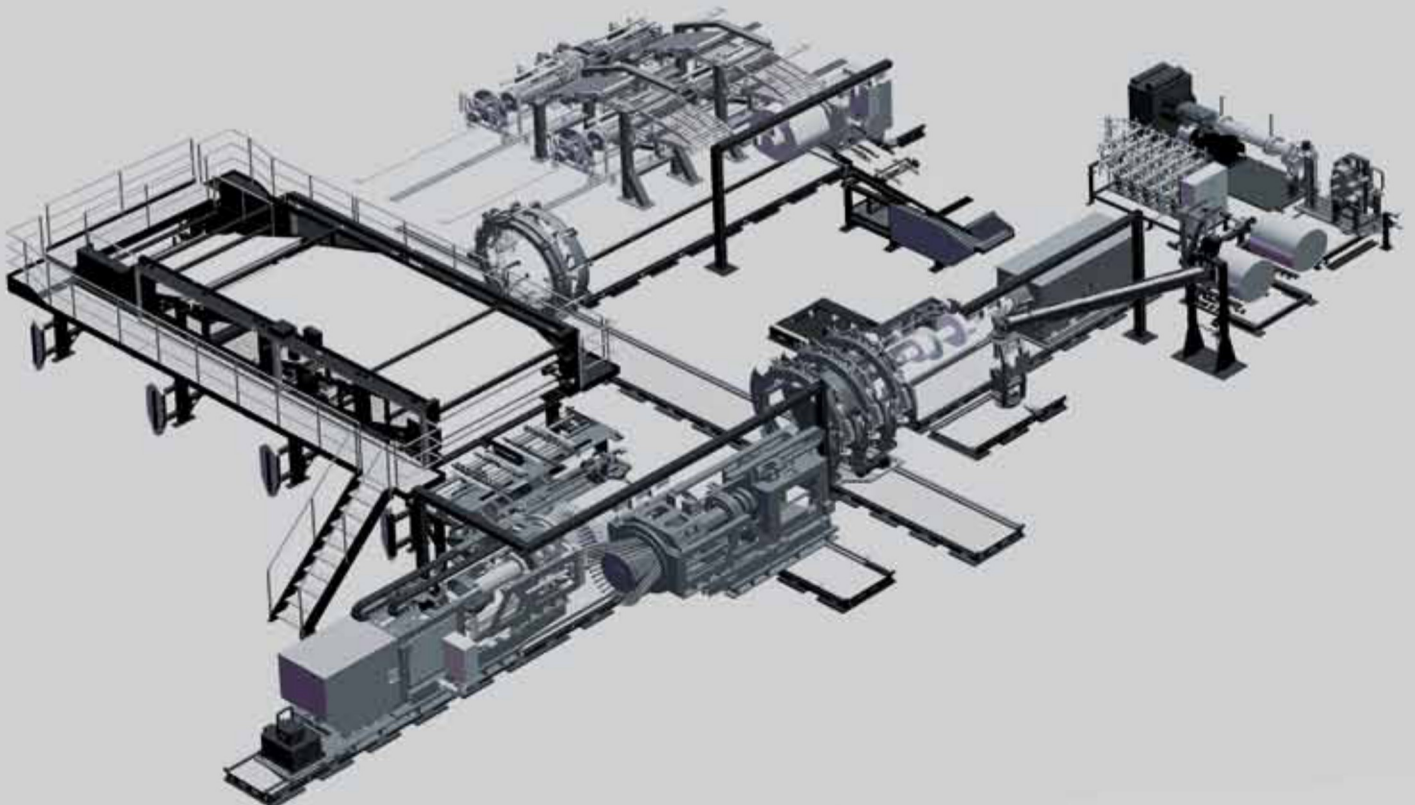
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TREND

By Sharad Matade

TVS SRICHAKRA RAMPING UP FOR EUROPEAN EXPANSION

The two-wheeler tyre major has fielded its maiden two-wheeler tyre range in Europe after much groundwork. Now it is preparing for new product launches for different applications in the two-wheeler segment. Andrea Bianchi Milella, Marketing Manager of TVS Srichakra's Italian Centre; P Madhavan, Executive Vice President - Sales & Marketing, and V Sivaramakrishnan, Chief Technology Officer (R&D Head), TVS Srichakra, spoke in details on the company's plans for the European market.



TVS Srichakra has entered the European market with its new range of Eurogrip two-wheeler tyres which are customised to meet the European rider's needs. The company has been meticulously moving on its brand building and product launches in the last two years. In 2019, the company had

launched its brand TVS Eurogrip with a new logo and new product range, aiming at younger, millennial and aspirational buyers.

To foray into the European market, TVS Srichakra once again has gone through a lot of studies and product testing. The newly launched range of



Andrea Bianchi Milella,
Marketing Manager, Italian Centre

Eurogrip Bee Connect scooter tyres will be available in a basket of 40 different sizes in the coming months in Europe. Decoding the significance of the Eurogrip Bee Connect name, Andrea Bianchi Milella, Marketing Manager of TVS Srichakra's Italian Centre, said, "It took quite a long process to come to this name – Eurogrip Bee

Connect. The pandemic has changed everyone's life and also their mobility preferences. Due to social distancing and safety, public transportation is being avoided in Europe and, two-wheelers, especially scooters, are increasingly preferred by people to connect with each other. Secondly, at TVS Srichakra, we are the forefront runner for creating ecological consciousness in the tyre industry. We did tremendous work on reducing the environmental impact and increasing the usage of renewable energies with this product. With the Eurogrip Bee Connect, we wanted to highlight that we are very conscious about sustainable mobility, and which animal could be better than the bees to symbolise this fact. Bees are industrious and hardworking and, most of the time, on the move, but at the same time, they play kind of a crucial role in the wellbeing of nature and humanity itself. So, we also wanted to highlight this side of our involvement in the automotive industry."



P Madhavan,
EVP – Sales & Marketing

The company has entered the European market when the pandemic has put a halt on everyone's life for more than a year. However, P Madhavan, Executive Vice President - Sales & Marketing, TVS Srichakra, backs the timing to enter the European market, saying the strategic move has been taken after much deliberation. Madhavan

says, "I will strongly believe in stop, pause and take a breath, and then look at the very reason where you can go from that point onwards. So we use this period to go back and understand the consumer better. We got into the deeper research and tried to get fresh insights on the consumer so that if there is that nugget of gold as an opportunity available, go pick that up. That was the thought right through."

The Chennai-headquartered company utilised the recent slowdown period for designing and studying the market trends and the riders' needs in greater details. The new product development went through multiple rounds of prototyping and subsequent tests in its laboratories and on racetracks and roads by some independent testers in Europe.



Today, the homegrown company is a leading tyre company in the two-wheeler, three-wheeler and OHT tyre space, operating for more than three decades. The company rolls out around three million tyres every month out of its two manufacturing facilities located in Madurai (Tamil Nadu) and Rudrapur (Uttarakhand).

Eurogrip Bee Connect for riding experience

In India, two-wheelers are essentially a mode of commuting, whereas as the consumers in Europe, though in smaller numbers, are more discerning and evolved.

According to Milella, European two-wheeler riders seek a wholesome experience and are choosy on bikes, accessories and tyres. "European two-wheeler riders want to enjoy the riding experience, which could be any form – long rides on highways, country roads, sporty rides, off roads or racetracks. The consumer segment in the region we are dealing with is updated and aware of the types of tyres they require for their needs. So, you need to have quite a lot of offers all across the spectrum to cater to each type of riders. I will say it's quite interesting," said Milella.

Currently, the company is working on new products, which will be released in the first quarter of 2022. A knobby product for off-road purposes and a street tyre for medium and big displacement motorcycles, both in Radial and Cross Ply construction, are lined up for launch in the next few months.



V Sivaramakrishnan,
Chief Technology Officer

TVS Srichakra has installed an entirely new line at its Madurai plant to manufacture the newly launched range. Elaborating further, V Sivaramakrishnan, Chief Technology Officer (R&D Head), said, "Tyres made for the European market require completely different compounds and materials



and need to meet the REACH compliance. So, we have a completely new manufacturing plant dedicated for the European product line in Madurai, India, which includes completely new extruders, tyre building machines and process."

At the start, TVS Srichakra is not looking for sales targets in the European market. The priority for the company is to establish the brand, which is another mammoth task for any tyre company. TVS Srichakra has already been in Europe with its Eurogrip brand in the Agri tyre space for five years. "We are designing and developing our products as per the market needs and building our brand. We prefer to have more organic growth," says Madhavan.

The company also plans to introduce some of Eurogrip Bee Connect products in India and other markets in upcoming quarters.

Not only building a brand, but establishing the retail chain in Europe is another challenge. The retail tyre business in the region is much more organised in both online and offline segments, which give much more options to consumers. In Europe, the retail tyre business is being increasingly driven by digital space, and consumers expect solutions from doorstep delivery and fitment to other services instead of just a product. As of now, TVS Srichakra has no plans to acquire any retail chain or distributors in the replacement market in the region. Currently, the company is working with the leading distributors across all European countries – Italy, Spain, France and the Netherlands. "With our partners, we will be present at the vast majority of retailers across countries to support our customers," said Milella.

Continued on page 42



TREND

By Louis Rumao



Louis Rumao

BIDENOMICS TO DRIVE EV REVOLUTION

'The future of the auto industry is electric. There's no turning back,' US President Joe Biden

President Joe Biden, during his visit to the Ford Motor Company's Rouge Electric Vehicle Center last month, said the American auto industry is at a crossroads, forced to choose between two options: Spend around \$174 billion to speed ahead and to dominate the burgeoning electric vehicle market, or cede the race to China!



US President Joe Biden Test drives Ford's new electric truck



President Biden Test drives Ford's new electric truck

He said "my plan will spark more electric vehicle (EV) manufacturing in the United States, secure a domestic EV supply chain, ensure a nationwide network of charging stations, make EVs accessible to average consumers and do it with a unionised workforce." Biden, in his nearly \$2 TRILLION jobs-and-infrastructure spending plan, wants to spend \$174 BILLION for EV infrastructure development. President Biden plans to fund the ambitious spending plan with tax increases, but as expected, it is opposed by the Republican lawmakers and many economists as inflationary and aggravating the national debt.

However, with this push for electrification, President Biden also appeases a large segment of his democrat supporters, such as the California Gov. Gavin Newsom, also a democrat, who has issued an executive order halting the sale of new gasoline-powered vehicles beginning in 2035 in the state of California.

The 'GREEN' angle

The most up-to-date data shows that driving an EV produces almost three times LOWER CO2 compared to an IC-powered vehicle. However, perhaps 50% or more of the greenhouse emissions occur due to an EV even before the vehicle hits the road; As the popularity of EVs starts to grow exponentially, so will the demand for raw materials such as lithium, nickel, and cobalt. These materials are used in batteries to power EVs but are also associated with significant greenhouse gas emissions and linked to environmental damage. Growing need for electricity to charge batteries with also add to the greenhouse gases, unless renewable energy is fully capable to power electricity networks.

Additionally, industry analysts predict that by 2030 the world will generate 2 million metric tons of used Li-ion batteries per year. Developing innovative methods to recycle and extract raw material from spent batteries is critical to reduce the need to mine for 'fresh' materials and to alleviate future pressure on supply chains. Therefore, there is an urgent need for further investment for researching and developing new practical methods for recycling the spent batteries and to avoid further environmental damage. While it is full-speed-ahead for EVs, a full life-cycle analysis of the production and use of EVs is needed.

Tyre industry seeks to benefit

The US Tire Manufacturers Association (USTMA) is hoping to influence eventual

infrastructure spending and boost the industry in the process. Its 13 member companies produce 85 percent of the tyres sold in the United States, and directly support more than a quarter million jobs across the country.

The association, in its May 24 letter to Congress and the Biden administration, is urging them to take several steps to strengthen the US tyre manufacturing industry while also delivering on important environmental objectives.

The association is urging law makers to promote the recycling of scrap tyres, to invest in research and use of rubber modified asphalt in new and existing infrastructure work. The group also wants more research into the use of tyre derived aggregate in stormwater infiltration galleries.

USTMA also suggests incentivising the growth of US manufacturing of retreaded tyres for commercial vehicles and the use of low rolling-resistance tyres to increase fuel economy and reduce greenhouse gas emissions. Strengthened federal mandates that divert used tyres from landfills would help the country with sustainability and environmental goals, USTMA said, especially when coupled with the greater use of retreads. According to USTMA, there are several ways in which government and the tyre industry can collaborate to meet nation's shared objectives.

Antidumping duty on tyre imports

President Biden plans to spend trillions of dollars for many social and infrastructure projects, and his administration will use every trick to raise money through imposition of higher taxes and tariffs. To wit, the US Commerce Department affirmed on 20 May 20 imposition of elevated antidumping duties on passenger vehicle and light truck tyres from South Korea, Taiwan, Thailand and Vietnam. This step will be followed by the US International Trade Commission (ITC) which will make its final injury determinations on or about 28 June, 2021. If the ITC finding is affirmative, then Commerce Dept. will issue antidumping orders. The 2019 imports of passenger tyres from the countries under investigation were approximately valued as follows:

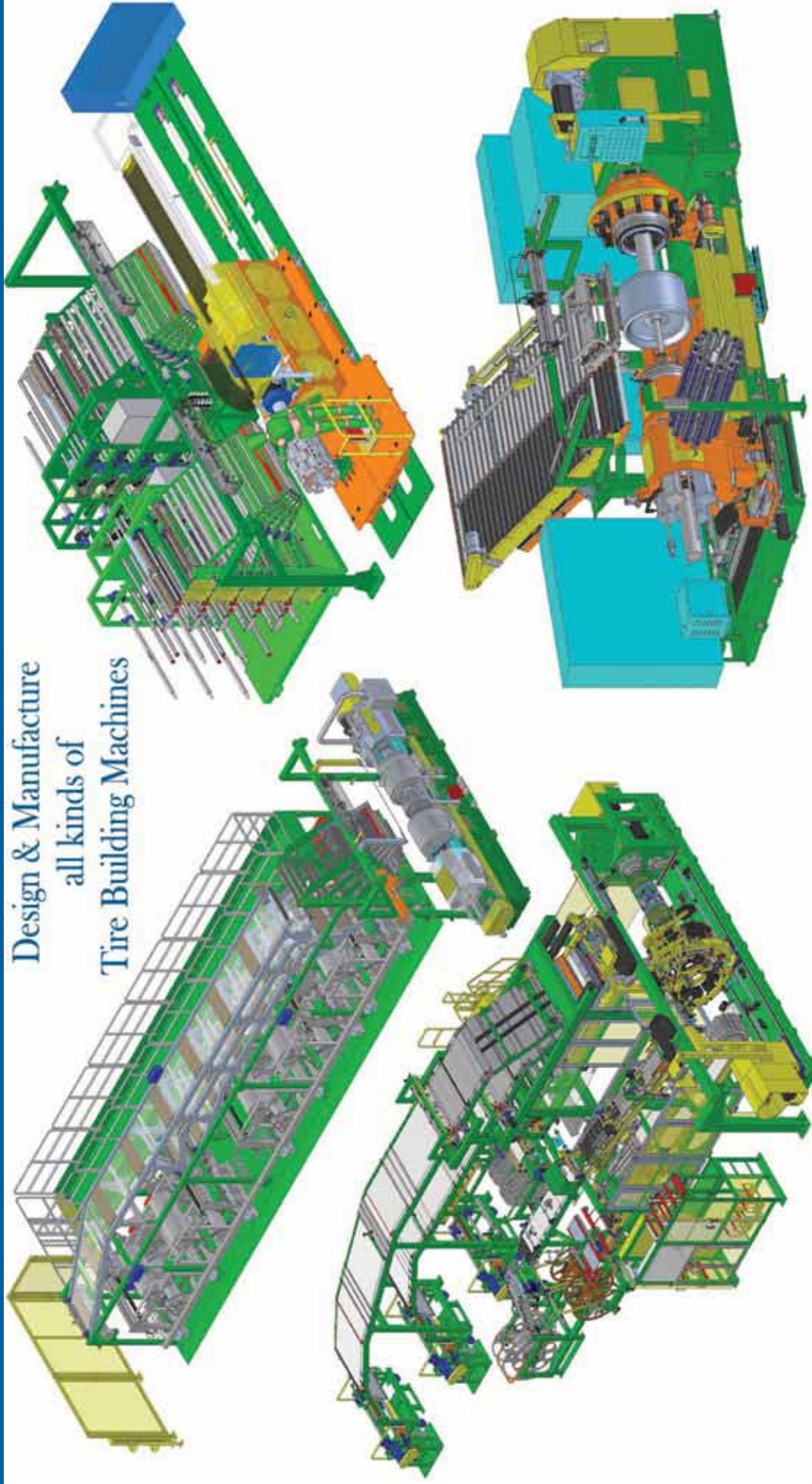
- \$1.17 billion from South Korea;
- \$373.0 million from Taiwan;
- \$1.96 billion from Thailand; and
- \$469.6 million from Vietnam.

No doubt, USA will use vigorous enforcement of import duties to augment its budgetary needs. ■



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Ashutosh Chincholikar of Smart Controls succumbs to Covid-19

Ashutosh Chincholikar, the Founder and CEO of Smart Controls, passed away on 23 May 2021 after losing battle to Covid-19.

Chincholikar was an electronics engineering graduate with more than 28 years of experience in the rubber and tyre industry. Smart Controls was founded in 1999 and has achieved major milestones under his leadership, which includes automation, MES and digitalisation solutions for rubber mixing room, tyre curing presses, spinning lines, polyester staple fibre lines, fabric dipping lines, airport-metro baggage handling etc.

In his condolence message, Ilkka Lehtoranta, Head of Tire and Material Development at Black Donuts Engineering inc, said, "Your life was a blessing, your memory a treasure. With great memories of a true tyre industry professional and friend, Ashutosh Chincholikar."

Peter Haan, Head of Global VM Tire, Siemens AG, said, "The global tyre community lost a pioneer regarding moving our industry towards digitalisation. This was his passion! Siemens has lost a long term reliable partner; driving our common

business as an entrepreneur with a strong focus on customer satisfaction. I have lost a very good friend and I am in deep sorrow about this loss. Our feelings are with the family."

Rochus Hofmann, Managing Director, Zeppelin Systems, said, "With heartfelt sorrow, we had to communicate to the Zeppelin Group that our colleague, friend and business partner, Ashutosh Chincholikar, passed away unexpectedly. He was the Founder, Managing Director as well as Co-Owner of Smart Controls India Ltd, our strategic joint venture automation company at Gwalior. Additionally, he was a very significant member of the global management team of Zeppelin Systems. We are saddened by this big loss for the whole Zeppelin Group.

"He will remain in mine and our memories with his visionary sense and his irrepressible will to move forward. It was a pleasure to work with him and exchange ideas. Those of us who have been in contact with him will also remember his energy, smile and his smart way of communicating with others. We pray to the Almighty for granting eternal peace to the departed soul," he added. ■



Social distancing: The hidden side

Over dependence on technology at the expense of losing the much-required human touch and interpersonal relationships, can be witnessed in many of the day-to-day activities, such as internet or online banking, bill payments, buying at super markets, home deliveries, and online webinars



PP Perera

The Plastics and Rubber Institute of Sri Lanka, and the Sri Lanka Association of Manufacturers and Exporters of Rubber Products, together with the assistance of the Export Development Board, conducted a two-day virtual workshop on Advanced Technology/Smart Manufacturing For The Rubber Product Industry In Sri Lanka, in December 2020. Despite the fact that the country was just raising its head from the deleterious aftermath of the first and second waves of Covid -19, the participation was beyond all expectations, thus indicating the weightage placed in keeping abreast of modern trends and moving with times by the industry community and the professionals and I presume that this is the current trend throughout the world.

As a member of the organising committee of the event and more as a hands-on person of the technologists of the not so modern generation, I realised that I was a curious and a rather passive observer of the currently fast unfolding industry scenario. The array of topics presented by local as well as overseas experts on their respective specialties was impressive. They covered Smart Energy Monitoring, IOT Built Industry Automation, Big Data Processing and applications, Conditioned

based Monitoring for Maintenance, 3D/4D Printing, Virtual Product Design and Testing, Finite Element Analysis, and Product Failure Analysis.

It made me guessing with fascination, how much the information utilisation scenario in the manufacturing industry has metamorphosed during the past few decades since the times of two great discoveries/inventions, of **Charles Babbage** and Arthur. C. Clarke, that paved way for the evolution of the Information and Communications revolution. Charles Babbage (1791-1871) was an extraordinarily talented scientist, mathematician, economist and engineer. He is best known today - as he was in his lifetime - for inventing two types of cogwheel calculating machines, the forerunners of the modern computers. It was **Arthur C. Clarke**. after the crest of World War II, from his base in Stratford-On-Avon, England, as a young officer in the Royal Air Force, who dabbled in science fiction writing, floated the idea of global communications satellites in a 1945 letter to the publication *Wireless World*. It will be of interest to learn that the latter made Sri Lanka his second home and contributed in no small way to the development of ICT and astronomy in our country during the sixties and seventies.

As I gathered, with my rather limited knowledge of ICT, that the common features, of the modern-day innovations are generating a vast amount of real time data on all key aspects of the value chain, and interfacing between the value adding activities. Automation and reducing the dependability on the human factor has been another significant trend. Another key driver has been the necessity for reliability, agility and robustness in delivering products and services to the customer in the ever-changing customer preferences, which are again fueled willfully through product promotion and creation of new needs through massive advertising campaigns and mass communications. Companies are increasingly embracing the innovative technologies, to enable business growth, wealth accumulation, contribution to the national economies, which has helped in achieving improved quality of life, particularly in the traditionally termed developed countries.

Right through his anthropogenic evolution, *Homo Sapiens* or the "thinking man" has been characterised by the use of his brain to find easier and faster ways of doing things, which was an absolutely vital advantage for his survival in the primitive hostile environment. Commencing with use of stone tools, discovery of fire, and iron, this



trend has continued throughout the history of mankind. During the more recent period of the last three centuries, which culminated in the Industry 4.0, some key landmarks, which reflect the quest of the mankind to better lives, through increased and efficient resource utilisation can be identified.

Revolutions

This process began in Britain in the 18th century and from there spread to other parts of the world. Although used earlier by French writers, the term Industrial Revolution was first popularised by the English economic historian Arnold Toynbee (1852–83) to describe Britain's economic development from 1760 to 1840. The first industrial revolution came with the advent of mechanisation, steam power and water power. This was followed by second industrial revolution which revolved around mass production and assembly lines using electricity. Henry Ford's conveyor belt system was put into motion in December 1st of 1913 in his Detroit manufacturing plant. Fully mechanised, or partially mechanised, assembly lines allowed Ford to offer a vehicle for a working family. One of his goals was to have a car that every family could own.

The car that every family would soon come to own was the Model T. His manufacturing plants would go on to produce over 15 million Model Ts and this is due almost entirely to his assembly line. In order to achieve a production of the Model T at such a high rate, he needed to break down the process of

assembling the car to make it as efficient as possible to produce, while still being financially accessible.

The third industrial revolution came with electronics, IT systems and automation, which led to the fourth industrial revolution that is associated with cyber-physical systems. Some of the principles of which were the topics of the December Workshop. Generally speaking, Industry 4.0 describes the growing trend towards automation and data exchange in technology and processes within the manufacturing industry, including:

- The internet of things (IoT)
- The industrial internet of things (IIoT)
- Cyber-physical systems (CPS)
- Smart manufacture
- Smart factories
- Cloud computing
- Cognitive computing
- Artificial intelligence

This automation creates a manufacturing system whereby machines in factories are augmented with wireless connectivity and sensors to monitor and visualise an entire production process and make autonomous decisions. Wireless connectivity and the augmentation of machines will be greatly advanced with the full roll out of 5G

The fourth industrial revolution also relates to digital technologies that can create virtual versions of real-world installations, processes and applications. These can then be robustly tested to make cost-effective decentralised decisions. In short, this should allow for digital transformation and for automated and autonomous manufacturing with joined-up systems that can cooperate with each other.

Black spots

It can thus be unanimously agreed that the emerging technologies have already resulted in tremendous benefits for mankind and that

they have vast future potential in changing the entire human civilisation. While appreciating and accepting the usefulness of the technologies, I cannot refrain from contemplating on the black spots in the white cloth. The disadvantages of the digital technologies have been well documented throughout the world and some of these, include, data security, digital media manipulation, job insecurity, over reliance on gadgets, addiction, depersonalization, and social alienation, and stress related physical and mental illnesses and the list is not exhaustive. Diminishing of the human touch is considered by many, as a matter of grave concern, and its effect on the personal, ethical, family and social has already begun to reveal its dark side.

As an adaptive measure of the new normal mentality that followed the Covid-19 pandemic, "Social Distancing" intruded our day to day activities over the past one and half years. However, on thinking reflectively, it will be evident that Social Distancing actually had its beginnings in the first three industrial revolutions, while it got aggravated in the recent years. Dilemmas and debatable questions as to whether dehumanisation is still progressing and what will be the outcome, if the current rate of rapid technology trend continues? These will become key challenges for the sociologists and sociopsychologists and the modern HR specialists. Prioritising automation and sub optimisation of the human resource, in the disguise of improving operational efficiency, as a business strategy of maintaining sustainability, could turn out to be short lived.

Over dependence on technology at the expense of losing the much-required human touch and interpersonal relationships, can be witnessed in many of the day-to-day activities, such as internet or online banking, bill payments, buying at super markets, home deliveries, and on-line webinars. I have personal experience of the short comings of on-line lecturing for students and on virtual workshops, which can only be utilised as a stop gap measure. As a person of the "old generation," I find it an exhilarating experience to walk to the local bank, greet good morning to the staff, and having a friendly chat with the familiar cashier, while getting my transaction done. Some may equate such practices to lack of time management and productivity. Human interaction of this kind holds a special position in countries such as India and Sri Lanka, which has rich religious and cultural heritages, and adopting the new technologies as a panacea for improving all the aspects of efficiency and productivity in an effort to stay competitive can only be a short-term strategy.

It was Robert Frost, the American poet (1874-1963), who once philosophically remarked, "**don't ever take fence down, until you know why it was put up**"

Obsolescence due to ineffective use or total non -use which we witness with machinery and equipment, may be applicable to the humans as well. It is said that the human body has about one hundred, vestigial organs, including the appendix, which have become nonfunctional, during the evolutionary process as a result on non-use and obsolescence. ■



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MACHINES CHART FUTURE COURSE

Machines make tyres. When tyres are made to suit the changing grammar of the mobility industry, machines too need to change the way they are created. The machinery sector is witnessing as much technological disruptions as the other areas of the industry. When one talks about robotics and artificial intelligence, the action takes place where machinery for the tyre manufacturer is made. This has thrown a major challenge to this sector. The following pages open into the world of tyre machinery.





Tyre Production Machines: Technology Is Limitless

Recent tyre production machines are equipped with robotics, full sensors and automation as examples of harmonisation, creativity and innovation in the industry



Olympic Tyre-Rubber Co.



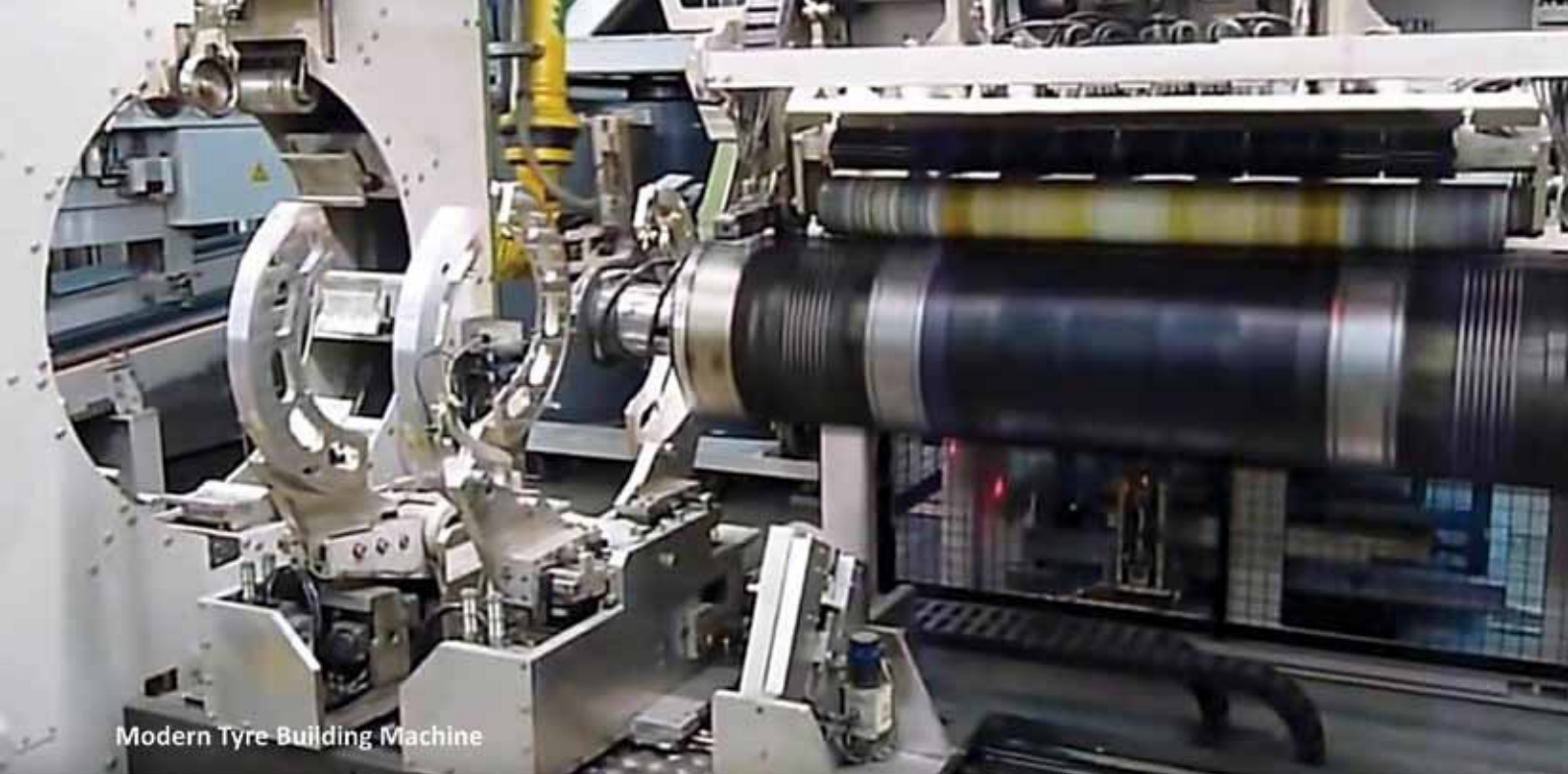
Ertugrul Bahan

By Ertugrul Bahan, Senior Tyre Expert

Nothing is stable. Technology is continuously evaluated. Materials science, electronics and software are the main three engines that reverse reactions or open new horizons.

Tyres are always known as black and round. However, the tyre engineers are aware of the weight achieved, the construction and the types of materials used in the tyres. What was the ancestor of the tyre, where is it going now?

The tyres were rated very quickly after vulcanisation 150 years ago. The first use of synthetic rubber and synthetic fibers, as well as the first radial tyre, go back around 70 years. Programming the control of the tyre building and curing machines with sensors and timer was a cornerstone. The new chemicals and advanced materials which suit well for process control, more homogeneous mixing, material integration and long-lasting rubber products.



Modern Tyre Building Machine

Today's tyres last to the end of their useful life, which is primarily measured by the Remaining Tread Depth (RTD) which is greater than a limit value set by local legal approval. Twenty years ago, many defective tyres were found in scrapyards that were almost like new, but today the tyre will last almost lifetime.

Today, Mechanical rubber derivatives production machine parts are made to tighter tolerances. The integrity of the main body material is higher than in previous years. Alloys or composites are widely used compared to recent years. More controlled and homogeneous surface finishing is applied. Modern tyre production machines are equipped with robotics, full sensors and automation, stepper motors and greater controllability which are examples of the harmonization of creativity and innovation in the industry.

More than all that, today manufacturing machines are more purpose oriented, lighter, sensitive and modular.

The other very preliminary point of **view is to analyse the needs of the main processes and what should be the strategy when you have an idea to buy new machines?**

Every system needs new machines to install for a reason. It is used

either to increase capacity or to renew a range of products, just to modernise or update technology. What should be the strategy when you have an idea to buy new machines? Either you are looking for a machine that matches your technology or you are taking the risk of a technology upgrade. The same category but a more efficient, more productive, safer and more controllable machine may be preferred or a completely new technology may be chosen.

If a very new technology is chosen, the time it takes to adapt can result in large production losses. It may take longer to adapt, etc. However, if you don't take such a risk, how will you manage the technology update in later years?

The other very preliminary point of view is to analyse the needs of the main processes. For example, if you are a tyre manufacturer, customers will only know your brand name. You are responsible for the end product. Third parties do not know where to start preparing tyres or what process to use to make them.

For example, you can have a textile calendar or you can get calendered textile and steel layers on the outside. When using a supplier, you don't need a factory calender machine. This also applies to the compounds used in the manufacture of the components. Today, a large volume of masterbatch is used in the rubber products industry. Organizing a good supply chain for manufacturing rubber compounds eliminates the need for mixers, a few mills, large silos, or process oil tanks.

A review of all processes and machine setup is necessary at regular intervals in order to remain competitive. Fewer production machines can increase productivity and controllability and intensify management. Less personal use, less energy and maintenance costs can be achieved. However, alternative suppliers need to be developed and diversified.

In the past, some particularly large tyre manufacturers had tyre cord treatment units in tyre factories. Some of them have steel wire production facilities for their own supply. Today we are witnessing a complete change of mind. The focus on the main process areas is mainly taken into account, which has completely changed the perspective in business. Today, most tyre manufacturers contract out the processing of 2nd class compounds. So, there is no refinery mill machines in tyre factories. The heating of the rubber in the preparation zones of the main components is carried out by cold feed extruders.

Continued on page 42



Advances In Tyre Building Machinery



Gregers Lindvig

When the lines all over the world only need core staff to monitor and make technical adjustments and maintenance work, the difference in the product cost structure can only come from land and building use, logistics and handling costs, as well as water, heating, and electricity fees

By Gregers Lindvig

The tyre is an amazing example of something that has served its purpose for more than a century with no drastic functional changes but has yet undergone constant improvement and sometimes fundamental structural changes. Materials have changed from leather to natural rubber, and then to ever-developing compounds of natural and synthetic rubber, as well as chemicals. Structurally, the largest change has been from bias to radial casing construction, and while some tyre products are now largely only radial tyres – passenger car tyres, for example – other vehicle segments still consume a large quantity of bias tyres; in some regions of the world more than others.

While the equipment required to produce bias tyres is fairly simple, and the costs of establishing a production line therefore relatively manageable – roughly speaking it's a textile production line combined with vulcanizing in simple 2-part moulds – the costs of establishing a radial tyre production line are massive. From rubber calenders to radial steel belt production and angle cutting over bead ring building and green tyre building

drums, until finally curing in 8-segment moulds – and many more steps and essential equipment not mentioned in between. Each machine and process is as important as the next, and only the most skilled management of the entire production flow can ensure that a quality product comes out at the end. So, needless to say, many of the quality improvements of the past decades have come from improving production equipment and knowledge as much as from improving tread designs and rubber compounds.

Chinese factories

Further, as many tyre production equipment manufacturers have expanded to supply all over the world, many production lines have become much more similar to each other as they approach the worldwide optimal standard for balancing production costs and quality. I won't mention any specific manufacturer names here, but anyone who has visited a tyre factory in China will have had an employee guide proudly point out that they use only the best equipment from manufacturers in the Netherlands, Japan, Germany, and the USA. I've always been tempted to ask if the hammer is more important or the person who wields it, but I digress. The fact is that most Chinese factories have also improved drastically in terms of management and comply with IATF 16949 standards to ensure consistently high-quality levels and constantly reduce defects. The main driver and reason for the current standards is the reduction of manual work stations and a large manual labour workforce to largely automatic or at least semi-automatic machinery, reducing the manual labourers to employees simply moving materials or finished products from one place to another. Over time, these will also be made redundant, as machines will also handle this part.

The question remaining is just how factories located in low-wage countries will keep competitive as the necessary equipment costs the same all over the globe, and less hands are needed to operate the massive production lines. When the lines all over the world only need core staff to monitor and make technical adjustments and maintenance work, the difference in the product cost structure can only come from

land and building use, logistics and handling costs, as well as water, heating, and electricity fees. Especially the latter, utility fees, probably soon make up the most important factory when it comes to differentiating tyre cost structures across the world.

Global supply

What will this mean for the global tyre supply? Most likely, it will be good news for the environment, as it won't make as much sense as previously to send products across the globe, because the transportation costs will make the products more expensive than locally produced ones – regardless of production country. Given that all countries play fair, that is, so maybe I should say in a perfect world. There is no doubt that some

countries favour their large factories with subsidies or tax rebates more than the developed countries do. But, with the recent massive rise in sea freight charges caused by the pandemic, and amplified by the Ever Given blocking the Suez Canal, the tables could be turned faster than anyone expected. Just until a month ago we all expected the extremely high sea freight levels from Asia to the rest of the world to last just a few months, now the carriers expect that we won't see normalization – and thereby decreasing rates – again until 2024. As tyre prices from low-cost manufacturing countries have been gradually closing the gap to second tier brands over the past decade (and quality levels have followed suit and in rare cases even surpassed them), they have now very suddenly lost all competitiveness when solely looking at pricing. Surely, it has been the strategy of all these manufacturers for many years to ultimately surpass the competition on quality and performance, but not before surpassing them on price.

So, what will happen now? Nobody knows, but it will be equally interesting and nerve-wracking to follow. For the tyre building machine manufacturers, the dilemma has grown bigger than ever before; should they continue to develop better machines, as they risk killing their clients by doing so? There's a very narrow path to tread between staying competitive against other machine manufacturers and sustaining the financial health of one's own clients. ■



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- Increased energy saving



Compact
Footprint



Panel Less
Technology



Increased
Energy Saving



New Technology In Tyre Production Lines

By **Daniel Franco**



Daniel Franco, FoIA

Daniel Fraňo has been involved in the creation of lines for the rubber industry for more than 19 years.

He established FoIA in 2019, which brings innovations and timeless insights into the future of rubber lines. He is a member of the R&D club of Slovakia and several world discussions clubs in the tyre technology industry.

Company FoIA focuses on innovation of processes and latest tyre technologies. The goal is to help organisations with Project Management, Strategic Planning and Operational efficiency.

WWW.FOIA.TECH

New technology in tyre production lines must enable your product make a competitive difference in the market. The product has to be exceptional in quality and make you most wanted as a supplier, accepted as a partner. The concept has to bring new vision and create new trends.

At the end of the day, the most decisive reason for innovation is

that on the one hand the customer wants the best in the shortest amount of time and for the lowest price, and on the other hand the manufacturer wants to deliver the equipment as expected while making a profit. Everyone's inputs grow, and we all expect lower outputs. Both parties have fundamentally one thing in common: they want a line with the best parameters and at a good price. For one, it is budget and for the other, profit.

The path is the goal

A well-prepared journey will help accomplish the goal. The path begins in the preparation and pricing of the project, in the communication of both parties. In modularity, in unification and standardisation. Also, in the use of the right CAD software, PLM system, linking the standing documentation with electrical documentation, with pneumatic documentation, and with hydraulic diagrams. The interconnectedness of PLM, PDM, CRM and ERP is a necessary basis for success.

But even in this area, there is no need to go into everything headless and at once. Choosing a path is about carefully considering all the steps in assembling an imaginary puzzle. The trajectory in the imaginary pyramid of success does not have to be universal. It must be clearly defined, measurable and strategically defined and based on the vision of advancing society.

Customising incremental sections of a path creates a standard

There is a lot of talk about I4.0 at the moment and it is being applied a lot. But are we doing it right? Are we following the right procedure?

It is not enough to deploy smart components and collect data from the line, create trends and statistics. Adding a number of sensors to have an almost perfect overview of what is happening on the line, increasing the level of automation and many marketing messages. Yes, marketing is also needed, but with a clear head, because otherwise it will cost us a lot and it will be disproportionate to the amount invested. Alternatively, the return on investment will be long and uninteresting.

FoIA, our company, significantly presents, holds, and understands areas of I4.0. However, it can also apply it correctly. Apply it so that it meets mutual expectations and ensure return on investment.

At the same time, company FoIA learns how to correctly apply the principles of I5.0. How not to create waste neither solid nor social nor urban nor waste from the process. This topic has its author, it is a new concept with fundamental principles so that with I4.0 we do not forget what we produce.

Innovation

As I mentioned, manufacturers of lines and equipment for the rubber industry are under pressure from customers, investors, the industry in which they operate. They are under pressure from new expectations and trends. The effect of this is that, in principle, the production system of semi-finished products for the production of car tyres has not fundamentally changed in recent years. I am not talking about the materials used. I have been working in this industry for 19 years, moving from mechanical design, electrical construction, project management to managerial functions and up to the level of CTO.



Courtesy: MTS

I have seen several devices around the world from reputable manufacturers and during my 19 years of experience, as a FoIA representative, I can thoroughly assess that the Tyre Technology Production line has a very conservative approach to new technologies and to changing the principle of thinking.

This is despite the fact that we are inspired by the industries ahead and around us, which are in the context of a huge trend in robotics and automation from other industries much further.

Finding a few trends in production facilities or smart factories or being proud that "we have put a robot on the line" will not make us an innovator.

When creating lines, experience, references and working applications often play a role, and many other aspects that we do not like to interfere with, we are glad that they exist, that it is possible to rely on them.

As manufacturers of machinery and equipment, in addition to our technical knowledge, we must also involve our imagination for non-traditional solutions and the ability to listen to the needs of the end customer.

It is also necessary to take into account the qualitative indicators

of the customer. Such as the rolling resistance coefficient of a tyre or the unevenness of tyre wear. Negative parameters can be removed by the concept and functionality of the production line for semi-finished products. It is not correct if only one side deals with the problem of the common product (tyre).

Innovation is evolution

The advantage of FoIA is an unbiased but experienced view of current solutions, the current process of creating documentation, the current thinking in creating the concept of the production line. The path is different in thinking, in the way of properly investing time in new solutions, effective deployment of R&D capabilities on a strategic path to achieve the goal.

Changing not only the product but also the product creation process. These two parallel branches are so tied that they both must go together like two skis. If one dodges without the other, you will fall. If they go together, they go together safely, correctly, and quickly.

The strategic principle will bring the benefits you expect

If, as a manufacturer of production lines and equipment, the costs of creating new lines are constantly rising and you are proud of I4.0, innovation, automation and robotics, I dare to say that you do not have the right strategy.

If you, as a manufacturer of car tyres, have increasing cost of purchasing new lines and increasing financial return from them, increasing cost of operation and maintenance, then you do not have the right strategy.

We at FoIA strive to change the way of thinking, to firmly tie the process to products, to apply new trends and to create innovations so that the development of both parties is sustainable and brings the expected effect.

FoIA is open to cooperation with machine and equipment manufacturers as well as tyre manufacturers. We can find the right path to the goal that we can determine together. Our job is to find a solution to your company's product or process problem.

Every cause has a consequence, and every shortcoming has room for innovation.

It is necessary for us to bring new solutions, new technologies and not be afraid to apply and test them.

PS: After all, even such a multi extruders line is "only" a multi 3D printer... ■



▶ COVER STORY

Step Inside HF's Virtual Halls

HF's Curemaster, TBR Truck Press



The past months overwhelmed all of us by the pandemic. This forced us to re-think, re-structure and adjust our activities and communication methods in order to keep the workflow processes running. We believe that personal contact, personal discussions and negotiations are essential for our partnerships and we are looking forward to intensifying our travels and personal visits at customers sites again as soon as possible. In the meantime, we set up various digitalisation projects. For example, we set up virtual showrooms to enable our customers to discover our machines and innovations virtually in HF's showrooms. With our sales and technician teams, our customers can book individual tours through our showrooms to get an impression of our latest developments related to Tire Building Machines, PCR and

TBR Curing Presses and PCI's, service topics, and our production facility in Belišće, Croatia as well as the Technical Center of the HF Mixing Group, Freudenberg, the related mill room production equipment and newest Mixing Technology.

Quality capability – outstanding results

During the past months HF ran through a VDA system-audit which was required by our valued customers who belong to the top ranked tyre manufacturers worldwide. HF achieved more than 95% which is considered an excellent achievement. HF was evaluated in the fields of risk management during the production process, traceability, maintenance, trainings, project change management, standardisation, production management, cutting edge technology, technical know-how and the professionalism of staff.

Additionally, we renewed our ISO 9001:2015 certificate. ISO 9001 is not just a standard that consists of numerous requirements. Behind ISO 9001 is the philosophy of an (almost) automatically functioning company. A company that develops unique competitive advantages through clear business processes and responsibilities, a high level of customer orientation and continuous improvement. ISO 9001:2015 is a management system that enables companies to align their products and services to customer needs and, by defining clear business processes, to offer their customers consistently reliable services. The standard aims to bring lasting and sustainable success to companies.

We are confident that these audits confirm our customers trust in our services.





COVER STORY



HF's virtual showrooms: Book a personal tour: showrooms@hf-group.com or showrooms@hf-mixinggroup.com

Tyre building machines – Service support & technical upgrades

HF TBM service department is ready and available to provide various service options for your machines. Our personnel are available to visit sites, inspect machines and provide detailed reports of the inspection. Reports will include technical improvement kit proposal, replacement parts, maintenance recommendations. HF can also offer a quotation for the maintenance/repairs to be completed on the machine.

HF has spare parts available for all machine types. For frequently ordered parts HF can provide standard price lists and yearly contracts for fixed pricing. HF also offers customised machine upgrades, technical improvement kits (new and replacement modules) for improvements in quality, reliability, output and capability. HF technical improvement kits can be offered for all machine types.

HF TBM service department provides turn-key services with our highly qualified personnel in the mechanical, electrical, technology and software disciplines.

HF TBM service department provides you with remote support using a connection terminal box that can be installed easily by the customer. Remote connection to PLC/Machine is safe and secure using a VPN connection. Online video and chat communications are available through TEAMS.



Tyre building machines – Common design approach for all tyre designs

The fundamental basis for our TBM design, no matter which type you are looking for, is the same. All tyre building machines consist of our long proven modular components and are sized to your specifications.

Depending on your requirements, we offer two carcass drum types, which are capable to adapt different tyre constructions: Inflated turn up with bladder or mechanical turn up drums or flat turn up with Ply up/down constructions with our patented FAPBS drum. This allows you to increase your flexibility and to react to current market changes due to the E-mobility such as high load index, lower rolling resistance and lower noise emissions.

The HF ONE is the solution for the current and future demands.

In addition, all TBMs are built up on a modular base to have the capability for integration of an automatic robot system for loading the beads & unloading the tire. The machine layout is prepared for simple future upgrades of these features as well as additional reinforcement strips which are applied on Body Ply or Innerliner.

Features & benefits:

- Multiple drums support with quick change from drum to drum
- Patented FAPBS drum for high Ply turn up, thick sidewalls and Ply up/down constructions
- Modular machine design for upgrade possibilities
- Hands off operation with robot system for bead loading
- High OE quality standard by excellent accuracy of material positioning and splicing
- Maintenance friendly
- Excellent machine availability by robust design and high repeatability

Contact: HF Tire Building Machines: tbm-service@hf-group.com; www.hf-tiretechgroup.com ■

HF Mixing Group-WF Recycle-Tech Unveils New Two Stage Tyre Pyrolysis System

Farrel Pomini, a business unit of HF Mixing Group, has made a significant investment in UK Pyrolysis system builder WF Recycle-Tech. The partnership enables introduction of WF Recycle-Tech's revolutionary new pyrolysis solution for the recycling of end-of-life tyres (ELTs) to the market.

Building on Farrel Pomini's 150 years of global experience in the fields of engineering and manufacturing, WF Recycle-Tech's patented two stage continuous process takes shredded rubber crumb from ELTs through a thermodynamic system, which applies proven technologies in an innovative and efficient manner, to ensure continuity and reliability of performance. The outputs of this process include oil, raw recovered carbon black and non-condensable gases, all of which have profitable commercial applications and are environmentally sustainable products helping to close the tyre recycling loop.

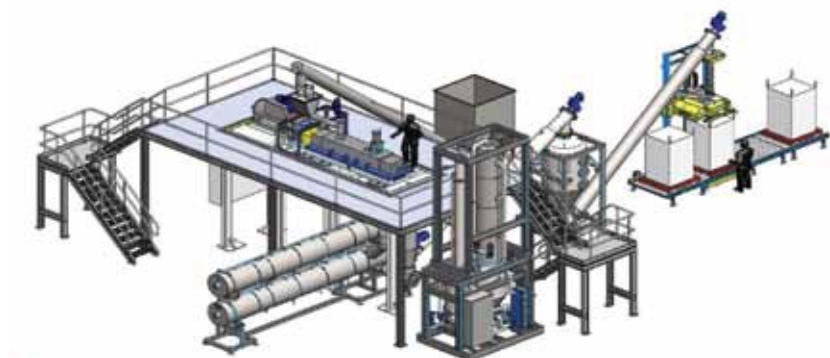
According to Ian Wilson, Co-CEO of HF Mixing Group, "This investment by our Continuous Mixing Business Unit, Farrel Pomini allows HF Mixing Group to engage in solutions for end-of-life tyres and support sustainability within one of our key sectors."

WF Recycle-Tech's new design comes on the back of its operational first-generation system, produced and tailored

over a lengthy research and development programme which has seen the company hone its product and deliver what its management team describes as a 'simple yet unique' system to the industry. The WF Recycle-Tech solution is specifically designed to process 1.5 tonnes of rubber crumb per hour in a shift from the norm of large-scale conventional pyrolysis plants. According to WF Recycle-Tech's Managing Director, Paul Neville, "This allows our customers the flexibility to strategically place systems and enables machines to be installed incrementally, making use of an initially small footprint and production capacity which can be increased as customers grow their business and the market for the outputs develops."

The patented WF Recycle-Tech continuous pyrolysis system consists of two core elements which make up the core pyrolysis system. The first stage, featuring a Farrel Pomini continuous mixer is used for rubber crumb ingestion and pre-heating, the second stage pyrolysis chamber controls final heat temperatures and residence time. The system is arranged into a compact footprint and is arranged with required ancillary equipment and a line control system for efficient full system control and 24 hour operation. The Continuous nature of the system also allows some processing flexibility which has been demonstrated to give some control flexibility of the outputs derived. In addition, the relatively short 18-20 minute process residence time ensures productivity and energy efficiency. The system is completed with a processing and handling equipment for both the feedstock and outputs, oil, recovered carbon black and gas. The full system is designed for simple installation without significant specialised facilities and offers the ability of the user to locate the equipment close to the source of feedstock, thus reducing transport requirement which further reduces cost and environmental impact of the process for recovery of end-of-life tyres.

WF Recycle-Tech have a pilot plant available for testing & demonstration in the UK which can be utilised for R&D or customer specific trials. The pilot plant is capable of processing upto 700kg/hr of end-of-life tyre from ground tyre stock to the three main system outputs. ■



WF RECYCLE-TECH

The patented WF Recycle-Tech production system

Continued from page 19

TVS SRICHAKRA RAMPING UP FOR EUROPEAN EXPANSION

TVS Srichakra's Italian R&D Centre will play a vital role in establishing the company's base in Europe. It focuses on cutting edge technology development and bringing the knowledge and consumer-specific inputs in the region. The Italian Centre also brings in testing capabilities, which are available globally. The Indian R&D Centre is oriented towards designing, detailing product industrialisation, working from the arts to parts, and compound and material testing. "We look into more synergy in terms of technologies getting developed at our India and Europe R&D centres," said Sivaramakrishnan.

The company already has a material science lab in India with mentors from Japan and Italy for the material and compound development process.

For the last 15 months during the pandemic, TVS Srichakra designed and developed new products for the local market. It launched 11 new products for the replacement market, including eight new high-performance tyre sizes for motorcycles, two for scooters and one new tyre size for electric rickshaws. The tyre sizes were introduced under the Sportorq, Jumbo GT, Conta, Durapro and e-Durapro product series.

In December 2020, the company also announced its planned capital expenditure of INR 10 billion to ramp up manufacturing in its Madurai and Pantnagar plants. This investment is planned to be made over three years. The investment, when fully made, will result in an increase in two- and three-wheeler tyre capacity by 25-30 percent and a doubling of off-highway tyre capacity from current levels.

The company also worked on digitalisation heavily as it had anticipated that contactless working would be the order of the day. The digitalisation programme helped TVS Srichakra reach the retailers without having the salesman in the field. Consumers realised that shared mobility was out and they pulled out the two-wheelers for service and changed the tyres and battery. So we saw a huge uptick in numbers thanks to the effort that we put in," said Madhavan.

Madhavan anticipates that if the Covid situation gets better and the economy comes back on track, it will boost the usage of two-wheelers. "That will augur well for us, and we will run into the festival season." ■

Continued from page 31

Tyre Production Machines: Technology Is Limitless

Large capacity extruders are used under the drop door in mixing rooms. As a result, there are very few milling machine and milling operators in the tyre factory. Factory structures are smaller, parts production and machine maintenance are outsourced.

Full robot transfer units already exist, No man-tyre building and curing are achievable now. Profile extruders are already disabled, calendaring might be totally needless by body ply webbing on tyre building drums.

Being open and innovative in the tyre and rubber industry is important. Support for technological innovation and productivity, as well as the vision to find more efficient devices, is required. New control systems with computers and automation are inevitable. Indeed, the company's employees must have a vision to choose the last and the best for the future. The most important thing is to find profitable solutions for the entire company.

As you follow the progress of the machine, keep in mind that new materials are coming. Any fashionable material will one day be a burden on the staff. Major hardware changes require new processes or machines. The ultimate case is the cancellation of part of the process, which means the cancellation of the production machines. Such a case can be irresistible at any time.

The increasingly demanding structure of the automotive industry and regulations will demand ever lighter, more environmentally friendly and more rolling-resistant tyres, which repeatedly calls for ambitious innovations. Innovative materials are inevitable to exceed expectations. Just as new materials come out of the R&D thicket box and enter the daily production inventory, the production area and machinery should be reorganised.

Full robot transfer units already exist in many phases instead of being transported. There are automatic scan and uniformity checks. No man tyre building and curing operations are achievable now. Profile extruders are already being phased out in some tyre factories. Body ply webbing could be more of a standard technology in tyre building. Calendaring may be totally needless in tyre plants.

As far as automation and controllability technologies assess, there is still room for refinement or cancellation of production processes and machines in tyre factories.

Today, Mechanical rubber products production machine' parts are made to tighter tolerances. The integrity of the main body material is higher than in previous years. ■



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From A Market Disruptor To A Trusted Partner



Kai Hauvala

Ten years ago, Kai Hauvala and his colleagues identified an opportunity in the tyre market and pooled their expertise in a new company, Black Donuts. Their first and hardest task was to challenge tyre manufacturers to break free of conventional thinking to spark new efficiency.

The global tyre industry had evolved on all fronts. Tyre manufacturers faced a constant trade-off between meeting productivity goals and increased requirements from the customers and new regulations. Hauvala and his colleagues realised that tyre manufacturers could no longer do everything by themselves in the changing market environment: to design tyres, tyre factories and manufacturing processes in a way that would support the new demands for efficiency. Instead, they should be able to concentrate on their core business. "We had a great vision with true market potential, plus an attractive option to reform the tyre industry," said Hauvala.

'We', that is a key founding team of twelve tyre technology professionals. Hauvala uses the plural form throughout the interview, pinpointing the obvious fact that you cannot change the industry alone. "It is all about 'collaboration'," Hauvala stresses.



BDE smart factory

In 2011, the tyre industry, well known for its strict conventions, was however not ready and waiting for a changemaker. It took long before tyre manufacturers accepted the new service concept and realized its potential business value. "It was the depth of our expertise that convinced the first customers. The fact that we knew the tyre industry from inside out and could provide the whole package under one roof," Hauvala says

Today, **Black Donuts** is an established and recognised technology house providing innovative solutions for tyre manufacturers. The concept of turnkey solutions has remained as the company's key strategic principle. Elaborating the solution provided by Black Donuts, Hauvala, said, "We are a full-service technology house providing the entire solutions for designing, building, and running a smart and sustainable tyre plant with maximized productivity and best-in-class products."

The company's customer portfolio includes 20 out of the top 25 tyre manufacturers, which a glaring sign of competence and an option to reform the industry. "You need references to be convincing. And you need a network of partners sharing your vision of a brighter future for making it happen," Hauvala says.

Changes And Challenges In Tyre Production

In last ten years, according to Hauvala, tyre manufacturing has witnessed the diverse challenges, including complex product mixes, shorter product runs, and the pressure for faster deliveries – a myriad of different demands affecting day-to-day factory operation. " Things are changing at an accelerating pace, and there are no signs of slowing down. From the tyre manufacturers' perspective, the operational environment has become complicated," thinks the Black Donuts CEO.

Focusing on core competencies is a clear industry trend. Other operations outside manufacturing high-end products are increasingly being outsourced – aligned with Black Donuts' original business idea.

Nevertheless, all players regardless of their area of specialization benefit from partnering with a company that understands the entire sector. In the era of ever-tightening cost and efficiency targets, choosing a partner to lead and actualize major investment projects, such as setting up a new factory, has become a mainstream option. "Tyre manufacturers desire a proven and effortless end-to-end service, provided by professionals, whose core competence is to plan and manage investment projects," he says.

Assuming total responsibility for the production design, ramp-up, and material handling, Black Donuts controls that every detail in the production aligns with the customer's goals. A shortened payback time creates concrete extra value for the customer. Hauvala says, "Our finetuned processes and advanced technology tools enable a smooth ramp-up. The reduced time-to-market generates faster and greater ROI."

The rise of automation is another key trend in the tyre manufacturing. Black Donuts helps tyre manufacturers improve productivity and take the required technology leaps towards smart factory efficiency. The company has developed its own MES concept that gives multiple benefits for tyre manufacturers, such as improved insight and the potential for full traceability of tyres in production. The new plant concept also enables a remarkable decrease in stock levels and factory manning. " In our latest factory design plans, the required manning is only half of the level in the first plans ten years ago," tells Hauvala.

Also, the end-customer demands are higher now than a decade ago, forcing tyre manufacturers to rethink their business models to live up to the growing expectations. In the concept of Black Donuts, the manufacturing process is optimized, flexible and efficient despite the increased number of simultaneous products and sizes in production. "With us, the manufacturing process gets new flexibility that enables shorter delivery times," Hauvala promises.

The Rise Of New Brands

During the past decade, the tyre industry has witnessed a geographic change. The number of brands in the market is growing, just like in any other industry offering low-involvement consumer products. Established international brands get new challengers from local manufacturers offering good quality for moderate prices. " The interest in tyre production raises its head particularly in the countries of fast economic growth with own raw material sources," says Hauvala.

Black Donuts has developed a tailored turnkey service for the industry newcomers. It covers the entire solution from A to Z for designing, building and running a tyre plant. "We step in on day one and work hands-on with the customer throughout the process from feasibility study to the market entry. Or beyond, keeping the production and products always in the frontline of tyre technology," explains Hauvala.

Today, Black Donuts is a genuinely international company with customers on almost every continent except Australia, where there is no domestic tyre manufacturing. " We don't have any borders in our minds, but the whole world is our market area. We are fully open to all directions," says Hauvala.

Quality Leap In Tyre Development

According to Hauvala, a quality leap is the single biggest change in tyre development, driven by a continuing high-performance trend and technological advances. " The quality of tyres is remarkably higher today," adds Hauvala.

Black Donuts' customers get access to the latest technology, the smartest innovations, and the most advanced materials. All the best-in-class product qualities, such as superior performance, lowest rolling resistance and a quiet ride, are at hand. Within the past ten years, the debate about tyre qualities has increasingly shifted to the total environmental impact of the tyre. Parallel to tightening regulations on emissions and rolling resistance, tyre manufacturers are being pushed to enhance the use of biomaterials in tyre compounds and to minimize waste.



Black Donuts experts

"The tyre industry has made remarkable progress in reducing waste, yet compared to many other industries, the use of biomaterials is still in its infancy," Hauvala admits. He anticipates new regulations to emerge concerning the recyclability of tyres.

In-Built Sustainability

Improvements in tyre manufacturing and development have accelerated over the last decade, spurred by the sharpened focus on environmental issues. The demands for sustainability now concern the entire industry from products to production.

At Black Donuts, sustainability is a strategic driver. The company not only contributes to sustainability in its own operations but also supports its customers and partners in the move. "The ideas of circular economy are inherent in our business philosophy. All our solutions focus on manufacturing excellence and resource efficiency, optimizing biomaterial use, minimizing emissions and maximizing recyclability," says Hauvala.

Enjoying a comprehensive view of the tyre industry, Black Donuts has

a great opportunity to improve overall branch sustainability. The company runs several major investment projects that aim at making the tyre industry greener – one tyre at a time, like Hauvala says. "All our most important development projects support a more sustainable tyre industry."

Recently, the company developed a new stud concept that remarkably reduces the negative side effects of safe winter driving. The new, patented technology tackles the environmental challenges of studs, such as road wear, pollution, and noise. Revealing a bit of the company's future aspirations, Hauvala reports that Black Donuts is also developing a high-end winter tyre for electric cars, doing research in biomaterials, and investigating the usability of recovered carbon black received from an integrated pyrolysis solution. "We are getting closer to zero-emission factories, although it will require dedication, engagement, and collaboration," Hauvala concludes.

Future-Proofing The Industry

Today, Black Donuts employs over 60 professionals with skills that cover all areas of tyre manufacture and tyre technology. During the 10-year journey, the company has grown, reinforced its skills and recruited new talents from areas outside its original core competences. Hauvala praises the employees for making it possible to celebrate such a significant milestone. "Our team is exceptional. We have great people from diverse backgrounds, working together for a common goal and inspiring each other to make a difference," says Hauvala proudly.

Although the company has rapidly grown, it has managed to preserve the flexible and agile corporate culture from the early days. In a recent employee survey, team spirit was named as the strongest motivator. "Team spirit is our internal source of power and a strong pillar supporting the whole business."

According to Hauvala, every team member at Black Donuts shares the same value-adding commitment and passion to help customers and to make the tyre industry an exemplary branch that considers the generations to come. He encourages all players in the industry to prepare for the future, starting today. "We know the best practices, future challenges, and opportunities in the tyre industry. For us, it is quite simple to evaluate if a tyre business is future-proof or not. Is yours?" (TT) ■

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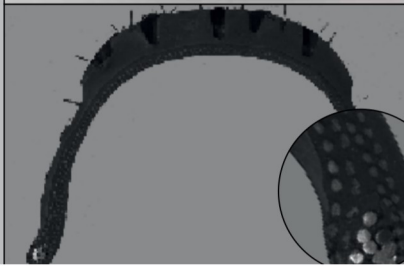
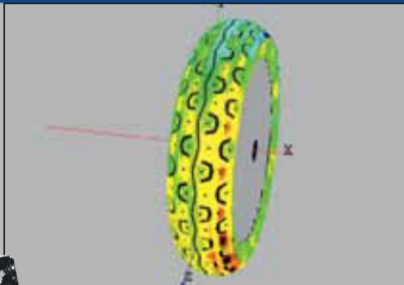
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Tyre Building Automation

A Human Cognitive Oriented Approach

The most recent innovations about Industry 4.0 are oriented to collect large amount of data and a wide use of sensors, instead the human presence is often replaced by electronic system. In several industries the human's role is still important to drive the process and automation is a fundamental support for that, in terms of knowledge, skillset and practical operations.

The Marangoni Machinery approach was to capitalise this knowledge and to leverage on human attendance to further improve the current process to design an evolution scenario: the innovation started from the "human cognitive" basics, to design a process around humans, not adopting an automation replacement approach only.

Industrial tyre building machines process has been deeply analysed by our engineers to point out pros and cons about Human-Machine-Interfaces usability, scalability and safety: the outcome was a redesign of the preparatory process (to design a production cycle, how to simulate scenarios) and then to get a more user's friendly

approach to be human cognitive oriented.

A cognitive approach is based on human perception criteria, by which is possible to redesign the human-machine interaction and so to get safer and faults-free operations.

The latest generation of Marangoni Machines design is based on several new tools to get a whole integrated tyre building process, as said, starting from production cycle design up to real-time process control. But not limited to that: we designed a new machine approach to get a real "concurrent engineering" approach, so by creating a system where Operators, Process Engineers, Maintenance Service teams etc., can get access to the same information but from different standpoint, shaped around their needs and approaches.

An integrated Platform is not only about automation and data collection: factory logistics and production management are two other important tasks for a lean and efficient production flow. We designed new IT Architectures to handle a multi-machines environment, to be able to manage critical task such as IT obsolescence, process improvements and automation evolution, all of that by using IT industry standard architectures and innovative software platforms to focus to capitalize multigeneration capex plans and to limit opex per year.

The new "Marangoni Station 2.0" is all around that: a human cognitive design approach (Users' touch screen software interface, advanced 3D synoptic, process design and simulation) to get a common information HUB suitable for all users around the tyre building process flow.

In addition to that many functions for Logistics (materials traceability,



lots detection and materials claim into machines), Automation Robotics (automated cycle portions design and control) and Vision System for cycle supervision and quality real-time control are embedded into the “Marangoni Station 2.0.”

Investments on new technology is often a heavy impact on a factory, mostly when process have to be updated or even redesigned. Our approach is a multigeneration outlook, so that a process can be updated and/or upgraded without to reshuffle machines and/or IT architectures.

In tyre industry the “production recipes management” is a key task: to manage multigeneration machines and tyres portfolio range is not easy at all, because of software and hardware change in technology, programming languages and process cycle flows due to lean manufacturing, quality criteria, tyre design innovation etc. Consequently, we introduced an agnostic approach in order to handle evolutions and not necessarily revolutions.

The tyre recipes management becomes easier and multigeneration compatible, so that the technology evolution can be smooth and more oriented to capital expenditure savings and operational expenditure based on real time needs and market scenarios.

The advanced synoptics approach was also part of the human cognitive flow, by which is possible to get what you see, like at shopfloor level, by using an intuitive and more productive working flow: to get access to information by depending the User’s role, skillset and daily job duties, but not spreading efforts to data collection or time-consuming datasheet usage.

A more productive approach can be achieved when the information comes into the most appropriate format, it is not misleading, it is updated and ready to be used at the proper time and mode. The Marangoni Machinery approach is not only around automation, mechatronics and tyre building tooling but mostly a User’s experience design-oriented process to drive a sustainable evolution through technologies and lean process implementation. ■

Control Station Platform Industry 4.0



Machinery Factory Architecture



Tyre Recipe Management and KPI/Metrics



BM SERIES EXTRUDER



FULLY AUTOMATED
COLD FEED EXTRUDER
PIN & PLAIN TYPE




CUSTOM HEAD PROFILE


- ▶ Cross Head
- ▶ Tread Head
- ▶ Strainer
- ▶ Pork Chop
- ▶ Strip
- ▶ Tube
- ▶ Roller Die

HOT FEED PORK CHOP EXTRUDER

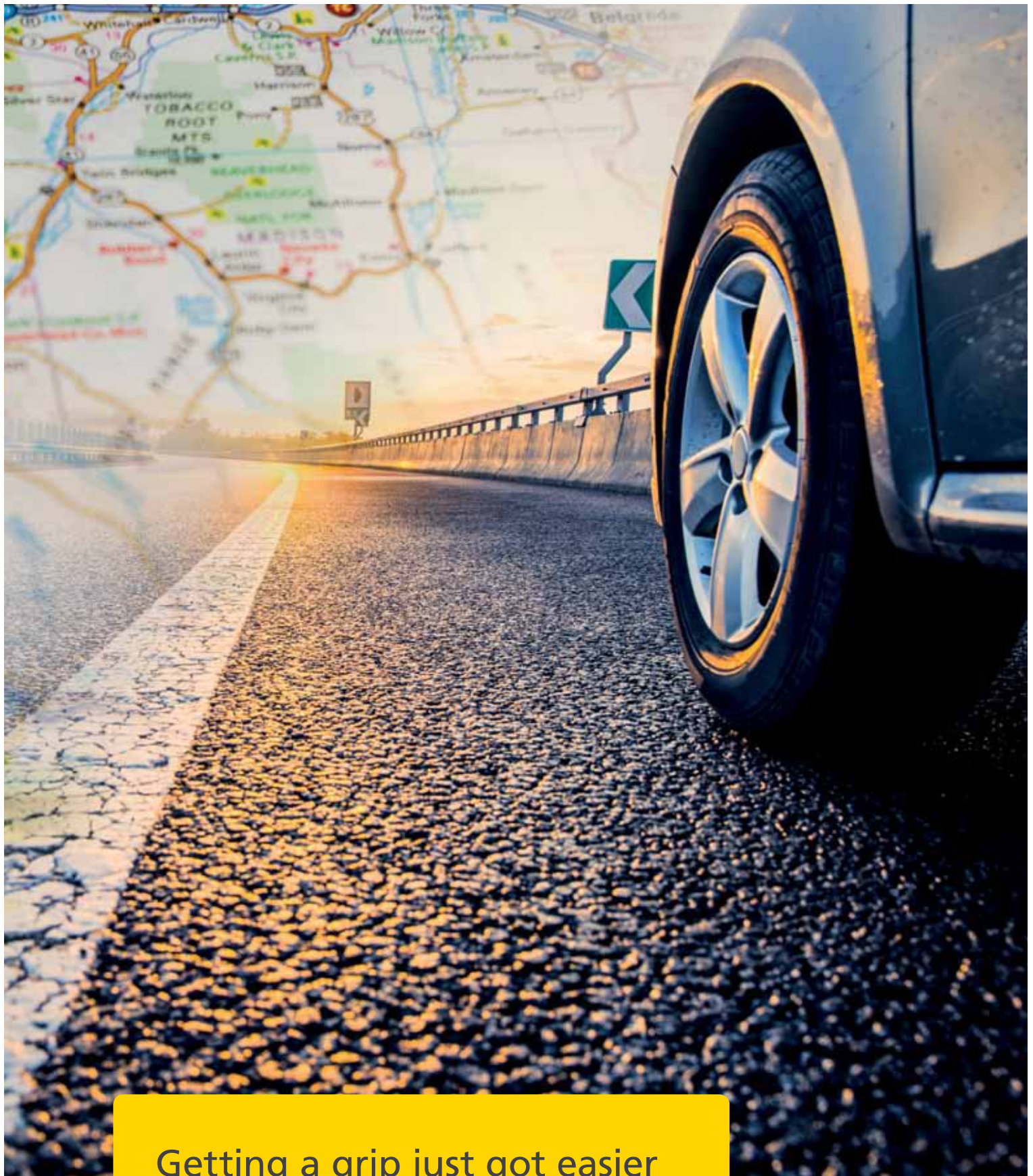
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Vipo's New Solutions For New Production Challenges

By Martin Bezák

We live in a lifetime period that we had not had the opportunity to predict and have not been sufficiently prepared for. This time is the same for both customers and their suppliers very challenging. Many things have fundamentally changed, and many new horizons are gradually opening for us, and some are still unknown to us today. Taking advantage of these opportunities is a potential space for business success for flexible companies that will be able to respond to these changes. Although many technical meetings and commercial negotiations have moved to the online space, they will certainly not replace a full face-

to-face meeting. However, they opened the possibility of higher efficiency of both parties and solutions in the online space. There has also been a significant shift in digitization, data collection and evaluation. We are aware of this fact in VIPO, and recently, we have significantly invested our resources in the field of R&D to create new solutions for our customers.

More and more machinery manufacturers are currently facing customer demands to streamline the technical support of their equipment. Despite the possibilities of local service in each country, the speed of response and customer support is a key factor, especially for machinery that is defined as strategic. Also, our equipment is classified as strategic in production facilities due to their high productivity and thus the need for a small number. We are fully aware of this fact and come up with a solution to support our customers with the Augmented assistance programme. With this solution, we try to bring the best solutions and develop our customer service module. In cooperation with external partners, our engineers have prepared a product that will enable the production plant to connect online between the manufacturer, specialists, and other experts in the online space. The advantage of this service product is the possibility of online image sharing and meeting between participants and thus instruct the end customer to correct the device's condition. At the



same time, it is possible to see the result of the service immediately. An alternative option, as the result of increasing production variability, is augmented reality (AR) as a form of employee education in interactive training. AR is a unique tool for training and integrating new employees.

On the other hand, it provides a unique tool for overcoming and solving the so-called generational exchange (efficient and effective transfer of many years of experience in training). This type of support brings the end user a benefit in the form of a quick response and, by its nature, can be used for all types of VIPO devices anywhere in the world. All these services become an integral part of the offered equipment and respond to the latest trends in the tyre industry, including IoT, predictive maintenance and analytics (using neural networks and AI).

The production trend of a wide portfolio of products fundamentally affects the performance and productivity of production equipment, not only in the field of tyres. Bead winding machines also face this challenge in semi-product material preparation, where the product portfolio has expanded significantly in recent years. We are aware of this fact in VIPO, and our goal is to dramatically reduce the downtime when changing production, which will create space for increasing the production of equipment. For this reason, we have identified the most significant effects of downtime and we try to eliminate them with new technical solutions on our devices by applying R&D activities. One of them is the automatic adjustment of the manipulator for removing beads from the mould according to the type of product produced. Selecting a recipe will automatically set the manipulator on either a Single or Multi Bead winding machine, which will significantly save the time of setting up the machine when changing production. Additionally, seemingly routine procedures are revised through SMED and Poka-yoke approaches, considering ergonomic principles when replacing individual tools of production equipment. By



solving this challenge, we managed to eliminate the necessary setup time by the operator significantly and, in the long run, increase machine utilization time, especially with a high frequency of changes in manufactured products.

To ensure consistent production, it is essential to use the right tools for the product. Many times, in production, we encounter an error caused by the human factor. This can cause a manufacturing mismatch or damage the device if the wrong tool is used. At VIPO, we, therefore, designed a system for automatic detection of used tools according to the selected product type on the device. The machine can automatically check whether the used tool is in accordance with the selected product type and thus eliminate any manufacturing error and collision on the machine. With this solution, we prepare our equipment for autonomous adjustment and production without further necessary mechanical changes by the operator when changing production.



The resulting parameters of the final product are fundamentally affected by the identical production process throughout its course. To meet this requirement, it is necessary to ensure its control and evaluation in its sequence of operations. In the field of beads production, several control points monitor the required parameters, such as the temperature of the preheated wire and the geometric dimensions of the coated wire. These parameters are important indicators of the accuracy of the final product and the stability of the production process. The VIPO R&D team, in cooperation with partners, prepared technical solutions that allow you to check these parameters and, in case of a mismatch, notify the operator of the need to react to a change in the machine settings. Online control mechanism and timely intervention in the process will prevent the formation of non-conforming semi-finished product, which has a positive effect on economic indicators of production.

We are grateful to our customers and partners for developing R&D solutions and putting ideas into practice that improve our products and solutions. Through cooperation, we thus achieve a higher technical level of production and the support of our customers. ■

martin.bezak@vipo.sk, www.vipo.sk, www.smartmaintenance.sk/



COVER STORY

NTE Process: Artificial Intelligence Leads To Green And Efficient Technologies ?

NTE Process is the Single Source Provider of turnkey systems with process solutions for Industry 4.0, ranging from dense phase pneumatic conveying to mixing but also liquid injection, drying, atomization and in-line formulation to packing.

The dense phase pneumatic conveying systems are equipped with the patented Air Assist® Technology and are the best - according to our customers - for primary products for tyre production ensuring the integrity of carbon black and silica pellets (fines < 1%).

Suitable for low-speed transport systems (< 5 m/s) and long distances (over 150 m), the Air Assist® Technology has been innovated with the patent Eco Dense-Tronic. Thanks to the use of Artificial Intelligence, Eco Dense-Tronic increases the system efficiency up to 40% and reduces energy consumption by up to 70% with an annual CO2 saving equivalent to almost 3,000 new trees planted each year.

Such equipment has a self-diagnosis and self-learning system with continuous monitoring of pressure and line flow, with a reduced degradation of the conveyed product (fine increase < 2%).



NTE Process offers the patented air mixers Blender M244 and Jetmixer M531 with no mechanical parts in contact with the product. NTE Process' air blender use only the "strength" of the air to get mixtures of products with different bulk density and particle size, in a quick and effective way, ensuring a specific control for the process requirements. Combining the air mixers with the Liquid Injection Skid M535, liquids are injected directly into the piston chamber. Such patented technology improves liquid dispersion in powders (silica, carbon black, etc.) by using air as a distribution vehicle. The system can inject up to 6 liquids at the same time, preventing the powder from accumulating on the nozzle with the drop effect that generally characterises traditional injection systems.

NTE Process has a Research and Innovation Centre equipped with a Pilot Plant where it is possible to perform both scientific and full scale tests to simulate the performance of different technologies. ■

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INTEGRATED TYRE CURING SOLUTIONS



Mehmet Akın Kılıç

Turkey-based Uzer Makina's innovatively new curing presses and molds are making a huge impact in global tyre industry, says Mehmet Akın Kılıç, Marketing & Business Development Chief, in an interview with Tyre Trends

What kind of products does Uzer Makina offer to global tyre industry?

Uzer Makina has been serving top tyre makers all around the world with its tyre curing presses and molds since 1978. Our press product category consists of mechanical and hydraulic presses for all kinds of tyres; while mold category includes tread segments, sidewall plates, container mechanisms, AG molds and bladder molds.

Tell us about the evolution of the company as a global leader

The company was founded by Selahattin Uzuner and his nephew Bahattin Ertuğ. At first, the company was working for



Year 1995 First Curing Press Produced



Uzer Makina Campus



Curing Press Assembly Area

petrochemical industry in Turkey and later on started to make mold maintenance activities for various tyre companies in Kocaeli. First mold was manufactured 1984. Nearly 10 years later, Uzer Makina started to manufacture tyre curing presses again for plants in İzmit. In 2000, the plant was moved to Kartepe, Kocaeli, where it is currently located. In 2004, first hydraulic tyre curing press is manufactured and in 2007 Uzer Makina designed, manufactured and internationally patented its popular product Floating Column Hydraulic Press. Until late 2000s, the company mostly served domestic market. After 2010, we started to supply a good amount of its products abroad as well. With an aggressive growth strategy, Uzer Makina invested in buildings, brand-new equipment, human resources and expanded production in last five years to become a global player in tyre curing equipment market. We now serve top tyre makers and their plants in more than 40 countries.

What is the latest step in your expansion process?

After doubling capacity in 2018 by separating press and mold factory, Uzer Makina has completed another expansion by June 2020. This new



Tire Curing Mold Production

facility is entirely dedicated for pre-production activities, including storing steel raw materials, cutting, bending, construction, welding, sandblasting and heat treatment serving both for tyre curing press and mold categories which used to be a part of press manufacturing facility before. Uzer Makina also moved its HQ office from mold factory to press factory.

Investment decision was made at the end of 2019 by the top management before Covid-19 pandemic with the goal of decreasing the costs by decreasing the amount of manufacturing activities which are outsourced. Following this decision, Uzer Makina has acquired 9500 m² land just next to existing press manufacturing facility and finished 6500 m² building in less than 7 months.

Uzer Makina also has added brand-new pre-production equipment like heat treatment furnace, sandblasting machine and bending machine. With these new machinery investment, Uzer Makina is planning to decrease the cost per product and production time while increasing the total quality of the processes by taking these operations in house rather than outsourcing them.

This expansion enables Uzer Makina to better use the existing press manufacturing facility. Since pre-production occupied a good amount of space before leaving the building, remaining place is now used for press manufacturing and assembly. Therefore, Uzer Makina is able to manufacture more presses at the same time compared to previous set-up. Uzer Makina has



V-Shape Floating Column Hydraulic Press

also made machinery investments for existing press area as well including automated spray-painting booth for painting press bodies/parts and vertical turning machine with 3 meters turning diameter which would mainly be used for parts of bigger (over 85") mechanical presses.



Year 1984 First Mold Produced

What are the features of the new SUV & TBR Floating Column Hydraulic Press?

A new era for SUV & TBR tyre curing has begun as Uzer Makina announced the development of SUV & TBR version of its most popular and internationally patented Floating Column Type Hydraulic Press in the last Tyre Technology Expo. Uzer Makina dispatched the first 65" Floating Column Hydraulic Type Curing Press at the end of 2020. This new version outweighs the existing solution Frame Type which used to be the industry standard almost in every aspect. It offers a simpler design, the construction weights much less, has fewer components, maintenance requirements are lower and finally the energy requirement is lesser compared to Frame Type. Besides, most importantly, pricewise there is no significant difference between these two types.

On the other hand, tyre manufacturers will be able to benefit all the advantages of the internationally patented Floating Column Technology for



New Pre-Production Facility



New Heat Treatment Furnace



New HQ Office Corridors



New HQ Office Meeting Room



65" Floating Column Hydraulic Press

curing of larger tyres. Floating Column Technology provides fully automatic mold height adjustment and therefore eliminates the need for conventional mold height adjustment systems. The technology features two squeezing cylinders under the columns on both sides of each cavity. The piston rods of these cylinders are directly connected to the columns. Besides applying squeezing force, these cylinders also change the position of the locking point, which is located on the columns for adjustment of mold height. Therefore, the press does not need multiple locking points and can work perfectly well with just one. Columns rise at the end of each cycle and release the locking plates from grooves, meaning the locking mechanism can work without jamming.

In addition to these, Uzer Makina is able to construct this new size Floating Column Type Hydraulic Press as V-Shape as well in order to save space. The V-Shape design enables tyre manufacturers to use the curing press area at least 12% more efficiently, in other words, tyre producers would be able to place 112 curing presses in an area that was previously large enough for 100 machines. This concept was



developed by Uzer Makina engineers in response to the recent market demand for upgrading existing machines in tyre production plants.

On the other hand, Uzer Makina have been recently putting so much effort to increase energy efficiency on the presses and therefore help tyre manufacturers to comply with the latest European regulations. With this object in mind, Uzer Makina has developed "Energy Saver Steam Hoses" as a subsidiary product that would work both with Uzer Makina presses and others. With these hoses, one can save up to 5% energy per press which is equal huge amount of energy considering the fact that tyre curing is the most energy consumer process of tyre production. These hoses also prevent curing area from overheating. In case there is an effort to cool down the area, there is no need for it or at least it requires much less effort to keep the curing area at normal temperature.

Continued on page 88

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TWO-WHEELER TYRES

By Sharad Matade



Chu Tsang Chih (Kurachi), Director, Maxxis India

MAXXIS INDIA ON AGGRESSIVE GROWTH TRACK

Despite having an overall slowdown in the two-wheeler market, Maxxis India will remain aggressive in introducing products catering to different categories. However, owing to the current pandemic situation, the leading two-wheeler tyre company has decided to be conscious of having five manufacturing plants in India. In an interview with Tyre Trends, Chu Tsang Chih (Kurachi), Director, Maxxis India, said, "We are evaluating the current market situation and will navigate our strategy as per the future condition." On the manufacturing side, Maxxis India is thrusting on digitalisation and Industry 4.0, but sustainability has been the priority. Kurachi spoke in details on the company's approach to sustainability, premium markets, partnership with OEMs and other topics.

What is your take on the two-wheeler tyre market in India, considering the current situation?

India is facing the heat of the most unprecedented crisis with the second wave of the Covid-19 pandemic. The automobile industry is witnessing a slump, resulting in a slowdown in the two-wheeler tyre market in India. However, the two-wheeler demand in India remains strong in the long term, and we believe the current harsh time will pass soon. We are certain that once the lockdowns are lifted, two-wheelers could become the preferred mode of transportation for many, certainly which will be a boom for the two-wheeler tyre market.

Tyre companies are facing challenges on the manufacturing front due to restrictions being infused by the pandemic situation. How has the company aligned its manufacturing activities to the current situation and is taking care of its employees?

At Maxxis, the employee's safety has been prioritised over business targets. There was a shutdown for a brief period. To ensure workforce well-being, we have been strictly conducting employee health check-ups, including RT-PCR tests and compulsory vaccinations

for all the staff. Also, we have always been following all government protocols of social distancing, limited workforce, operating in shifts and other safety measures for our employees.

The manufacturing unit operates under the guidelines drawn by the Ministry of Home Affairs and Gujarat State Government. Currently, employees are working in shifts with full capacity workforce. We intend to augment production as per market demand and the lockdown situation in the country.

Management is also proactively sharing e-mailers with employees, channel partners on safety measures and positive quotes to spread the positive environment.

Could you highlight the role of digitisation of Maxxis India's plant in Gujarat and how is it helping in today's time?

Maxxis lays excellent emphasis on digitisation. It gives us greater control and visibility into each step of the complex manufacturing process, reducing cost and waste and improving overall efficiency.

How does the company see Industry 4.0?

Industry 4.0 will be the key game changer for the Indian

manufacturing sector. Industry 4.0 refers to leveraging cyber-physical domains in association with the latest technologies like AI, IoT, cloud computing, AR, 3D printing, etc., to enhance productivity. Industry 4.0 is already influencing sectors like manufacturing, supply chain management, construction, shipping, etc., and shall impact all the aspects of our day-to-day activities. It is truly considered to be a disruptive technology.

Maxxis has always worked extremely hard to implement this strategy into hardware (technology, equipment and machinery in our newly built facilities worldwide) and software (the production, management and quality methods that operate those facilities).

What about sustainability in manufacturing at the plant?

As a socially responsible corporate, Maxxis has been continually assessing the environmental impact of its activities, products and services that forms the basis of its 'Global Environmental Policy.

Our Sanand facility boasts of one of the most effective water stewardship programmes in India. Its efficient Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP) have accorded the plant its status of a 'Zero Liquid Discharge' facility. It discharges no liquid effluent into the surface water, effectively eliminating the environmental pollution associated with treatment. The process also uses wastewater treatment, recycling,



and reuse, thereby contributing to water conservation through a reduced freshwater intake.

The manufacturing unit also has a unique peripheral trench for water conservation. It collects and stores rainwater and further discharges it into the ground through 22 recharge stations rather than completely running off.

On average, Maxxis India recycles around 2,000 cubic metres of water every month, and the residual water after recycling is further used for plantation and cleaning purposes. The increasing groundwater draft caters to its domestic and industrial requirements, rendering most of the unconfined aquifer zone dry.

Following are some of the measures for collection, storage, handling and disposal of waste at our Sanand unit:

- We have the effluent treatment plants (ETP) and sewage treatment plants (STP) in our facility to treat our wastewater. After treatment of wastewater, sludge is generated from both plants. Considering the three



R's, we use the entire STP sludge for our in-house gardening purpose. And the sludge of ETP plant – we keep it in a scrap yard for getting dry and then we send it to TSD (Treatment, Storage and Disposal Facility), the pollution control board's authorised waste management companies, for landfilling.

- We also have a sound constructed facility of 1800 sq. mt. for collection, segregation and storage of all type of waste.
- We are not only focusing on the safe disposal of hazardous waste; being an ISO 14001 (Environmental Management System) certified tyre manufacturing company, it's our moral responsibility to ensure "end

use" or "life-cycle prospective" of our products. We are only selling out the tyres and other rubber-related waste to Gujarat Pollution Control Board's "authorised recyclers".

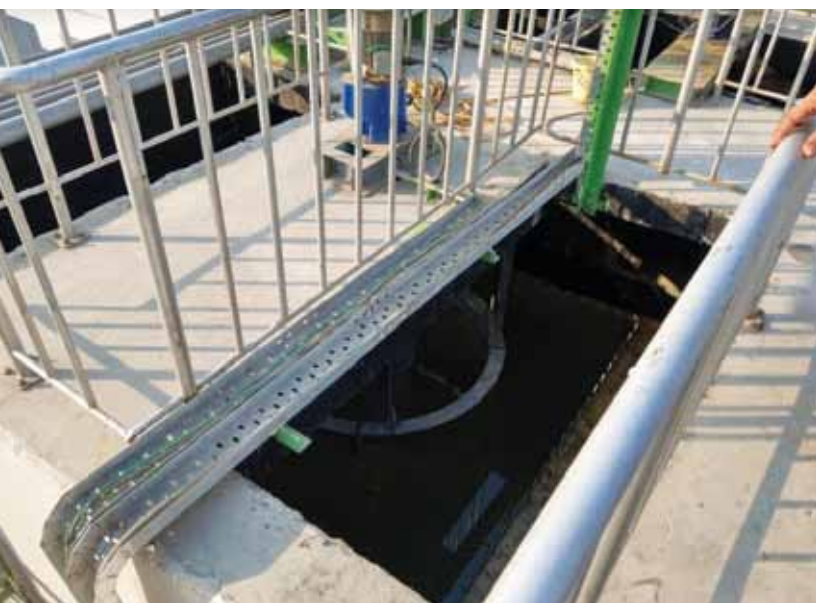
We have always been following consistently ethical standards for recycling to encourage a green environment.

How are you preparing for producing and marketing premium tyres?

Maxxis believes that quality speaks for everything, especially for the premium tyres market; no marketing or promotion activities can subdue how a user concludes the experience of using a premium product. We tapped into the market with Hornet 2.0 project with Honda Motorcycles and Scooters India last year by supplying the Extramaxx (M6233/M6234) series. Extramaxx tyres use the world's strongest Aramid Fibre, and the dual compound technology minimises rolling resistance while improving stability and tyre life. We have also planned to launch extension sizes for the Extramaxx series to cover all significant sports motorcycles running on Indian roads. We will soon launch more tyre series to cover different road applications for the cruising/touring market segment in the coming months.

How is the company widening the partnership with OEMs?

Maxxis has formidable strength in the OEMs market, where our quality and technology enable us to serve our OEM partners better. We have partnered with some of the world's largest two-wheeler manufacturers – Hero Moto Corp, Honda Motorcycles and Scooter India



Maxxis India Plant

Limited, Yamaha Motor India and Suzuki Motorcycles. We are fast expanding our portfolio as per new trends and market demand.

Will Maxxis India open to cater to the electric two-wheeler market, which is small but a fast-growing segment?

Maxxis Tyres stands for our steady commitment towards innovation, catering to the future mobility trends across segments. Last year, we launched the M922F, a special edge for tyre designs for electric two-wheelers. The new M922F tyres are built with specialised compound technology, which helped us in producing lighter tyres. This lighter weight in turn reduces energy consumption by five to ten percent, enhancing the range of an electric two-wheeler.

We are one of the best EV 2W tyre manufacturers globally as we supply tyres to Gogoro in Taiwan and Niu in China; both are the pioneers in EV 2W globally.

The company plans to have five more plants. Could you elaborate on how will they be technically advanced and cater to future demand?

We are one of the fastest-growing tyre companies in India with a long-term vision to achieve a 15 percent market share by 2026 and set up five manufacturing plants. Owing to the current pandemic situation in the country and keeping in mind the well-being of the employees, the complete utilisation of the existing plant capacity has been put on hold.

We are evaluating the current market situation and will navigate our strategy as per the future condition.



What are the expansion plans for 2021–2022

On the product front, Maxxis India has various line-up of tyres for sports bike with different applications for road and weather conditions which we will introduce in a very short time. We are evaluating the space of market for more product introduction. Currently, our portfolio covers 82 percent of market users' scenario and we plan to raise it to more than 90 percent this year.

Also, the company has made an investment of over USD 400 million in its Sanand plant in Gujarat. We currently employ a workforce of 600+ people and are committed to extend manpower to 2,000 within five years. Currently, we have used half of the land (106 acres) we got from the Gujarat government for the planned 60,000-unit capacity. Owing to Covid-19 pandemic, we are carefully evaluating the situation this year and will take appropriate steps to realise our future plans, in the time to come. We have penetrated across all 28 states and 8 Union Territories of India and opened an exclusive retail store in Goa to meet the growing demands of our customers.

We are working on new alignments and partnerships with new set of OEMs for the two-wheeler market as well as working on expanding our portfolio for the replacement market. ■

Following are some of the best-selling products:

- **Maxxplore (M6239/M6240)**- Maxxplore is specially designed to cater to riders' needs having craved for exploration of off-road conditions without compromising speed. It has been built with state-of-the-art advanced rubber compound technology that offers higher strength and outstanding performance in dry/wet conditions. The aggressive big blocks are meant for long-lasting grip without compromising on rider's safety. Its deep grooves offer better water channelling with excellent performance on the wet surface. Overall, this tyre is suitable for sports commuters having excellent grip, ensuring a comfortable ride with superior safety.
- **M6182**- The M6182 is perfect for both serious off-roading and city driving. Its powerful directional semi-lug pattern gives great stability whether you are riding in a straight line or attempting a challenging sharp-corner-stunt. This tyre is suited for all weather conditions, be it dry or wet, patchy or smooth land.
- **M6304**- The M6304 is designed for serious off-roaders. Its large tread blocks with deep grooves

give more stability, better water channelling and outstanding durability. This tyre is perfect for all geographical and weather conditions and suited for long off-roading drives.

- **M6000/M6000R**- The M6000/M6000R is science in design. Its reinforced sidewall strength and computerised tread pattern give rear wheels a whole new definition. Created to challenge wet and dry roads with better speed handling and unwavering stability, the M6000/R takes the joy of riding to a whole new level.
- **M6301**- The M6301 is designed to take the rough with the wet. Its special lug pattern treads, with effective water dispersal abilities, manoeuvre wet roads with panache. Take a dry road, and its large tread blocks come into play, giving high surface contact and the stability and power every rider seeks.
- **M6305**- The M6305 has a special nylon-ply construction design. Its deep tread grooves give better water channelling and great traction on any kind of off-roading terrain. In short, it's durable, stable and dependable. ■



RETREADING

By Sharad Matade & Gaurav Nandi

Fortune Tire Tech opens new tyre retreading plant in Odisha, India



Vijay Pal Reddy, Chairman, Fortune Tire Tech Limited

Fortune Tire Tech Limited, the Hyderabad-based tyre retreading company, is set to open its new plant at Lakhanpur in Jharsuguda district, Odisha, India. A tete-a-tete with Chairman Vijay Pal Reddy highlighted the company's vision and the challenges in the business.

Speaking about the plant, Reddy said, "We planned to set up the plant in late 2018. Before the first wave of Coronavirus, we started off with construction, but our work was stalled due to the subsequent lockdown. Now the manufacturing unit has been fully constructed, but we can't start operations due

to Odisha being under lockdown. Once things normalise, we will start production."

The plant is expected to have a monthly production of 500 units of 1200x24 size tyres used for Volvo truck-like vehicles.

The new plant will cater to the mining industry situated in Odisha. The company has already been serving the mining industry in the region for the last 24 years. "A lot of people from Andhra Pradesh are involved in the mining business in Odisha. We are taking indigenous machinery from Coimbatore, which will ensure an optimum cost for the tyres," said Reddy.





The company's customer base comprises VPR, BGR, Sainik Mining, etc. It has also started trade relations with Linde India. Fortune Tire Tech also plans to offer management services to its customers as well.

Fortune Tire Tech is the first-of-its-kind company in India to retread tubeless, radial and bias tyres, complying with European and American environmental standards.

The Odisha plant is equipped with the latest machinery imported from Germany and Italy. Fortune Tire is the first company in India to use shearography for retreading tyres. However, speaking on the viability in deploying modern machinery, Reddy explained, "Due to being a model plant, the investment for the plant is high. However, the plant is not viable for the Indian perception. But as a passionate retreader for the last 25 years, we have made the investment. The challenge is the Indian customers compare my product quality with roadside retreaders. Global retreading machinery leaders have also set up plants in the country, but unfortunately, could not succeed in this market so far. The people interested in investing in machinery get demoralised as the output cost is more than the local products. It is a problem for everyone."

Commenting on the Indian government's move to open its indigenous mining to private players, he said, "Retreading is famous in the mining industry across the globe—everyone banks on it. It is a key change in the tyre space. It is viable for everybody."

Reddy has been in the retreading business since 1995, but he started on a larger scale in 2012 with his first manufacturing plant in Hyderabad. "I was associated with Vamshi Rubber Limited since 1995 as a franchisee. That time we would roll out 800 units per month in Telangana. It was a small unit. I know the chairman of the firm very well. So, in one of our discussions, I placed the idea of a model plant in India. After that, we set on a tour of Europe and eventually, with the help of Mereddy Ramesh Reddy, chairman of Vamshi Rubber, we laid out our first plant in Hyderabad in 2012. After its success, we started our second plant in Singrauli, Madhya Pradesh, in 2016. And now we have set our eyes on Odisha. But due to the pandemic, there is a delay in commencing operations," said Reddy.

Fortune Tire Tech's Hyderabad plant has a capacity of 4,000 tyres, but it is rolling out 1,300-1,400 tyres per month in the lockdown. On the other hand, the MP plant produces

500 units per month, but currently, it is producing 250 tyres per month.

Commenting on the retreading space in India, the veteran opined, "The market is outstanding, but the sector is unorganised. You cannot compete in an unorganised sector. Around 80 percent of the market is unorganised. We have appealed to the government to license players in this sector, but nothing has been done so far. Between 2016 and 2018, many Chinese tyres were imported into the Indian market which crunched to the tyre retreaders. But now, the current import duty has reduced the flow of Chinese tyres here. The government should show its support to the industry as we come under 18 percent GST slab. Due to this, transporters and other logistic support have to incur heavy losses. We appealed to the government through our association, but nothing came of it. We should come under the 5 percent GST slab."

According to Reddy, fleet owners now are more concerned about maintaining their old tyres than buying new ones and looking for retreading tyres to reduce the cost per kilometre. "Chinese tyres are used and throw tyres and can be used temporarily. They are not viable in the long run, and retreading of these tyres is not viable. Major Indian tyre companies have come into the retreading space, but none of them, including the government, have perceived that this industry can be eco-friendly," said Reddy.

Drawing a comparison on tyre retreading awareness between India and European countries, Reddy opined, "In European countries, every retreader has to have a licence and label their tyres. We have demanded the government to bring the same practices to India. Because once we have labelling on retreaded tyres, the unorganised sector will come to an end. But it is not happening in India."

He concluded the conversation by saying, "We have no future plans yet. We are looking at the second Covid wave. Future prospect for the space is good, but we have to see how it unfolds after the pandemic and what effect does Coronavirus have on it." ■

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FIELD TRIALS

TYRES

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RACE TRACK

MAX MAGIC AT MONACO

Max Verstappen's first win at the Monaco proves he has what it takes to be the new world champion in Formula One



courtesy: Red Bull Media House



The Dutchman started off his career in racing quite early. At 17yrs of age, he became the youngest driver in a Formula 1 World Championship race at the 2015 Australian Grand Prix. Only an year later, he won the 2016 Spanish Grand Prix. This victory made him the youngest driver ever to win a Formula One Grand Prix.

Max Verstappen's energy on the track is explosive and has catapulted him to becoming Red Bulls lead driver. Being the son of former F1 driver Jos Verstappen, Max is a natural at the wheel and keeps pushing the car to limits of its performance. More noticeably though, he's been known to push race tyres to the edge and extract tremendous amounts of grip from them in almost all-weather conditions.

The 2021 season has been action packed with Verstappen and Hamilton battling it out for podium space. The rivalry between the two not only makes for an interesting race, but seems to be fuelling the young Dutchman's dream of becoming the next world champion.

Formula 1 Grand Prix de Monaco is known to be a tough course to race on. It tests the harmony between man and machine with its precision layout. This year's season saw Verstappen pull into the lead with Sainz in second, and Norris in third. Three former Monaco Grand Prix winners, Kimi Räikkönen, Daniel Ricciardo, and Fernando Alonso, all finished one lap down on race winner Verstappen and finished in 11th, 12th and 13th places respectively.

Verstappen's victory at the Monaco Grand Prix is just the spark Red Bull Racing needed against its main rival Mercedes and its Lewis Hamilton. A win at Monaco speaks volumes for the kind of precision driving Verstappen's capable of.

After the race was over, Max was overjoyed and had this to say. "I'm super happy to win the Monaco Grand Prix. It's such a tricky track and you need a smooth weekend so I'm very pleased with what we have achieved as a Team and of course with Honda. I just had to focus on my own race and make sure I had a clean start. Of course, it all looked under control but to keep your focus for so many laps is the hardest part because it's easy to relax when you're in the lead and make a mistake, so you have to keep reminding yourself to leave your thoughts on the road and stay focused. I think pace wise, we were always in control because every time someone

tried to push me in terms of lap time, we were able to respond and increase the gap. I've never been on the podium here and then the first time it's a win, so it's a bit of redemption for the other races I've had here. Looking ahead to Baku, Mercedes I think are still the ones to beat, they are very quick on the normal tracks. We are leading the championship and I hope of course to be there at the end of the season because that's the most important thing so we cannot get carried away. But for now, a massive thank you to everyone in the factory and here at the track, we won the Monaco Grand Prix so let's enjoy it."

His team mate Sergio Perez, who finished fourth in the race, had a tough battle with Norris to secure the third place on the podium. The Red Bull racing duo are proving to be tough combination for other drivers. Christian Horner, Team Principal of Red Bull Racing was quoted, "It's a phenomenal day for the Team. Max was disappointed yesterday that we didn't get to see him deliver a pole position lap but he dealt with the frustration well and when the opportunity presented itself today he seized it with both hands, driving faultlessly from start to finish to deliver our fifth Monaco victory. Checo also drove an incredibly strong race, the strategy worked well and he had brilliant pace in clean air enabling him to finish fourth. It's Honda's first win here since Senna in 1992, the first time they've led the championship since 1991 and we have to credit them for their hard work in helping us get to this point. They've done a great job and to have three Honda cars in the top six is a fantastic result. As a Team we have great strength in depth and finishing first or second in the first five races of the season is a phenomenal example of teamwork and our ability to fight. There is a long way to go in this championship but we should always enjoy the wins. Commiserations to Charles and Ferrari, it was a tough day for them but great to see them back up there in the mix. The championship is very tight at the top and today was an important step for us." ■



ON THE ROAD



MERCEDES-MAYBACH GLS 600: LUXURY REDEFINED

The 2021 Mercedes-Maybach GLS 600 4MATIC, expected soon in India, represents a new form of luxury in the SUV segment. It extends the portfolio of the Mercedes-Maybach brand by combining the body design and technical basis of the GLS with the luxury of a top-class saloon car. Its spacious interior with the highest-grade materials and extremely effective noise insulation creates a stylish, cocoon-like feel-good atmosphere. From their pleasantly elevated seating position, thanks to electrically operated roller sun blinds on the two rear side windows, the passengers can decide for themselves how much of their surroundings they want to see. The AIRMATIC suspension included as standard or the optional, fully-active suspension with E-ACTIVE BODY CONTROL effectively keep the road bumps at bay.

For the first time, there is a dedicated Maybach drive programme that ensures even more comfort in the rear. Access and egress are also highly

convenient: when the doors are opened, the vehicle is lowered slightly, and an illuminated running board quickly and silently emerges on the access or egress side. The running boards are made of anodised aluminium. The V8 engine with a displacement of four litres, which can develop 410 kW (558 PS) and 730 Nm of torque, is an engine variant developed exclusively for Maybach and moves the car discreetly and powerfully. The engine is combined with the 48-volt system EQ Boost. The Mercedes-Maybach GLS 600 4MATIC will enter the market in the second half of 2020.

The Mercedes-Maybach GLS combines the body form and superior, robust technical basis provided by the GLS, the S-Class among SUVs, with all the technical and material luxury of a top-class saloon car. It stylishly yet emphatically shows its special standing among the Mercedes-Benz SUVs. ■



MAHINDRA NEW TUV300: NEW AVATAR

Mahindra's next generation TUV300 is the revamped and updated version of the original on the road since 2015. The updates include a new honeycomb grille with the signature six slat design and a trapezoid shaped air dam. Also on offer will be a new set of headlamps. The model has been currently on test and will soon hit the showrooms.

The current model has a 1.5-litre, 3-cylinder, turbocharged diesel engine that produces 100bhp and 240 Nm of torque. This motor is paired to a five-speed manual transmission. The new model is expected to have an updated one with 6-speed manual and AMT, sticking to BSVI emission standards. ■



icn

SKODA KUSHAQ: INTO THE MID-SIZE SUV MARKET

Kushaq SUV will have 1.0L turbo petrol (113bhp) and 1.5L turbo petrol (147bhp) engine options. According to reports, a 6-speed manual gearbox will be standard, but a 6-speed torque converter automatic and a 7-speed DSG automatic transmission will be reserved for the 1.0L and 1.5L motor respectively.

The MQB A0 IN platform is based on its international model used by Volkswagen. Skoda is reportedly aiming to price it aggressively competitive in the Indian market for mid-sized SUVs like KIA Seltos and Hyundai's Creta. The

2,651 mm wheelbase is similar to the new Volkswagen Taigun.

It retains Skoda's butterfly grille between the sleek headlamps which come with LED projector units and LED Daytime Running Lamps. The fog lamps are not placed in the traditional fog lamp housing instead they are placed right below the headlamp and are halogen units. There is also a three-piece faux skid plate in the front bumper. The bonnet too gets some muscular lines which up the aggression quotient of the car. ■

TATA HBX EYES MICRO-SUV SEGMENT

Tata Motors HBX is expected to enter the new micro-SUV market – somewhere below its Nexon. According to reported spy-reviews, the concept has unique design elements quite different from other cars from the Tata stable.

Ford Freestyle, Mahindra KUV100 are among the current crop of micro-SUVs in India. Maruti Suzuki's Future S Concept is also expected to join this league.

Based on the same ALFA platform as the Altroz, the HBX is said to have a 50mm smaller wheelbase, according to a media review. The nose is akin to the Harrier with sleek LEDs on top and tri-arrow design where the headlamps will be placed. The imposing bumpers hint at aggressive body cladding on the production model while the overly futuristic wheels will surely be toned down a few notches, it said.

The vehicle will get sharp-looking LED taillights and a roof-mounted spoiler at the rear, the report added. The powertrain is likely to have the same 1.2-litre petrol engine (86 PS/113 Nm) used in the Tiago, Tigor, and Altroz (non-turbo). ■





OFF THE LINE

CONTINENTAL LAUNCHES NEW LOADER TYRE WITH TURTLE SHIELD TREAD LAYER



Continental has launched the new CompactMaster AG under its loader tyre segment. The heavy duty tyre designed for telehandlers and skid-steers is available for 24-inch wheels.

The radial tyre has a sectional width of 460 mm, with an aspect ratio of 70, load rating index of 159 and speed symbol B that allows it to operate optimally at 50 km/hr (460/70R24 159B). It is the first-of-its-kind tyre designed using a new Turtle Shield tread layer and twisted steel belt.

Compared to a standard agricultural tyre, the CompactMaster AG ensures five percent more surface area riding on the back of lug design. The tyre also has a land-sea (L/S) ratio of 30 percent, which means a larger portion of the tyre stays in contact with the ground.

"This is a reinforced tyre with a hard shell and a more flexible steel wire construction to help prevent cuts and damage, whilst offering greater stability for materials

handling work," said Benjamin Hübner, Product Line Manager Agricultural Tires at Continental Commercial Specialty Tires.

He added, "This tyre represents years of research and development by our agricultural research and development team in Lousado, Portugal. The new twisted steel belt construction has a unique Turtle Shield layer beneath the rubber to protect the tyre shoulder area from damage. The wider tread and lug widths have been specifically designed to offer better traction on a variety of surfaces and improve the self-cleaning properties of the tyre."

"This level of tolerance is an indication of the strength and flexibility of the tyre. The twisted steel belt provides a robust yet flexible tyre that can run at higher pressures on the road to enhance fuel efficiency, and lower pressures in the yard or field when carrying heavy loads," revealed Hübner. ■

MICHELIN LAUNCHES SEVEN NEW SIZES FOR TRAILXBIB TYRE RANGE

Michelin announced the expansion of its Michelin Trailxbib tyre range with the addition of seven new sizes from June 2021.

The new sizes are – VF 500/60 R22.5 160D; VF 600/50 R22.5 164D; VF 710/45 R22.5 170D; VF 600/55 R26.5 170D; VF 710/50 R26.5 176D; VF 650/65 R30.5 181D; VF 750/60 R30.5 187D.

The Michelin Trailxbib range has incorporated various inputs from farmers to improve tyre performance elements. It comes with the Michelin Ultraflex technology, which in addition to resisting damage, ensures even weight distribution through the tyre contact patch and high levels of soil protection.



In addition, the tyres are fully compatible with remote inflation systems which allow the operator to easily adjust tyre pressures, including on trailed equipment in real-time and according to the driving surface or soil conditions.

Raymond Tavernari, Agricultural Product Category Manager, Michelin, said, "When this tyre was initially launched last year, it was the result of collaborations and discussions with our agricultural customers in many countries. We have now extended the range from two to nine sizes and this means we can now offer more of our customers the option to use the Michelin Trailxbib on more of their implements." ■

BKT ADDS NEW VARIANT TO RIDEMAX FL 699

In a bid to expand its Ridemax FL 699 radial tyre variant, Balakrishna Industry Limited (BKT) has introduced the new 525/65 R 20.5 tyre size. The sectional width of this automobile component is 525 mm with an aspect ratio of 65 percent and 20.5-inch rim diameter. It will be an addition to its predecessor that measured 24 R 20.5.

The OEM's relentless pursuit for innovation through an increasing focus on environmental sustainability has given rise to the Ridemax range. It is specifically designed for transport operations with tractors and trailers, in

agricultural and industrial applications.

Opening the flotation range for agricultural vehicles and tank trucks, this tyre remains stable at high speeds, supports heavy loads in order to reduce transport cycles and reduces rolling resistance, thus consuming less fuel. It also features a reinforced bead which ensures a comfortable ride with safety and control.

The other varieties under this brand name include FL 693 M, FL 690, FL 690 IND, IT 696 and IT 697 (M+S). ■



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BOARD ROOM

GOODYEAR INDIA REPORTS Q4 PROFIT SURGE

Goodyear India's profit after tax (PAT) surged 240 percent to INR430 million Q4FY21, aided by higher volumes, increased factory utilisation and cost efficiencies. The company had reported a PAT of INR130 million QFY20. The PAT constituted 7.6 percent of the company's sales for Q4 2021.

Total income for the January-March 2021 quarter increased by 50 percent YoY to a total of INR 574 crore due to the robust farm demand and the efforts made by the company to expand its distribution initiatives in the consumer replacement business.

Goodyear India recorded a 53 percent increase in PAT to INR1.36 billion for FY21 as against INR890 million in FY20, the highest in the company's history. The company's total income has also spiked by two percent to a total of INR18.14 billion y-o-y despite the COVID-19 impact.

Sandeep Mahajan, Chairman and Managing Director, GIL, said, "We benefitted from our ongoing enhancement of our consumer replacement distribution network, particularly in rural markets where we are creating synergies with our farm business. Our distribution initiatives are strengthening our position in the market and helping us build a sustainable business. Our results also reflect increasing momentum in the Farm Segment driven by a resurgence in rural demand and our excellent products and customer service. While we expect to continue advancing our strategic priorities in fiscal 2022, safeguarding our associates and helping our communities overcome Covid remain our top priorities." ■

JK TYRE Q4 REVENUE UP BY 63%

JK Tyre's consolidated revenues for Q4FY21 rose 63 percent to INR 29.45 billion compared to INR 18.3 billion in Q4FY20. EBITDA surged 119 percent reaching INR 4.72 billion with margin expansion of 400 bps.

Raghupati Singhania, Chairman and Managing Director, JK Tyre, said, "The year began with India in lockdown due to Covid-19 pandemic and the economy grinding to a halt with Q1FY21 almost a washout. The economy started opening gradually from mid-May. As a result of several initiatives taken, JK Tyre recovered fast and achieved highest sales in Q3FY21 and Q4FY21 increasing its market presence."

"With high-capacity utilisation, control on costs and reduced working capital, special focus on customer outreach and premium products offering, profitability improved significantly. Similarly, JK Tyre subsidiaries – Cavendish Industries and JK Tornel also added to a substantial overall improvement in the profitability of the company," he added.

The company has shown multi-fold growth in PBT and PAT on a y-o-y basis as it stood at INR 2.81 billion and INR 1.95 billion, respectively, in Q4FY21.

Singhania further said, "JK Tyre is fully geared to face challenges emanating from rising raw material prices and prevailing lockdowns under the second wave of the novel virus. Despite these headwinds, the company expects to continue capturing opportunities that are arising in this new environment in India and abroad." ■

APOLLO TYRES REPORTS PROFIT INCREASE

Apollo Tyres managed to report a growth in sales and net profit in FY21 despite several challenges. The company's net profit for the quarter ended March 31, 2021 surged to INR 2.89 billion from INR 789 million in the same quarter of the previous fiscal. Net profit for FY21 rose to INR 9.85 billion from INR 4.76 billion in FY20.

Consolidated revenues in Q4FY21 surged 39 percent to INR 50.26 billion y-o-y on the 'robust' performance in all segments in the local market. In FY21, revenue grew by six percent to INR 174 billion from INR 163.5 billion in FY20.

Indian operations continued with robust performance in all segments of the market and reported an increase of 49 percent in its Q4 revenue (from operations) to close at INR 36.3 billion. Similarly, European Operations' revenue, including Reifen, was up 20 percent in Q4 to close at INR 14.04 billion, whereas for the full year, it increased eight percent to close at INR 56.75 billion.

Onkar Kanwar, Chairman, Apollo Tyres Ltd, said, "What started as an extremely challenging year, with lockdowns across geographies, ended on a very healthy note for us with robust revenue growth across market segments and geographies. Ensuring business continuity along with the safety of our employees have been of paramount importance throughout this pandemic, and considering the current situation, especially in India, we cannot let our guard down. The year ahead is full of challenges, with demand getting impacted due to the lockdowns, and pressure on margin front, due to the rising raw material prices." ■



TREADMARKS

By Rajiv Budhraja



Rajiv Budhraja is Director General of the New Delhi-based tyre industry association, Automotive Tyre Manufacturers' Association (ATMA). The views expressed here are personal

Silver linings in dark clouds

The health shock borne out of the second wave of Corona has seeped into our collective psyche. Frankly, no one anticipated that the second wave would hit with such vengeance. At the time of ushering in of the New Year 2021, the positivity rate in India had fallen to minuscule levels adding to the belief that the pandemic was well and truly getting over.

However, as is evident now, we were caught unawares. Mutated strain of the virus took India in its stride as we were yet to work out a robust vaccination strategy. To curb the spread and manage the health emergency getting out of control in view of paucity of beds, oxygen and ventilators, a large number of states-imposed lockdowns and other restrictions which continue till date.

As is normal under such circumstances, the economy bears the brunt

and that is what seems to have happened. The fragile economic recovery seen in the second half of FY21 seems to have gone derailed. Consumer confidence has hit a new low as shown in a recent survey. Different rating agencies and multilateral organizations have downwardly revised the growth projections for the current fiscal year. From a bullish 11-13% growth (in view of base effect), the projections are now for growths in single digits only.

Needless to say, the pitch for economic revival is queered. But, curiously, as Covid infections come off from the peak levels and the recovery rates go up, a new kind of confidence is building up. The infection rates are coming down with as much alacrity as they had peaked.

Certainly, there is no room for any complacency as premonitions of a third wave have already been made. However, the vaccination strategy to inoculate a large number of Indians by the end of the year holds much hope. It has been observed that those countries that have already inoculated over 50% of their population have witnessed much less morbidity and mortality rates.

What also holds out hope are a range of high frequency indicators which show the resilience of the Indian economy and the entrepreneurship that shines through whenever an opportunity is provided. The economic growth in the fourth quarter of last fiscal has been better than expected. From a contraction of 24.4% and 7.4% in the first and second quarters, the economy turned around in the third one with 0.5% growth and ended the year with 1.6% growth in Q4.

There are a range of other indicators too. Industrial performance measured by IIP grew by 22.3 percent in March. Merchandise exports grew by 197 percent in April. The output of eight core infrastructure sectors grew by robust 7% in March. Manufacturing PMI has remained at a high of over 55 in March and April. GST revenue collection set a new record of Rs. 1.4 lakh crore in April.

If the tyre production data for FY21, as released recently, is anything to go by, Tyre Industry will continue to put the wheels of economy in motion against all odds. No doubt, Tyre Industry's overall numbers are down in FY21. However when looked closely, there is ample evidence that points to the resilience in the sector. Truck & Bus (T&B) tyre production, the bellwether of economy has turned in better performance in FY21 over FY20. And this despite the fact that April'20 was a washout in view of nationwide lockdown. Both T&B and Passenger Car tyre production touched significantly higher figures in March this year with T&B tyre

production crossing 20 lakh numbers, a historic high.

FY21 will also go down as a landmark year when Radial Truck & Bus tyre production equalled that of Bias tyre production. Tyre exports from India have charted an upward trajectory in the second half of previous fiscal as the stability was achieved in the exports markets.

Forecast of a normal monsoon (third in a row) and the upcoming festive season can provide much-needed impetus to the economy if vaccination drive accelerates and Covid appropriate measures are followed strictly.

No doubt, the situation is still in a flux, and it is too nascent to gauge the true impact of the second wave on economic growth. But ramping up the vaccination drive and inoculating the entire adult population as early as possible will help.

And there is a major shift again in the vaccination policy. As this column gets on the editor's desk, the federal government has decided to provide free coronavirus vaccines to states for inoculation of all above the age of 18.

FY 21 could not live up to the expectations that most Indians had. Hope the next year will. ■

GTRC 2021



Emerging Business Strategies And Technology For Tyre Industry

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MY VISION

By Rommel Albuquerque

CONSUMER DEMAND NEVER DROPS OFF

Joaquin Gonzalez, President, Tire Group International, spoke to Tyre Trends on the constantly changing tyre industry, more importantly, on tyre retailers and wholesalers



*Joaquin Gonzalez,
President, TGI*

How do you view the changes happening in tyre retailing, and its future course into a digital world?

I was born and raised in the tyre industry. My dad had a wholesale company along with 13 retail locations so I had the opportunity to work on the wholesale and retail side. Retailers have always faced challenges, whether it be size proliferation where you look back 25 to 30 years ago where 80% of the market was dominated by 10 sizes while today 80% market is dominated by 250 plus sizes. That poses challenges that retailers have to manage because it's not in their domain, it's all about tyres and sizes and it's their speciality.

The biggest challenge that I see retailers being faced with now is the new digital age. It's out of their comfort zone! They have to rely on marketing themselves through social media platforms and Geofencing. So now retailers have to sit down and think of how they can be different and how can they attract an audience and bring people through the door, rather than how it was before. This is an aspect of the business that is out of their comfort zone. Many do not understand it and have to rely on third party software's or consultants. The market structure in the US is still predominately driven by independent tyre retailers, where over 65% of the industry is run by 'Mom and Pop' shops. Everybody wants to think about the large chains but the bulk of the business is by these independent operators, and they're competing against these Giants that are trying to gain that customer base.

What strategies does TGI adopt in the current changing business environment?

Size proliferation is a big driver and one of the things that benefits

companies such as us Tire Group International, is that we are a large wholesaler with large inventories & large warehouses. The reason for that is we have to stock a lot of tyres because retailers no longer have the luxury to stock tyres. They may have financial constraints, space constraints, etc , to be able to stock all the different sizes in order to service whatever car is coming through one of their doors. So, they have to rely on wholesalers like us to offer them a good solid product range. It all depends on the type of consumer coming in. Once that is satisfied then you have to meet the

requirement of getting there on a timely manner to get them those tyres.

One of the things that we have been able to do is to increase the service side of our business. It's really been changing our business. It's not about just providing tyre support. You have to have great customer service having a great relationship with your customers and being able to deliver to them more than three times a day in-order to offer what they call 'Hot Shot' delivery, where you get your tyres within 30 to 60 minutes to the retail location. They are heavily relying on that supply

chain to be able to satisfy their retail customers. So as a part of our strategy to bring that all together and meet the needs of today's market, we have opened up additional smaller distribution centers so we can service regional locations as opposed to having to drive from our main hub to one of our farthest customers almost three hours away. Opening up a location closer to customers has now given us the opportunity to deliver a customer a 30 to 45-minute delivery window rather than having to wait almost a day for delivery. In Latin America which we have invested in, single shop

operators and multi branded stores are very prevalent and they rely on fast service and getting tyres to customers in a timely manner and that is something that we will continue to push on.

How much has the pandemic and its impact forced you into bringing in new changes?

The pandemic has taught us many things. Most importantly is has taught us how to lean on our digital platforms and software systems that we've been developing over the years. Being forced to use them more and other digital platforms has taught us a lot. Video calling has been a great tool to showcase our product line to dealers from all across. It has definitely opened our eyes to the use of technology and how important it is to have the right technology in the workplace. We felt the first impact of the pandemic when I got a call from our VP of Sales asking if one of our dealers could get a 30-60 stay on his trade receivables as he was being forced to shut down due to having to adhere to CDC guidelines. That was the start. A lot of our customers were asking for more time to sort out and figure out what was really going to happen. The pandemic was affecting all of us and this solidarity came out from everyone. People were very accommodating and understood the situation.

Surprisingly consumer demand never dropped off. For most, if you had a job, you continued to have your revenue stream coming in, but you didn't go out to eat



2-3 times a week, you weren't spending money on gas, on a vacation, or going out. You had to stay at home, and this led to consumers having more spending power and wanting to travel locally. Rather than air travel, people started opting for more road trips and so tyre purchases which may have been a faraway thought, now became a front and center and customers had the discretionary income for it.

Manufacturing plants were shutting down but consumer demand never dropped. These plants tried to come back but with workers going back to their hometowns and not being able to travel back, there was suddenly this supply gap in the industry that started to drive the price up but demand kept increasing. Everyone thought that consumers were not going to buy tyres or spend much on them but it was the complete opposite. Even today demand is extremely strong and supply has not caught up with it. Over the last couple of years, we have seen retailers go through a price decline, but with the market demand increasing they are going through a price incline which is good.

What is your take on online retailing? What are its advantages as well as disadvantages?

We divide our business into many units and the online retail sector is one that has taken off in the last 3-4 years. It is the wave of the future as more and more things become automated and we adopt a 'buying everything online' type of world. The challenge

with tyres is, you cannot just click and get them to your house, but you have to get them installed. That creates the challenge which people are trying to meet, whereby coupling the service of buying online with mobile service via appointments to get the tyres fitted. These are the challenges faced in the online sector but it is by far the largest growing sector. The online space is the first place where customers go to find out when they should buy a new tyre, what size they need and see what their options are. The challenge is, how do you put your product in front of a consumer or how can you get that consumer into your virtual door. We service a lot of B2B platforms where customers can place their orders and we ship those orders directly to the consumer. We started doing this in 2017 and this has grown by over 400% year over year.

What are the challenges in retailing multi-brand products?

Back in the days there were only single branded tyre retailers because at that time there were only limited tyre sizes. But now with so many tyre sizes available in a particular spectrum, even if you wanted to be a single brand retailer, you wouldn't have all the tyre sizes that you would need to be able to service every consumer's needs. This forces you to become a multi brand outlet. It has its own challenges. No particular tyre can be branded as the best as it's a subjective decision and so as a retailer it depends on how you are going to market it. We as a retailer need to understand what are our objectives. How





we tier our products in our portfolio matter.

Which segment of tyres is more in demand than others?

In the US market, with the new import restrictions and import duties on tyres from certain countries, the biggest challenge has come in the passenger and light truck segment. Tyres which were imported and that were once available at a certain price point are now more expensive because of the cost of the duties to import them. It is estimated that with the new duties imposed on tyres imported from Taiwan alone, there is about two and a half percent of the market share of the US that is now priced out of the market. So now there is a tremendous supply gap in the passenger and light truck segment because of this new import law and the duties that have been imposed. This also works as an opportunity for those who have inventory to increase the price a bit. Passenger and light truck segment is where the demand is more but trying to secure product for that segment is now a challenge.

Do customers demand any specific features for the tyres they seek?

For the vast majority of our consumers, the main question in their mind is pricing. The second question is how good is your cheapest tyre. It's always a mental game of price for quality. Most consumers don't know a lot about tyres, and most of the time, the lower priced tyres are from brands that they've never heard of. Consumers put a lot of trust in the retailer as far as quality

vs price go. From a retail side, bridging the gap from price to quality as in safety, is crucial. On the wholesale side, it's very different. We wholesale and buy tyres on the open market and that's where competition comes in. Profit margins and pricing plays a big part, bridging the gap between the cost, quality, exclusivity make a difference.

For the most part, general consumers don't ask for specifics about a particular tyre, like the kind of grip or longevity it offers. But you get specific consumers who are performance oriented. An educated consumer will ask more questions about the benefits each tyre brings. Top US publications in the US ran a survey last year and about less than 20% of the consumers we get come in well informed and are looking for specific features. As per a survey done here in the USA, 80% of the time, a consumer walking in to a retail tyre shop, will buy a tyre that the counter person recommends. Customers also look at what tyre they have already on their car, and feel that those tyres served them well, but according to the survey, customers only left buying the same brand of tyres 30% of the time. 70% of the time, customers bought the tyre that the counter person recommended. So there's a lot of power in what the counter person recommends.

What is your take on tyre manufacturers doing their own retailing? Does that affect your business?

The first here in the US to get into that was Michelin. They developed

their own online platform and then Goodyear and a lot of the Tier1 manufacturers followed. But some have taken a step back. The channel disruption it was creating was more a drag on their business than a benefit. They did create a MAP pricing (Manufacturers Authorised Price). This way they wanted to make sure that their tyres were being sold at the same price across platforms and dealerships. But by setting a ceiling price on a tyre, you're also setting a ceiling on how much a shop or tyre channel can make. Whereas if I'm selling an in-expensive brand of tyre, I can buy at my cost point and the retailer can sell it at their cost point where both make a profit margin.

There are a lot of dynamics at play. The younger the consumer becomes, when they start buying tyres, the more they're going to look for online purchasing. The challenge is a retailer's consumer is becoming younger and becoming more fleet driven with the likes of Uber, Lyft, etc. These fleet businesses are becoming more of our consumer base than an individual car owner. The old ways of going to a tyre shop and talking to the guy, having a cup of coffee and talking about tyres is over, the younger generation of buyers want to buy everything online. This is where online providers are trying to bridge the gap between product and service, as you need specialized service as far as tyres go. Automated tyre installation bays is being worked on and I think that will be the future. ■

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Integrated tyre curing solutions

Uzer Makina is not solely a tyre curing press and mold producer – the company also strives to improve the efficiency of the entire curing process. Uzer Makina places great emphasis on digitization and designs its presses to be fully compatible with Industry 4.0 requirements such as EMS, AGV, SCADA, MES and ERP systems. In addition, the company conducts its own research and also works with leading industry companies to offer solutions such as mold pre-heating presses, mold changing pickup cranes and RFID mold management systems – to help tyre manufacturers achieve the most efficient curing processes.

How did the company take on the pandemic?

Even though pandemic conditions were very challenging for tyre industry especially in terms of demand last year, 2021 is very promising also for Uzer Makina. There are many reasons for this: firstly, because of US tariffs against Asian tyre makers, Turkey & Eastern Europe has become a very attractive country for capacity increase for tyre production. Almost all tyre makers in Turkey runs at full capacity and some of them already

is expanding. Secondly, there has been a global change in transportation as many people now prefers to move more individually than ever, this probably will eventually affect the number of tyres produced globally. Uzer Makina started to feel this rebound in the demand as many existing customers has decided to restart their previously on hold orders and requesting inquiries for new equipment, and it is also a known fact that quite a few tyre makers are making new greenfield & expansion projects. As Uzer Makina continues to improve its reputation in the market year by year, this rebound will have much more positive effect on the company.

In the pandemic period, like all other companies, Uzer Makina also had to transform the way to operate business into more digital. Now in Uzer Makina, all internal meetings are video meetings. Since travelling abroad is still an issue, nearly all the meetings with customers and suppliers are done via video calls too. Uzer Makina enriched the content of the installation and commissioning materials and provided remote support in order to help the customers which cannot accept people to their plants because of travelling bans. ■



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VMI CORTEXX CORE

VMI introduces CORTEXX Core, featuring unlimited possibilities of extending the number of screens, such as strategically placed large information screens around the machine, touch panels to operate the machine where needed, or smaller screens that are positioned at certain modules of the machine to provide status information to the operator. These screens can all have their own specific functionality and lay-out and are all controlled by one server. This gives you the option to manage for example messaged and translations centrally.

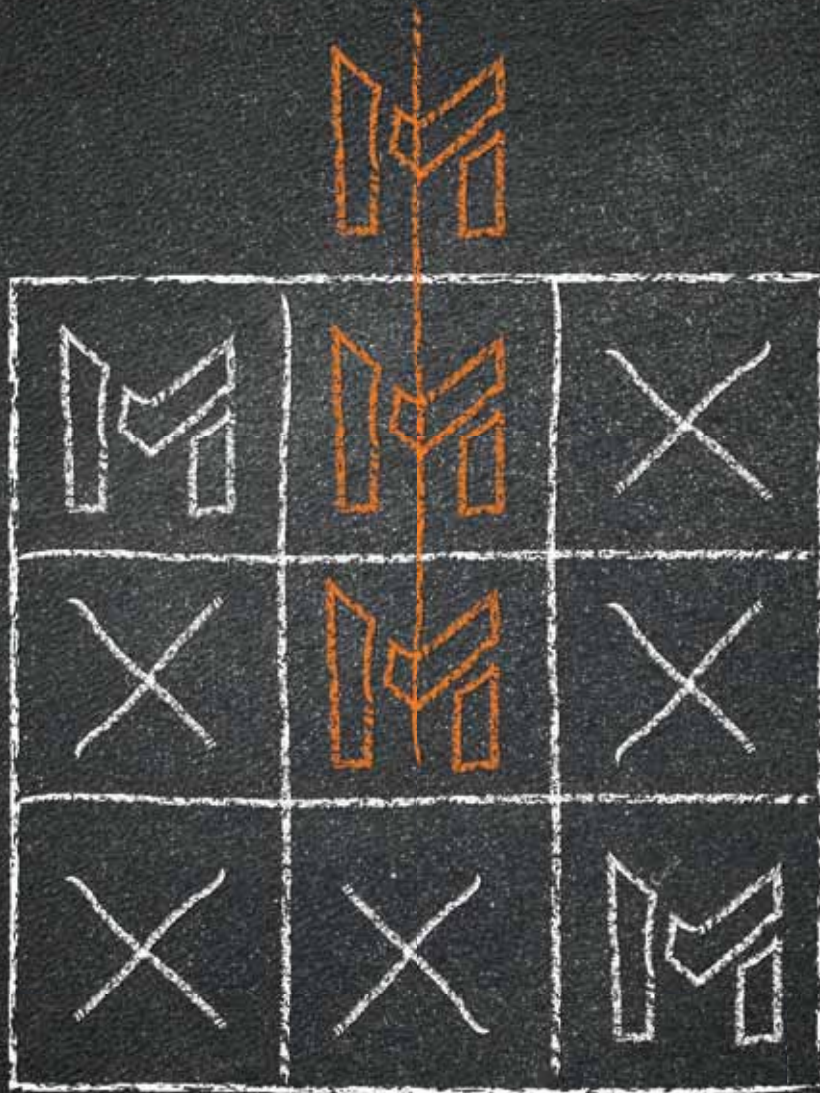
The configurable interface to customer MES systems can be used to exchange data, such as tire quality reports or performance reports, to the customer database.

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