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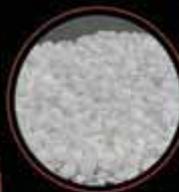
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EXPO 2020

Tire Technology Expo will celebrate its 20th birthday when it returns to the Deutsche Messe in Hannover, Germany, on February 25, 26, 27, 2020, with plans in place to ensure the show will be even bigger and better than previous years.

Expect more exhibitors, more product launches and manufacturing innovations, more expert conference speakers and more networking opportunities than ever before – including a spectacular gala dinner like no other!

The show remains Europe's most important international gathering of tire manufacturing experts, bringing together influential figures from across the industry. More than 5,000 visitors are expected to travel to Hannover for the world's largest gathering of tire design, development and manufacturing experts. The free-to-attend exhibition will be held across three halls, each filled with the latest in tire expertise and innovation.

Leading brands exhibiting their latest technologies include ExxonMobil, Siemens AG, VMI Tire, Rockwell Automation, Buss AG, Bosch Rexroth, Cimcorp and Mesnac. With over 300 exhibitors in total, visitors can expect to see all the latest equipment and materials covering the complete spectrum of the tire manufacturing process.

Meanwhile, the expo's prestigious conference will feature over 160 speakers from leading companies and institutions, and will highlight the issues currently facing the industry, as well as explore the trends set to dominate the tire business in the future.

Notable speakers include Frederic Biesse, tire performance analysis expert, Michelin; Giovanni Caputi-Gennaro, vehicle dynamics - tire development engineer, Automobili Lamborghini SpA; Hans Dorfi, director of digital

engineering, Bridgestone Americas; Jorge Lacayo-Pineda, materials evaluation expert, Continental Reifen Deutschland GmbH; and Mauro Martino, designer wheels and tires, Fiat Chrysler Automobiles.

Tire Technology Expo's renowned program of short courses has also been further enhanced for 2020, with all attendees receiving a certificate of approval for professional development issued from the Institute of Materials. In total, there are five courses to choose from: the Akron University Tire Mechanics Short Course; the Future Tire Regulations Review; the Computer Modeling Course; the Tire Reinforcing Materials, Applications and Fatigue Testing Course; and the Basic Rubber Compounding Course.

Expo attendees will also be treated to a spectacular 20th anniversary gala dinner, during which the Tire Technology International Awards for Innovation and Excellence will be presented in recognition of industry achievements over the past year. Categories include: Environmental Achievement of the Year, in recognition of environmental advances in the tire industry; Tire Technology of the Year, in recognition of important advances in technology; Tire Industry Supplier of the Year, in recognition of excellence by suppliers to the tire industry; Tire Manufacturing Innovation of the Year, in recognition of scientific and technological excellence in tire manufacturing; and Tire Manufacturer of the Year, in recognition of achievements by tire manufacturers.

Exhibition entrance is free, and registering online takes just a few minutes. For more information and to register for your free entry badge, please visit <https://www.tiretechnology-expo.com/en/index.php>



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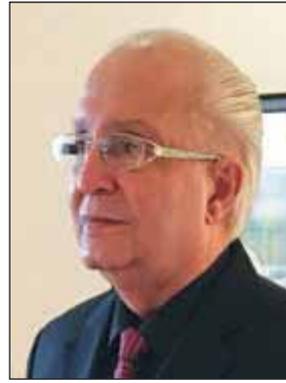
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The last few weeks have seen a lot of political turmoil in our home state of Maharashtra. None of the political parties have come out smelling like roses and have proved that ideology does not matter, but only power and money do. Maharashtra contributes 14% to India's GDP and one hopes that the three-party coalition of the Shiv Sena, NCP and the Congress will provide a stable government for the state, which is the country's financial capital.

India's GDP for the last quarter has plunged down to 4.5% officially, which means that it is possibly only 3.5% or less. The next quarter is expected to be even worse. Hardly a good sign for our target of a \$5 Trillion economy by 2025!

While the economy is in a very bad shape, the Central government in Delhi is still in no mood to implement much-needed major reforms or even to curb extremists, whose action damages India's image internationally, in addition to making life insecure for some minorities.

US President Donald Trump is inching closer towards impeachment, while the US economy is suffering from the effects of the trade war with China.

Our Cover Story features ATMA (Automotive Tyre Manufacturers' Association) India's Tire Association. It is possibly the only national tire association which had to fight from its very birth against well-entrenched multinationals (Dunlop & Firestone). It is to the credit of India's tire pioneers that ATMA survived and flourished. It has raised the profile of the Indian tire industry nationally and internationally. India manufactures all types of tires from the smallest

to the largest OTR tires and exports to over 120 countries. In the next five years, the Indian tire industry will rank 2nd globally after China.

The current ATMA Chairman K M Mammen, also Chairman & Managing Director of MRF Ltd., India's largest tire company, is proving himself to be a worthy successor to his illustrious father, the late Mammen Mapillai, one of the founders of ATMA. ATMA is also fortunate to have a very capable and experienced Director General Rajiv Budhraj and a finely tuned team.

Natural Rubber prices and local production remain low, leading to a demand for import of NR at lower import duty and a reversal of the damaging inverted imported duty structure.

China's biggest rubber exhibition "RubberTech China" held in September was another great success, thanks to the excellent organisation of China United Rubber Corporation (CURC).

I hope that our readers will find Smither's paper on the specialised synthetic rubber market outlook interesting. On the technological front, China's MESNAC continues its progress with the launch of its smart tire-making systems and equipments.

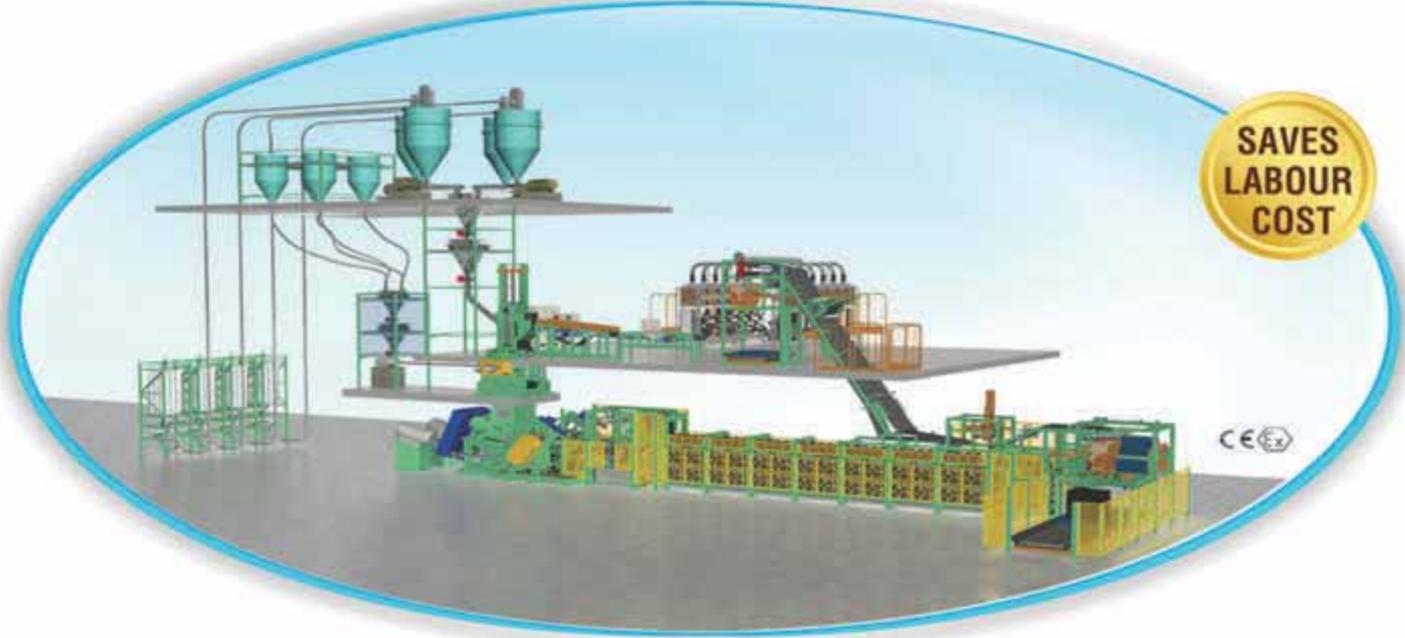
As the year draws to a close, here's wishing everyone Merry Christmas and a very happy, prosperous and successful New Year.

Aida Malik

M Noorani



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K M Mammen, Chairman, ATMA (& CMD, MRF Ltd.) in an interview with M Noorani

Can you please tell us more about the formation of ATMA?

ATMA came up in 1975 as the organised face of the Indian tyre industry which was contributing handsomely to the development of India as a young democracy. For fast-tracking growth, development of tyre industry, an integral part of the transport sector, was important. Reputed business houses and top MNCs joined hands to form ATMA to safeguard the interests of tyre sector and also get the sector its due as a lead manufacturing segment. It was the long-term vision and commitment of those founders that India soon became self-dependent in manufacturing all categories of tires.

Who were the original founders?

The first meeting of the founders of the Automotive Tyre Manufacturers' Association took place on June 4, 1975 at Hotel Taj Mahal, Mumbai. Parks Chrestman (Goodyear) and G C Guglielmino (Ceat) were elected as Chairman and the Vice Chairman of the Committee respectively.

The following eight tyre manufacturing companies were admitted as members of ATMA;

- 1) Ceat Tyres
- 2) Dunlop
- 3) Firestone
- 4) Goodyear
- 5) India Tyres
- 6) Inchek
- 7) Madras Rubber Factory (MRF)
- 8) Premier Tyres

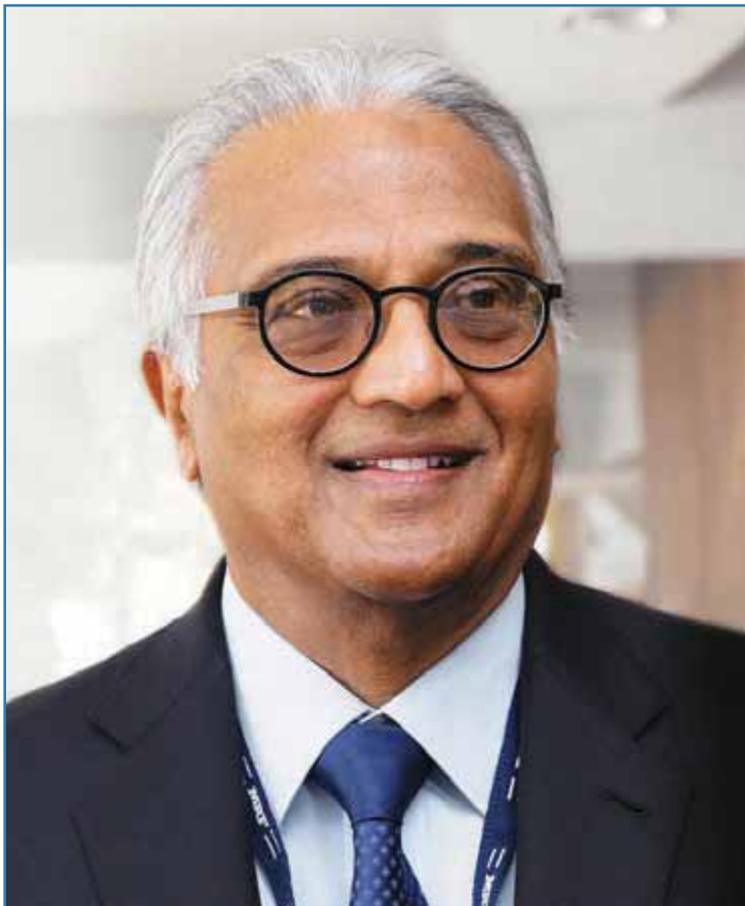
Since then, which other companies have become members of ATMA?

The following became ATMA members in later years:

1	Apollo Tyres	1976
2	JK Tyre	1980
3	Birla Tyres	1991
4	Bridgestone	2007
5	TVS Srichakra	2010
6	Continental	2011
7	Michelin	2014
8	Yokohama	2015

Do you envisage accepting small tyre companies as members ?

ATMA Managing Committee takes a decision on the basis of merit. Size is a criterion, but not the only one.



Credibility of an organisation, its practices, vision and global competitiveness are some of the factors taken into consideration.

ATMA plays a very big role in representing the interest of tyre manufacturers? What have been some of the more significant developments/initiatives taken by ATMA during the last five years?

ATMA has emerged as a credible and strong voice of the industry in India. It is a reputable ally of the Government in policy formulation regarding mobility issues. For its thought leadership and research prowess, ATMA is often invited by the Government and industry chambers for deliberations and for suggesting policy framework for the industry.

Over the last five years, ATMA has intensified its engagement with the Government. This is reflected in issuance of some of the key policy decisions including Anti-dumping duty on indiscriminate imports and other safeguard measures implemented by the Government,

which have levelled the playing field for Indian companies.

Tyre Care & Safety has been another significant initiative taken by ATMA to sensitise motorists about this critical part of road safety. Ministry of Road Transport & Highways (MoRTH) has recognised and supported ATMA's efforts for making roads safer. Leading corporates of the country including Indian Oil, Honda Cars, Infosys Technologies, Pipavav Port etc have joined hands with ATMA and several campaigns have been held in different campuses of these companies employing thousands of people in all major cities in the country. Head of Mobility vertical at NITI Aayog recently unveiled a poster on creating awareness on Tread Wear Indicator (TWI) prepared at the behest of MoRTH.

Currently, ATMA has launched a nation-wide campaign to reach out to school and college students across the country so as to sensitise youngsters on road and tire safety and being an influencer in making family travel safer. Several leading schools/ universities in the country are coming aboard.

Having started last year, ATMA's Annual Convention is emerging as a robust platform for redefining the tire Industry – Auto OEM's relationship much in the same way as ATMA Partners Summit has been instrumental in bringing the tire industry and its raw material partners together so as to work towards future-ready products.

Skilling especially skilling of tire mechanics and rubber growers is another area that is a priority for ATMA and is being driven by Rubber Skill Development Council (RSDC) founded by ATMA with other stakeholders. There are over 10 lakh small rubber growers and thousands of tire mechanics dotting the length & breadth of the country. Both these constituencies need skilling push to make the Indian tire industry even more competitive.

How close is the interaction between ATMA and SIAM?

Both ATMA and SIAM are part of the same value chain, hence they need to have closer interaction. ATMA's Annual Convention, the second edition of which was held earlier this year, is providing a formal platform for ATMA and SIAM to come together and deliberate on the future roadmap.

It is a matter of pride that most of the major Indian tire companies (MRF, JK, Apollo and Ceat) are relying on their own technology to manufacture tires compared to the best in the world. Could some of these companies co-operate with each other to further enhance the value of indigenous research?

The Indian tire industry is converging with the world and a strong research base is important to be a force to reckon with globally. Each tire company is involved in proprietary research so as to deliver better products



The Indian tire Industry is projected to double in size to nearly \$20 billion by 2030

conforming to the tenets of healthy competition. However, best practices are shared within ATMA with members of Technology, Environment, Safety & Standards (TESS) Group drawn from all the member companies. Not only within India, ATMA and its technical arm, Indian Tyre Technical Advisory Committee (ITTAC), hold regular parleys with international counterparts such as ETRMA/ ETRTO and JATMA. Such deliberations provide a direction to the research in consonance with the changing technologies and consumer expectations.

Would it be a good idea for ATMA to consider setting up its own R & D Centre?

ATMA's role is to provide a robust platform and a conducive environment that facilitates the functioning of its members including in the domain of research.

How regular is the interaction between ATMA and tire Associations of USA, the EU, Japan and South Korea?

Since the Indian tire industry is fast converging with the world in terms of products, practices and services, it is incumbent on the Indian tire industry to have regular liaison with its counterparts worldwide. Auto sector scenario is changing fast with the launch of e-vehicles, autonomous vehicles, shared vehicles etc. The tire industry needs to respond to these challenges together. Sharing and knowledge exchange sessions therefore become all the more important.

The participation of Rajiv Budhraj, your Director General at various International conferences has undoubtedly raised the profile of ATMA. Would you consider having an International tire conference in India at least once every two or three years with the participation of major international tire companies and tire associations?

All the major tire companies are already present in India. Out of top 10 tire companies globally, six are not only present but manufacturing in India too. Five of these are members of ATMA. All the events by ATMA including ATMA Partners Summit and ATMA Convention have significant international representation of companies and associations.

Can you share with us your vision for ATMA for the next 10 years?

Indian tire companies are moving up the charts in international rankings. While Indian tire companies are becoming part of global supply chains, ATMA is also acquiring global veneer. In the next 10 years, the Indian tire industry is projected to grow at least double in size to nearly \$20 billion. ATMA as its face will also grow in size and scale and in several respects be the initiator and be at the vanguard of global change.

ATMA touches new horizons under Chairman K M Mammen



During the 1970s, India was a relatively young democracy with a growing population, which needed to develop a viable tire industry with a long-term vision. These forces led to the formation of the Automotive Tyre Manufacturers' Association (ATMA) in 1975. Amongst the entrepreneurs who had started tire manufacturing in the country was the late K M Mammen Mappillai, one of the key founders of ATMA and the revered father of current ATMA Chairman K M Mammen, the Chairman and Managing Director of the country's leading tire maker, MRF Ltd.

K M Mammen Mappillai was a visionary, a forthright and dynamic entrepreneur, who became a highly respected leader of the Indian tire industry. As the domestic tire industry struggled to find a foothold in the country, K M Mammen Mappillai came into direct conflict with entrenched multinationals such as Dunlop and Goodyear. Due to his assured handling of these companies and insistence that Indian tire manufactures get their due, the country's tire industry owes a debt of gratitude to this giant amongst men.

Nation-building requires a robust logistics and transport network and India needed a reliable and world-class tire industry. ATMA came into existence to ensure the Indian tire industry had the support it needed to grow and a framework for maintaining standards. The association was to safeguard the interests of India's tire industry. Over the decades, the

role that ATMA has played in promoting the growth of the country's tire industry cannot be overemphasised.

ATMA is currently amongst the most active national industry bodies in India and represents the Rs 65,000 crore (\$9 billion) automotive tire industry. Its membership is made up of 11 large tire companies, comprising a mix of Indian and international tire majors and representing over 90% of tires manufactured in the country. Current ATMA members include Apollo Tyres, Birla Tyres, Bridgestone India, Ceat, Continental India, Goodyear India, JK Tyre & Industries, Michelin, MRF, TVS Tyres and Yokohama.

K M Mammen, Chairman of ATMA, notes that the Indian tire industry is increasingly converging with the world's best in terms of practices, product quality and R&D. ATMA has been promoting the global face of the industry, which today boasts state-of-the-art radial tire manufacturing facilities that vie with the best. As a result, K M Mammen said, auto OEMs in India have practically stopped importing tires and are sourcing from domestic manufacturers. Breaking with the past, international vehicle majors have also been using Indian-made tires on their vehicles, signaling greater confidence in the quality of the country's manufacturing. "Indian tires are being exported to over 100 countries in the world including some of the most discerning markets," added K M Mammen.

India's auto industry accounts for 8% of the country's



Late K M Mammen Mappillai - One of ATMA's Founders



K M Mammen, ATMA Chairman & CMD of MRF Ltd

GDP. The tire industry is a big constituent of the sector and will help the country hit its target of growing the present \$1 trillion economy to \$5 trillion, by 2025.

The nation's tire industry has the potential to export even more of its product, emphasises the Association, provided it can obtain natural rubber (NR) at reasonable prices and also provided the present inverted duty structure for raw materials is corrected. Being the leading organisation of the Indian tire industry, ATMA is very conscious of the leadership role it is poised to play in the emerging global scenario. India is a preferred destination for new brownfield and greenfield investments in tire manufacturing, with six of the top 10

Eight tire companies became the inaugural members of ATMA in 1975

▶ Ceat Tyres
▶ Dunlop
▶ Firestone
▶ Goodyear
▶ India Tyres
▶ Inchek
▶ Madras Rubber Factory (MRF)
▶ Premier Tyres

Later, on the following tire companies became members:

▶ Apollo Tyres	1976
▶ JK Tire	1980
▶ Birla Tyres	1991
▶ Bridgestone	2007
▶ TVS Srichakra	2010
▶ Continental	2011
▶ Michelin	2014
▶ Yokohama	2015

CEOs of Current ATMA Committee Members

- ▶ Onkar S. Kanwar (CMD, **Apollo** Tyres Ltd.)
- ▶ Neeraj Kanwar (VCMD, **Apollo** Tyres Ltd.)
- ▶ Satish Sharma (President, APMEA, **Apollo** Tyres Ltd.)
- ▶ President (**Birla** Tyres)
- ▶ Parag Satpute (MD, **Bridgestone** India Pvt. Ltd.)
- ▶ Anant Goenka (MD, **Ceat** Ltd.)
- ▶ Claude d'Gama Rose (MD, **Continental** India Ltd.)
- ▶ Rajeesh Anand (CMD, **Goodyear** India Ltd.)
- ▶ Dr. Raghupati Singhania (CMD, **JK** Tyre & Industries Ltd.)
- ▶ Marc Pasquet (President, AIM, **Michelin** India Tyres Pvt. Ltd.)
- ▶ P Vijayaraghavan (Director, **TVS** Srichakra Ltd.)
- ▶ Kazuya Miyazawa (MD & Plant Head, **Yokohama** India Pvt. Ltd.)

global tire majors manufacturing in the country, making it one of the most competitive markets in the world.

Rajiv Budhraja is one of the most well-known faces in the Indian Rubber & Tyre industry. Rajiv has a vast experience of over 35 years having held prominent positions in apex industry associations such as PHD Chamber, Confederation of Export Units and Indian Paper Manufacturers' Association prior to joining ATMA in 1997. Rajiv is a prolific writer having penned numerous articles in mainline media in areas such as economy, industry and plantations besides being the editor of Traction, the industry newsletter. As a spokesperson, he has been articulating the case of the tire industry as governing body member of high-profile bodies as The Rubber Board of India, Rubber Skill Development Council and Indian Rubber Manufacturers Research Association.

Rajiv Budhraja, Director General of ATMA under the direction of the Chairman and Managing Committee members, guides the destiny of ATMA in a most efficient manner with his its very active participation at international conferences. He has further raised a profile and high reputation of ATMA.

Indian tire companies are holding their own amidst rising competition. The range of tires being manufactured by the domestic tire manufacturers is amongst the widest in the world, ranging from bullock cart tires to fighter jet tires. The



Rajiv Budhraja
Director General, ATMA

R&D spend of the nation's tire industry has gone up by four times in the last decade and currently matches the average R&D spend of tire companies across the world.

The Association points out that in the current global scenario, the focus of tire manufacturing is shifting to Asia. India, with a stable democracy, mature manufacturing operations, linkages with global supply-chains and verdant natural rubber plantations has the required conditions in place to attain pole position.

ATMA's vision is to make the most of the current window of opportunity and to boost growth through effective Industry-Stakeholder-Government collaboration. Recent months have seen the Association undertaking several bold initiatives which have helped forge new relationships, strengthening the value chain of which the Tire Industry is an important part.

At ATMA's Annual Convention, the flagship event of the Association held in New Delhi in March 2019, focused on redefining the partnership between the tire industry and Auto OEMs, and brought together a large number of Auto OEMs and tire companies on one platform.

Explaining that meeting new regulatory framework is a major issue in India, Mammen pointed out that the country will soon make a transition to BSVI emission standards from the current BSIV- skipping BSV altogether. Meeting such stiff regulatory stance requires a concerted approach, which is what the country's Auto OEMs and tire partners are engaged in doing. He added that new technologies including electric mobility, shared mobility etc call for closer

collaboration.

ATMA can rightfully claim that India's automobile revolution has been perfectly matched by enhanced capacities and R&D in the tire manufacturing sector. Tire production in the country has grown at a robust rate, from 80 million units to 180 million units in the last 10 years. India is today home to four of the 30 largest tire companies in the world- second only to China.

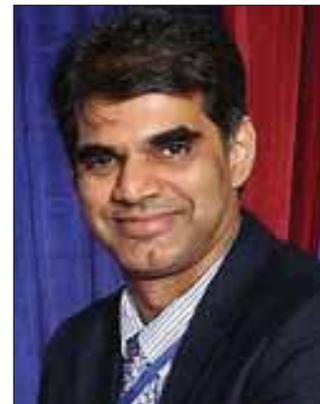
ATMA Partners' Summit

There is currently major research underway regarding the use of raw materials which have a low carbon footprint. The Association has created a platform called the ATMA Partners Summit, where the tire industry and raw material partners meet and discuss ways and methods to make the entire industry sustainable and competitive. According to ATMA, these sessions have been very stimulating and the symbiotic relationship between the industry and supply chain partners has been redefined. New Delhi was the venue in October 2019 for the ATMA Partners Summit 2019

Securing Natural Rubber Supplies

ATMA has undertaken new initiatives to secure NR supplies on a sustainable basis. NR accounts for 40% of the total production cost of a tire in India. The country is the world's second-largest NR consumer, after China. Meanwhile, India's rank has slipped to the 6th in the world, for the production of NR. The domestic NR production / consumption gap is widening. The southern state of Kerala, which accounts for more than 80% of the country's NR production in the country has reached the saturation stage in terms of the area covered (though there is still scope to boost productivity in Kerala).

India's north east region has great, largely untapped potential for NR production. ATMA has already sent a Study Mission to the north east of the country to evaluate the NR potential and has submitted a report to the Government of India. The



Rubber Board Chairman Dr Raghavan

ATMA Study Mission has also interacted with the Chief Minister of Tripura, India's second-largest NR producing state.

An optimally productive rubber plantation sector is also in the best interests of India's Tire Industry, and it has demonstrated its commitment towards this objective by aligning with Rubber Board of India to improve the quality of the NR produced. This matter was discussed at a detailed meeting between the ATMA Managing Committee and Dr Raghavan, Chairman of the Rubber Board, in July 2019.

Tire Safety

Tire safety has always been a focus area for ATMA and the Association has focused strongly on a tire safety drive of late. Major school and university connect programmes have been launched, which aim at raising awareness of tire safety. ATMA has joined hands with organisations with large commercial fleets for the training of drivers in Tire Safety. (Note appended)

ATMA Convention 2019

ATMA's Annual Convention 2019 turned the spotlight on a closer collaboration between Auto OEMs and the tire



(L-R) Rajiv Budhraj (DG ATMA), K M Mammen (Chairman ATMA), Anil Srivastava (Principal Consultant NITI Aayog), Anshuman Singhania (Vice Chairman ATMA), Roopesh R (Convener, ATMA SCR Group)

industry, in order to address the emerging realities of mobility. Held in New Delhi in March 2019, the Convention brought together automotive and tire industry leaders, top policy makers, government officials, thought leaders and consultants.

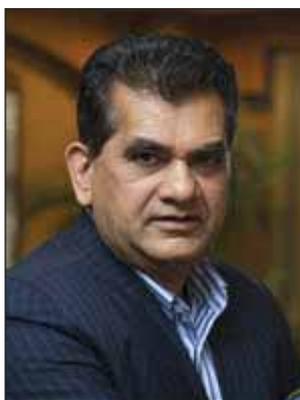
Speaking through video conferencing, Union Minister of Road Transport & Highways (MoRTH), Nitin Gadkari stated that the Indian tire industry was creating new landmarks in domestic growth, and that its exports also contributed to the growing economy. He urged the industry to develop new technologies, with a single-minded focus on road safety, which is the Government's top priority. Gadkari urged the industry to undertake cooperation with the MoRTH in running training institutes for drivers and providing motorists with the skills to improve road safety.

Speaking on the occasion, Chief Guest Inaugural Session Vikram S Kirloskar, President Automotive Research Association of India (ARAI) and Vice Chairman, Toyota Kirloskar Motor said, "If the economy grows, mobility will increase and if mobility increases, economy will grow. There is large headroom for growth in India. However, there are three major challenges facing Auto and Tire industry – Energy security of the country, Environment issues that we are facing and the third is the challenge of "Make in India". The Auto and Tire sectors need to collaborate in meeting all three challenges".

In a special session of the ATMA Managing Committee, which was held on the sidelines of the Annual Convention, the CEO of NITI Aayog, Amitabh Kant, expressed confidence over the progress made by the Indian Tire Industry, and urged members to continue to focus on manufacturing excellence, and to lead the world in size and scale.

ATMA Partners Summit 2019: Tire Industry Supply Chain in Focus

ATMA Partners' Summit 2019, the 4th edition of the iconic tire industry event, brought together the senior management



Amitabh Kant, CEO, NITI Aayog



The Chief Guest on the occasion, Anil Srivastava Principal Consultant & Mission Director, Mission on Transformative Mobility, NITI Aayog

of India's Tire Industry and its raw material partners in the largest numbers seen so far. This year's Partners Summit assumed all the more importance, as it was focused on key ingredients such as Carbon Black, Zinc Oxide, Rubber Chemicals and Silica.

The ATMA Partners Summit called out for greater engagement between India's Tire Industry and its raw material partners, in order to collectively build on a more sustainable ecosystem and to respond to emerging challenges.

The Chief Guest at the Partners Summit, Anil Srivastava, Principal Consultant and Mission Director, Mission on Transformative Mobility, NITI Aayog, said, "India's growth story is intact. India has maintained its 'world's fastest-growing economy' tag according to a recent report by International Monetary Fund (IMF). We aspire to be a \$5 trillion economy by 2024-25. India is the 4th largest automobile manufacturer in the world. We need to move from a consumption-led economy to a manufacturing economy. Value addition is the key to become a manufacturing economy which will lead to job creation and improve ease of doing business. India's size and scale is an opportunity to be tapped"

In his keynote address at the Summit, K M Mammen, Chairman ATMA stated "ATMA Partners Summit is unlike any other industry conclave. The presence of so many raw material partners exchanging notes with Tire Industry so as to make the entire sector globally competitive, makes Partners Summit a special one which has few parallels in Indian industry." He stated that the Indian tire industry urgently needs to take another look at materials and processes and to bring in new technologies to achieve sustainable manufacturing. "The collaboration between the industry and raw material partners assumes all the more importance in this regard," K M Mammen urged.

Industry speakers and panelists travelled from all across India to take part in the Summit and add to the width and depth of deliberations. Four experts made presentations: Kaushik Roy, Managing Director, Phillips Carbon Black Ltd., on Carbon Black; Bhuwan Purohit, WTD & COO Rubamin Ltd., on Zinc Oxide; R M Gadgil, President Marketing NOCIL Ltd. on Rubber Chemicals and Darshak Shah, Managing Director, Madhu Silica, on Silica.

Aside from members of ATMA, top managers of a host of raw material partners, both national and international, were present at the Summit. Some of these companies included Phillips Carbon, Birla Carbon, Orion,



K M Mammen, Chairman ATMA



Training of ISRPL drivers



Continental Carbon, Rubamin, NOCIL, Acmechem, TWC, OCCL, Madhu Silica, Gujarat Multi Gas Base Chemicals, SOLVAY and Speciality Silica.

ATMA-ITTAC Commercial Drivers Training Programme on Tire Safety

ATMA recently started collaborating with a range of organisations, including reputed majors such as Indian Oil, ISRPL and Pipavav Port, which have a large supply chain and logistics staff in dire need of training in tire safety.

This extensive training helps drivers understand key aspects related to tires, including tires and their parts, the role of tires and steps for tire safety. Special training modules, including in vernacular languages, have been prepared for commercial drivers' training.

"Tire Matters" Campaign to Spread Tire Safety in schools

Elevating the Tire Safety drive to yet another level, ATMA has launched a year-long campaign titled "Tyre Matters" which aims at spreading Road and Tire Safety in schools. During school activity, an interactive session is conducted where students are shown ATMA Tire Safety animation films. All students take a pledge to impress upon their parents the importance of checking the tire health of their vehicles. A quiz on road safety is held, and prizes awarded to winning students. A colouring competition on Road & Tire Safety was also held, to reinforce the concept amongst children. They were given the posters to take home and, with the help of their parents, took part in a slogan competition on Road & Tire Safety. Finally, Tire Games were held.

The Future for ATMA

Since 2000, it was said that India had reached the take-off stage. It is now obvious that the country has surpassed this stage and is now a \$1 trillion economy. With an output of 180 million tires, the Indian tire industry is among the largest in the world and the country has climbed the ranks to become the 4th largest global auto manufacturer. As these impressive

statistics suggest, India's economy, auto sector and tire industry are in a strong position to expand further and elevate the country's standing in the world. ATMA is set to guide the fortunes of the country's juggernaut of a tire industry as it continues to consolidate its global footprint and take domestic production to the next level.

Under the inspiring leadership of current ATMA Chairman KM Mammen, ATMA will ensure that the potential of India's growth is fulfilled.



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Mesnac launches smart tire-making systems and equipment

● Mesnac has announced the launch of three smart tire-making systems and three new machines at its headquarters in Qingdao, Shandong on Oct 21. The systems, all for tire-building machines, include a development system, a mixed reality system for maintenance and a big data analysis system for quality prediction, said a company press release. Branded ROC, the building machine development system comprises standard modules that can streamline the customisation process based on clients' needs.

Mesnac said it has also set up a lab for the system to test externally purchased components before finalising the design. The mixed reality system employs wearables to



Mesnac executives celebrate the product launch (l to r): Li Huijin, general manager, Greater China, sales centre; Liu Yuncheng, deputy dean, Mesnac Research Institute; Yang Huili, general manager, Passenger Car Tire Building department; Wu Shoutao, general manager, Truck and Bus/Off-the-road Tire Building department

Bridgestone opens OTR plant in Thailand

● Bridgestone Corp. has opened an off-the-road (OTR) tire production plant in Rayong Province, Thailand, four years behind schedule. The Japanese tire maker disclosed its plans to build the Euro 467-million factory in 2012, with production scheduled for first half of 2015. The plant was then to ramp up to 85 tonnes per day by 2019. However, in a statement on Oct 25, Bridgestone said the facility had a nameplate capacity of 35 tonnes per day, producing radial tires for construction and mining vehicles.

The unit is operated by Bridgestone Specialty Tire

Manufacturing (Thailand) Co. Ltd and spans an area of 870,000 square metres. The new factory will function as the first Bridgestone unit producing OTR tires in an Asian country other than Japan, the tire maker noted. With the new plant, Bridgestone expects to build a flexible production and supply system to be able to respond to medium- to long-term changes in demand.

Bridgestone also operates a radial truck and bus tire production plant in Chonburi, Thailand, with a capacity of 8000 unit/day, according to ERJ's Global Tire Report 2018.



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"The technology will soon cover all of Mesnac's product line," The 'big data' system is designed to generate models for correlation analysis, using classical data mining and DNN machine learning.

This capability enables tire-building machines to predict product quality based on correlation between green tire quality and dynamic balance uniformity.

Mesnac rolled out three machines at the launch event, including the O-PRO truck and bus tire-building machine, which specialises in customised tires ranging from 20" to 25" in size. The company claims to have made breakthrough in green-tire positioning and tread winding, raising productivity by 50% compared with Mesnac's older models. The small-degree fabric cutting machine has improved its performance in noise and vibration reduction compared with the company's older models. The system is equipped with synchronised rectification and closed-loop control technologies, and has 24,000 metre per shift capacity.

The AT-3 truck and bus tire bead filler production line holds 44 patents and has raised its annual capacity from 1 million unit to 1.4 million unit compared with older models. Mesnac aims to become the world's top building machine maker over the next three to five years.

ETRMA publishes two reports on tire & road particles

● The European Tyre and Rubber Manufacturers' Association (ETRMA) has published two report outlining actions needed to address the tire & road wear particles (TRWP) issue. The reports followed a year-long collaboration under the European TRWP Platform, an initiative of ETRMA which brought together the main organisations related to TRWP well as research institutes and EU policy makers. The new reports highlight potential mitigation measures to reduce generation and transportation of TRWP and call for additional research where knowledge gaps exist. The "way forward report"



Fazilet Cinaralp, secretary general, ETRMA



explores the most promising ways of mitigating the environmental impact of TRWP that were jointly identified during meetings of the platform, according to ETRMA. This includes measures to address TRWP generation and TRWP capture and removal. The document also provides recommendations and pathways for continued cross-sector collaboration.

The second report, "scientific report on TRWP in the aquatic environment" was prepared by Professor Dr. Martin Jekel of TU Berlin. The research summarises the existing scientific research and knowledge gaps on TRWP from generation to freshwater systems based on the available literature. This review also identifies several future avenues for research. "The topic of TRWP is very complex and our knowledge is still very limited," said Dr. Jekel commenting on the report. Jekel expects considerable progress to be achieved in the coming years in the understanding of TRWP, as several on-going research projects will help support or reject several hypotheses or assumptions.

"They will contribute to the evaluation of the effects of TRWP in the environment and will be the basis

for decisions on optional countermeasures," he said.

TRWP refers to small particles, from the tire and the road, formed during normal driving conditions as a result of the friction between the two surfaces.

"As a sector, we are faced with the complex challenge of reducing the generation of tire and road wear particles without impacting the important role tires play in road safety and mobility," said Fazilet Cinaralp, secretary general of ETRMA.

The issue, according to Cinaralp, can only be addressed by bringing all parties involved together for an open dialogue on potential solutions and collaborations.

Bridgestone cements new route to tire circular economy

● Bridgestone Corp. is optimising technology for using rubber granulate from scrap tires as a cement additive in geoenvironmental products, a company manager reported at the recent IRC 2019 conference. Rubber granulate has been found to offer an effective means of improving the ductility of cement treated clay while still maintaining its very low permeability, Ashoke Karmokar said at the event held on Sept 3-5 in London. The use of rubberised cement in civil and geotechnical engineering applications, he suggested, could represent a significant outlet for scrap tires – thereby, helping the industry to meet its circular-economy goals. A particular target is the use of dredged clay as sealing/filling material in geotechnical engineering applications, which is usually treated with cement for to increase its strength and reduce permeability. However, due to embrittlement following curing, cement-treated clays cannot follow the contour of structures under deformation:

Michelin to shut truck tire plant in France by the end of 2020

● Group Michelin has notified workers at its La Roche-sur-Yon, France, truck tire plant that it intends to close the 47-year-old factory by the end of 2020.

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Michelin cited a “structural transformation” of the premium truck tire market, both in Europe and overseas, for its decision to close the factory. Michelin said it is offering each of the plant’s 619 workers the opportunity to continue working for the company.

This is the second plant closing announced by Michelin in the past several weeks. In late September, the company disclosed plans to shut a plant in Hallstadt, Germany, which focuses on the production of smaller rim-size passenger tires, by early 2021, affecting 858 employees.



It said the structural transformation affecting truck tires includes a European market with no growth expectations, intense competition and an expanding “entry-level” brand segment.

Michelin committed \$132 million in 2013 to transform the plant – consolidating truck tire capacity from another plant in Joue-les-Tours, France – but now concedes that the effort did not achieve the desired improvements in productivity.

Doublestar signs agreement for tire JV in Pakistan

● Pakistan’s tire trader MSD Tire & Rubber Company and Doublestar signed an agreement on November 13. As part of the agreement, the country’s leading bus operator Daewoo Express will build a joint venture tire plant in Pakistan with Doublestar of China.

The plant has 7 million unit annual capacity and will become the largest in Pakistan when fully on-stream. Doublestar will provide technical support and equipment.

LongMarch, a Chinese tire maker based in Chaoyang, Liaoning province, has also announced its plan for a Pakistan plant earlier this year.

Phase one of the plant, with \$220 million investment earmarked, has annual capacity for 1 million unit truck and bus tires and 3 million unit passenger car tires.



Phase one is scheduled to start operation by the end of 2021. Tires made at the plant will supply to local consumers as well as several regions in South Asia and Central Asia.

ETRMA: Europe tire market ‘stabilising’ despite Q3 results

● European replacement tire sales fell in all categories over the three months till end of September, the latest quarterly figures from the European Tyre and Rubber Manufacturers’ Association (ETRMA) show. “But, despite the negative third quarter, the trends reported by ETRMA members indicated a general stabilisation of the market”.

Passenger car tire sales continued to fall in the third quarter, down 2% year-on-year to 58.4 million units. Over the nine months to end of September, the figure dropped 3% to 159.4 million units, compared to the same period the previous year. After an encouraging second-quarter

recovery, truck tire replacement sales decreased 2% to 2.9 million units – though, overall results for the first nine months remained positive, up 3% year-on-year to 8.1 million units. Agricultural tire sales were in steep decline in the third quarter, with a sharp 8% fall to 273,000 units. Over the nine-month period, the figure registered a 6% drop to 954,000 units. For the first time this year, motorcycle tire sales also decreased during the quarter. Unit sales of motorcycle tires fell 2% year-on-year to 1.8 million in the three months to 30 Sept. However, the overall results for the first nine months of the year show a 2% improvement to 7.9 million units compared to last year.

Continental restructuring will affect 20,000 jobs globally

● Continental A.G. is set to cut up to 20,000 jobs, including some tire-related positions, by 2029, as part of its newly-developed Strategy 2030. The roadmap involves a so-called “transformation 2019–2029



structural programme," which aims to increase efficiency and productivity through a turnaround in the organisation and portfolio.

Conti said it expects the restructuring will result in roughly \$1.2 billion in costs but eventually will yield \$550 million in reduced annual operating costs.

The company will cease the production of truck tires at its plant in Petaling Jaya, Malaysia, by year-end, affecting 270 employees. Operational since 1963 and acquired by Conti in 2003, the Malaysian plant also makes agricultural, earthmover and industrial tires.

Despite the cuts at the Malaysian plant, the new strategy pledges further investments in the tire division that it expects to foster organic growth in its tire business with the goal of becoming "one of the top three suppliers worldwide."

Between 2011 and 2018,

Continental invested more than \$1.2 billion in expanding its tire production capacity worldwide. The restructuring measure aims to strengthen the company's competitiveness over the long term by focusing on electric mobility and digital solutions, Conti said.

Conti's New Hybrid Agricultural Tire

● As it continues its focus on intelligent tires with a view to zero accidents, keeping in mind the varied working environment of farmers, Continental has launched the new VF TractorMaster Hybrid with intelligent sensors for digital tire monitoring. The system was introduced at Agritechnica 2019, the world's leading trade fair for agricultural machinery, held in November 2019 in Hanover, Germany.

The Continental VF TractorMaster Hybrid tires have been developed in



Lousado, Portugal, in close cooperation with other European research and development units. They are designed to provide operators with the technology to efficiently adjust the pressure, in line with the task being performed. These very high flexion (VF) tires feature a new and unique hybrid tread pattern that is designed to offer traction in the field and be more comfortable on the road.

The structure of the Continental VF TractorMaster Hybrid tire carcass is more resistant than standard tires, so it can operate at lower pressures in the field and at higher speeds on the road, while carrying the same load. This is particularly significant, as underinflated tires on the road increase fuel consumption, whilst overinflated tires in the field lead to increased soil compaction.

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Pirelli's new cyber tire

● The Italian tire giant Pirelli claims it is the world's first tire company to transmit information detected by intelligent tires regarding the road surface, via the 5G network. The company has launched what is called the "World-first 5G enhanced ADAS (Advanced Driver Assistance Systems) services.

The system was demonstrated during the 5G Path of Vehicle-to-Everything Communication event organized in Turin by 5GAA – Automotive Association, of which Pirelli is a member.

Tire safety awareness initiative in India by ATMA and Indian Oil

● An initiative aimed at raising awareness amongst motorists about tire safety across the country has been started by the Indian tire industry-represented by ATMA (Automotive Tyre Manufacturers Association), which has tied up with the state-



owned oil and gas giant, Indian Oil. ATMA will be interacting with motorists visiting Indian Oil retail outlets (ROs) across the country, to raise awareness about tire safety. The ambitious drive will be spearheaded by the technical wing of the tire industry – the Indian Tyre Technical Advisory Committee (ITTAC).

New EU tire labelling system will generate huge energy savings

● In November, the EU Parliament, Council and Commission arrived at an agreement regarding tire labelling, in order to encourage consumers to make better energy-saving choices.

The new agreement will improve and

Bridgestone to commercialise new, high strength rubber polymer

● Bridgestone Corporation announced the development of the world's first polymer to bond rubber and resins at the molecular level back in May, 2018. The Japanese tire giant said the new polymer features unprecedented durability with crack resistance that is more than five times higher, abrasion resistance that is more than 2.5 times higher, and tensile strength that is more than 1.5 times higher than natural rubber (NR), which itself has higher destruction resistance than common synthetic rubber (SR).

This unique polymer has now been named SUSYM. Bridgestone aims to increase recognition of this polymer and to encourage its use as a next-generation polymer material in various fields even beyond its use as a tire raw material.

SUSYM high strength rubber is a hybrid material to bond SR components such as butadiene and isoprene, with resin components such as ethylene, at the molecular level, by using Bridgestone's proprietary novel gadolinium (Gd) catalyst (via copolymerization). The new polymer features the high levels of durability and resistance found in conventional rubber, along with substantially higher levels of performance with regard to puncture resistance; fixability (recyclability, repairability) and low-temperature impact resistance. It is also recyclable.

Bridgestone plans to proceed with the R&D of applying the benefits of SUSYM to various fields, while collaborating with a range of companies and organisations.

A concept tire utilising numerous SUSYM functions and materials was exhibited at the Tokyo Motor Show held in late 2019.

strengthen current regulations, making the labelling of tires more visible and accurate. There will also be improved enforcement and surveillance. The regulation will be applied from May 1, 2021.

Between 2014 and 2017, energy consumption in road transport in the EU rose by 5.6%. Tire resistance accounts for 20 to 30% of their fuel consumption. The EU parliament stressed the importance of clear labelling which would allow consumers to make better environmental choices, with the hope that the new labelling system will lead to energy savings in the region equivalent to taking 4 million cars off the roads every year.

Swiss researchers study release of rubber pollution from tires into the environment

● A team from the Swiss Federal Laboratories for Materials Science and Technology (EMPA) recently revealed their discovery that around 200,000 tons of micro-rubber – tiny articles from tire abrasion – are polluting the environment in Switzerland.

"The magnitude of the released micro-rubber is on another level than that of microplastics – it is an astonishing finding when we were finally able to compare the magnitude of the different flows," according to the author of the study Bernd

Nowack.

Due to the wear and tear of tires on the road, small particles get skimmed off and land in the road or whirl into the air. On an average, a Swiss passenger car loses about 10 to 30% of its tread rubber during lifetime use.

A study published in the journal Environmental Pollution says this tire abrasion makes up 97% of all micro-rubber in the environment, with artificial turf making up the rest. Around 75% of tire particles remain within 16 feet of roadsides, while almost 20% make their way into water bodies and 5% into the soils.

Nowack estimates that 93% of polymer-based microparticles are from tire abrasion, while only 7% are of commodity plastics. The team at EMPA used a process called dynamic probabilistic material flow analysis (DPMFA), which allowed them to track mass flows over time under certain parameters to help them estimate the amount deposited into water bodies, soils, and on roads. They based the data on the import and export of tires from 1988 to 2018. Reportedly, the impact of rubber microparticles in the air on humans is likely low. In terms of surface water pollution, rubber from tires can get there via several sources, including the sewer system and through road runoff treatment plants.

Fintyre wins Italy public transport tender

● Italian tire distributor Fintyre has won a Euro 800,000 tender for the supply of tires for public transport vehicles to Ferrovie del Sud-Est.

The two-year deal covers the supply of bus tires from Hankook for Ferrovie del Sud-Est 's fleet of vehicles made of 360 public-transport buses and coaches. The contract win shows "our distinctive positioning in the industry, based on high-quality standards in terms of service and on a logistics with high-level of efficiency," said Francesco Carantani, CEO of Fintyre.

"For us this is an opportunity to enhance the quality of our products in a segment in which we are still relatively little present in Italy," said Carlo Citarella, CEO of Hankook Tire Italia. "The partnership with Fintyre and the partner fleets represents a strategic objective for the growth of the truck product market share in Italy," the Hankook boss added.



Pictured (from left to right): Cristiano Costantino, Hankook Tire Italia; Raffaele Palermo, Hankook Tire Italia; Angelo Cianfrocca, Hankook Tire Italia; Giuseppe Colombi, Fintyre; Marco Massimetti, Ferrovie del Sud Est e Servizi Automobilistici

Tire makers can 'edge' ahead in data analytics

● Tire makers should look to a new scalable approach to data analysis to overcome current barriers to the creation of a fully information-enabled production environment at their plants. This is according to Dominique Scheider, strategic account team leader, Rockwell Automation who believes many manufacturers are struggling to deal with the "patchwork of digital assets" at their facilities.

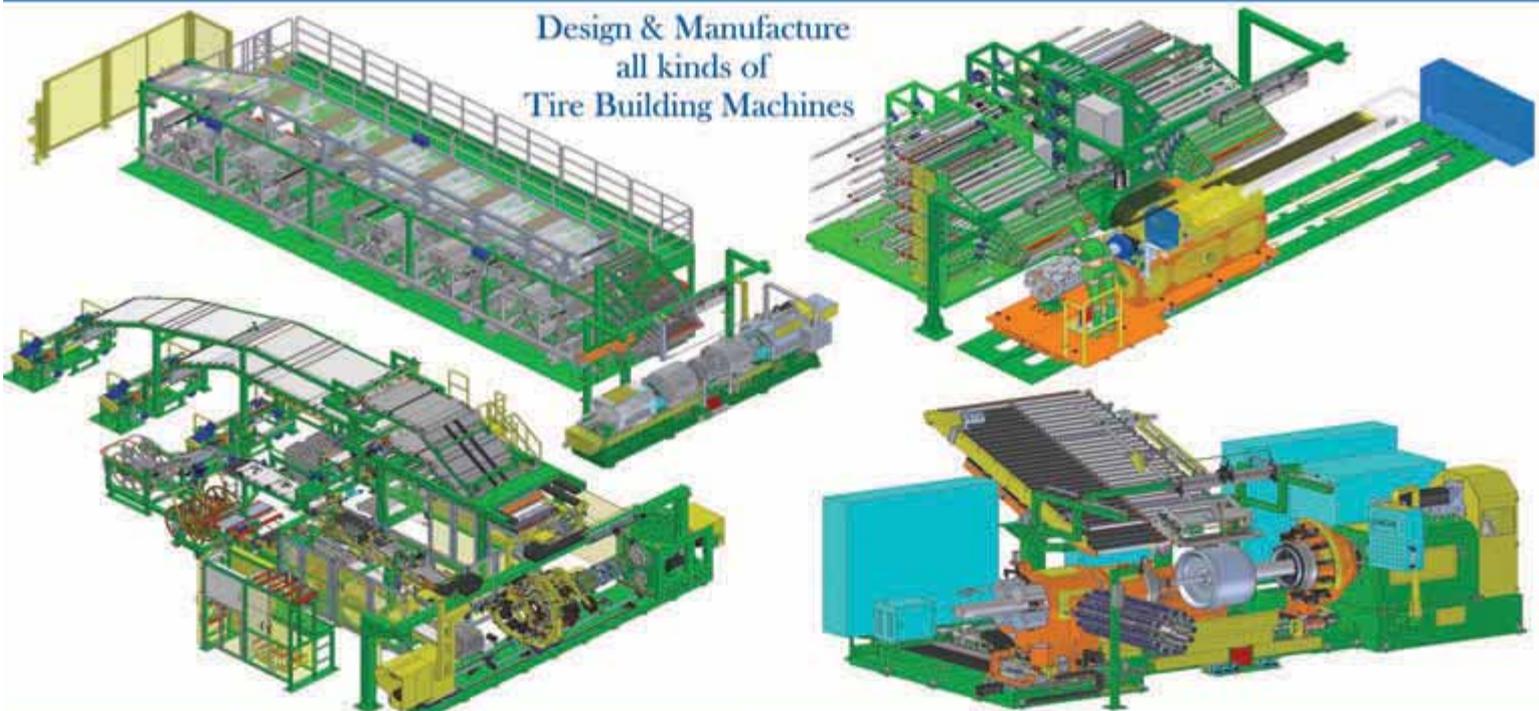
To increase productivity and agility,

he notes that major players have adopted smarter plant-floor technologies and are effectively collecting relevant data from intelligent assets. That still leaves the major requirement to convert this data "into information that enables people at all levels of the organisation to work smarter and more productively," said Scheider. However, a traditional cloud-based approach cannot provide contextualised information quickly enough to support plant processes and staff, the Rockwell expert pointed out.



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Report on the 67th meeting of ISO/TC45 (Berlin Oct 28-Nov 1, 2019)

The Indian delegation comprising 09 delegates participated in the 67th Meeting of ISO/TC 45 “Rubber and Rubber Products” and its subcommittees during Oct 28 - Nov 01, 2019 in Berlin. Details of Indian delegates are given below:

- Dr. K. Rajkumar, Director, IRMRA– Chairman PCD 29 - Thane.
- Dr. Bharat Kapgate, Sr. Scientific Officer, IRMRA-Thane
- Dr. Saikat Das Gupta – HASETRI – Mysuru
- Dr. R.K. Matthan, PCS, Chennai
- Santosh Kumar, Association of Planters-Kochi
- Satish Abraham, Association of Latex Producers of India-Kottayam
- Srikanth Krishnamurthy,– All India Rubber Industry Association-Chennai
- Chinmoy Ray,– All India Rubber Industry Association - Pune
- Chandrakesh Singh, Scientist-C,(BIS)-Delhi

At the international level, standardisation activities in the field of Rubber and Rubber Products are being carried out by ISO/TC 45 through its sub-committees and working groups. India is ‘Participating member’ of this technical committee. India has been actively participating in ISO/TC 45 meetings regularly for several decades. India has always been actively involved with TC 45 activities with leadership roles. At present, nine projects are under various stages of development with Indian experts as project leaders.

Dr. K. Rajkumar from India was honoured with ISO Long Service award in presence of more than 140 delegates from 15 countries. It is important to mention here that Dr Saikat Das Gupta, Dr Arup Chandra and Dr R.K Matthan had already received this award in past meetings. This award is intended to recognise delegates of P member countries who have participated in the annual ISO/TC 45 meetings for a total of 10 meetings continuously.



Dr. R K Matthan (2nd from right) at the opening plenary

The next meeting of ISO/TC 45 “Rubber and Rubber Products” and its subcommittees is scheduled to be held in Thailand during Oct 26-30, 2020 (tentatively). The Indian delegation’s size needs to be increased to include expert participation on Carbon Black, Silica, and Rubber Chemicals and Hose working groups and effectively monitor the revisions in progress or proposed and new work items as they can influence domestic and international markets of producers as well as manufacturers.

India is hosting 70th Meeting of ISO/TC 45 “Rubber and Rubber Products” and its subcommittees and working groups in 2022. During the event of TC45, approx. 34 meetings shall be conducted which includes meetings of committee, subcommittees, working groups and committee officers etc. One training session and technical seminar will also be organised. Around 150-200 delegates from 15-20 countries are likely to attend these meetings in India. Through hosting this meeting, India can showcase its rich heritage in rubber and rubber products since independence.



The nine- member Indian delegation



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subhavkapoor@gmail.com



Trinseo completes acquisition of latex binders assets in Germany

● US speciality chemicals company Trinseo SA has completed the acquisition of Dow Chemical's latex production facilities and related infrastructure at Rheinmunster, Germany. The Euro 40m transaction,



Frank Bozich, president and CEO, Trinseo

originally announced in May this year, includes full ownership and operational control of both latex production facilities at Rheinmunster, as well as site infrastructure and services contracts, and approximately 108 employees who have transferred from Dow to Trinseo.



The completion of this acquisition is directly aligned with Trinseo's strategy to grow its latex binders business in applications serving the coatings, adhesives and sealants markets, as well as speciality paper," said Frank Bozich, president and CEO of Trinseo. The Rheinmunster site, said Bozich, is "well positioned" for future expansion, and is ideally located to serve many of our European customers. Trinseo aims to grow its latex binders businesses, particularly in applications serving the adhesives and construction industry.

Arlanxeo to ramp up position in Chinese market

● The Chinese synthetic rubber (SR) market is a now major priority for Arlanxeo, according to Donald Chen, who recently took over as CEO of the company, the world's largest SR producer. The Saudi Aramco-owned company's ambitions in China encompass both capacity and the company's technological offerings there, Chen said at the K2019 trade fair in Dusseldorf. In terms of its geographical presence, Arlanxeo is "very proud of its global footprint with one exception: China," the CEO adding that the company is "under-represented" there in almost all the polymers its produces. LANXESS sees a lot of development and growth in the Chinese market, and want to play a bigger role there.



Donald Chen, CEO, Arlanxeo

Asked about competition from low-cost synthetic rubber producers in China, Chen insisted "we as a technology-led company, should be able to occupy the top part of the pyramid. That will be our intent." Technical innovation, will be instrumental for the development of new SR 'solutions' and in meeting customer demands in a changing market environment, in areas such as mobility. Arlanxeo will, therefore, leverage its technological advantages as well as its technical support capabilities, with high-end polymers among the top priorities for China.

The Maastricht, The Netherlands-based company's focus on high-end polymers was recently highlighted by a turnaround of its chloroprene rubber (CR) production facilities in Dormagen, Germany – bringing the total capacity there to 70 kilotonnes per annum (ktpa). The 'multi-million-euro' project, originally announced in 2018, involved upgrading and modernising the plant to increase the flexibility and capability of the unit to produce speciality products, Arlanxeo said 8 Oct. In addition, Arlanxeo said it had made "substantial progress" modernising its nitrile butadiene rubber (NBR) plant in La Wantzenau, France. The "double-digit million euro" investment programme started in mid-2018 and aims to bring the plant up to the latest technology standards.

The La Wantzenau facility is claimed to be the world's largest NBR production site, serving as Arlanxeo's centre for research and development activities for NBR.

At K2016, Arlanxeo listed its SR portfolio as comprising: Butadiene rubber and styrene-butadiene rubber, over 1,000ktpa; EPDM, 450ktpa; butyl rubber, 400ktpa; NBR rubbers, over 130ktpa; chloroprene rubber, over 60ktpa; EVM rubber, around 15ktpa. The company's main production sites include: Geleen, The Netherlands; Dormagen, Germany; Orange, Texas; Jurong Island, Singapore; and Changzhou, China



"With these acquired assets, we will further enhance our product offerings to provide advanced solutions and chemistries that are required by our customers in attractive growth segments," the company CEO added. The acquisition enhances Trinseo's production network across Europe – including an existing Trinseo latex

production plant in Rheinmunster, which also houses the company's R&D centre for latex binders, as well as operations in Hamina, Finland; Norrkoping, Sweden; and Terneuzen, The Netherlands. Trinseo already operates a latex production plant Rheinmunster, in addition to sites in Hamina, Finland; Norrkoping, Sweden; and Terneuzen, The Netherlands.



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Arlanxeo ending EPDM production in US

● Arlanxeo is shutting its EPDM plant in Orange, Texas as part of a move to realign global production and supply of the SR material. Scheduled for the second quarter of 2020, the closure will be carried out in “close cooperation with all affected stakeholders, both internally and externally,” Arlanxeo announced. This facility has capacity to produce about 70 kilotonnes per annum (ktpa) Keltan-branded EPDM and employees around 300 people.

Arlanxeo’s only production site in the US, the Texas operation also produces butadiene rubber (BR) and hydrogenated nitrile butadiene rubber (HNBR). “Our teams will support our customers in North America, and around the globe, to make their transition to our specifically developed alternative Keltan grades as smooth



as possible,” said Chretien Rooijackers, VP marketing & sales, high performance elastomers. Arlanxeo did not give further details about the EPDM business realignment, but the company recently announced that it is steadily increasing sales of EPDM sold under Keltan KSA brand.

These grades are being produced in Saudi Arabia by Petro Rabigh – a 50:50 JV between Arlanxeo owner Saudi Aramco and Sumitomo Chemicals. Arlanxeo is the sole distributor of Aramco’s 50% share of the JV plant’s EPDM output, Rooijackers explained in an interview at the recent K2019 trade fair.

Operational since 2018, the Petro Rabigh EPDM plant has a capacity of

Sibur completes sale of rubber assets to Tatneft

● Sibur has closed the sale of some of its synthetic rubber production assets in Togliatti, western Russia to Tatneft. Under the deal, Tatneft has acquired Sibur’s production facilities for various types of synthetic rubber, MTBE high-octane fuel component, butadiene, isoprene, and other intermediates. The facility has the capacity to produce 82 kilotonnes per annum (ktpa) of emulsion styrene butadiene (ESBR 60) and butyl rubber (IIR75). Sibur said the decision was prompted by the company’s increased focus on “polymers with global capacities, perspective medium tonnage products and premium special chemistry.”

“At the same time, the business of elastomers (synthetic rubbers) makes a stable positive contribution within the framework of a vertically integrated model of the company, therefore, for today we remain in this business and develop its individual directions,” the company added. Through the acquisition, Tatneft aims to strengthen the vertical integration of its Kama Tyres business with the acquisition and increase its value. Post-acquisition, Tatneft intends to further develop the assets in line with its gas and petrochemical strategy.



75ktpa and, said Rooijackers, has “ramped up according to plan.” Arlanxeo also operates EPDM production facilities in Geleen, The Netherlands and Changzhou, China, each with nameplate capacities of 160ktpa, as well as a 40ktpa unit in Triunfo, Brazil. The company, then part of Lanxess, closed down a 70ktpa EPDM

production unit in Marl, Germany in early 2016.

Sibur reports 4.5% dip in sales of elastomers at Q3 stage

● Russian petrochemicals firm Sibur Holding has reported a decline in the sales of its elastomer products in the third quarter of 2019. Sales of elastomers stood at RUB13.1 billion (Euro 184 million) for the three months to end of September, down from RUB14.2 million the year before. Over the nine-month period, sales of elastomers fell 4.5% to RUB40 billion.

Sibur produced 382 kilotonnes of elastomers during the nine months to end of September, up 3.3% compared

to the year before. Production included 236.7kt of commodity rubber, 83.1kt of speciality rubber and 62.6kt of thermoplastic elastomers.

Sibur’s elastomers unit belongs to its plastics, elastomers and intermediates segment, which posted a 40% decline in earnings (EBITDA) to RUB16.2 billion. The group linked mainly to lower MTBE volumes and negative price dynamics across product group over the first nine months of the year.

Zeon’s elastomers unit posts decline in sales, profit

● Zeon Corp.’s elastomers business has reported declines in both sales (8%) and operating income (37%) for the six months to end of September. Net sales for the elastomers segment – comprised of ‘rubbers’, latex and chemicals units – fell 8% year-on-year to Yen92 billion (Euro 761 million), while operating income decreased 37% at Yen6 billion. Rubber sales and operating income decreased due to the sluggish business in the automotive segment and general industry, Zeon said in its first half statement on Oct 31.

Volume sales for general purpose rubbers, mainly used for tires, rose 3%, marked by the growth of

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- ▶ Rubber Aid - PA 50T
- ▶ Rubber Aid - PA 60
- ▶ Rubber Aid - PA 60T
- ▶ Rubber Aid - PA 70
- ▶ Rubber Aid - PA 276

Zinc Free Processing Additives

- ▶ Rubber Aid - ZF 254
- ▶ Rubber Aid - ZF 254M
- ▶ Rubber Aid - ZF 212
- ▶ Rubber Aid - ZF 16
- ▶ Rubber Aid - ZF 42
- ▶ Rubber Aid - ZF 222
- ▶ Rubber Aid - ZF 80





butadiene rubber and solution styrene butadiene rubber. Specialty rubbers, mainly used within the automotive industry, posted a 9% decline in volumes due to global demand decline and sluggish market conditions. Sales and operating income in the rubber chemicals unit also fell, mainly as a result of volume decrease from the regular plant maintenance.

China's Letone starts Euro 214 million rubber hose plant

● China's rubber hose maker Letone Hydraulic has started a new plant for rubber hose and related products at its headquarters in Luohe, Henan in October. Phase one of Letone's Smart Hydro Industrial Park with Euro 214 million (1.65 billion yuan) total investment. The project broke ground in October 2017. Letone has an annual capacity to produce 30 million metres hydraulic rubber hoses, 10 million units of hose joints, 20 million units of sealing and related

products as well as a mixing capacity of 15,000 tonnes/year of rubber.

Scheduled for full operation in 2024, the project will raise the company's total annual capacity to 120 million metres of rubber hoses, including 20 million metres of industrial hoses. By 2024, Letone will also have an annual capacity to manufacture 100 million units of sealing and related products, 50 million units of hose joints and a total mixing capacity of 35,000 tonnes per year. The project will create 1,100 new jobs and bring in Euro 324 million annual revenue when in full operation. A leading rubber hose maker in China, Letone reported Euro 36 million annual revenue in 2018, up by 27% from 2017. Its 2018 net profit dropped 4% to Euro 3 million.



Enviro, Nynas in link-up to enhance pyrolysis oil

● Recovered carbon black (rCB) manufacturer Scandinavian Enviro Systems, in partnership with RISE (Research Institutes of Sweden) and processing oil company Nynas AB, has launched a project to further refine its pyrolysis oil recovered from waste tires. The research follows a study conducted last year which showed that the oil extracted through Enviro's end-of-life tire (ELT) pyrolysis technology could be mixed in and used as a fuel such as diesel, Enviro said in 20 Nov statement. In this new project, the companies aim to further develop manufacturing processes where fractions of the pyrolysis oil are converted to base oil products such as lubricating oils and process oils.

"This project seeks to increase the

China's Xingda opens steel cord plant in Thailand

● Chinese steel cord reinforcements maker Jiangsu Xingda Steel Cord Ltd. Co. has initiated production at its first overseas plant, in Chonburi.

Xingda Steel Cord General Manager Liu Xiang said establishing Xingda Steel Cord (Thailand) Co. Ltd. is "integral to our strategy of globalisation and proves our commitment to better serve our valued customers in the global steel cord market."

Building and operating this plant "will enable us to gain a tremendous amount of experience of running a factory in another country, and this will

pave the way for our further global expansion." With a designed annual capacity of 100,000 metric tons, the Thai plant will produce steel cord products used in the tires of passenger cars and commercial trucks and buses. It's designed to provide fast and flexible delivery of steel cord products to tire makers in Thailand and Southeast/South Asia. Xingda has two plants in China, in Jiangsu and Shandong, and recently opened branch offices in Luxembourg and the US as part of its global expansion strategy.

economic and environmental profitability of both tire pyrolysis and tire recycling in general, and to promote the sustainable conversion of refineries for base oil production," said Linda Sandström, the project manager at RISE ETC. The partners, she added, expect that the project would contribute to "a sustainable tire recovery" that utilises the tires' components while reducing fossil fuel consumption. Enviro's objective of the project, according to the company, is for its pyrolysis oil to be priced on the basis of its value to the petrochemical industry both as a fuel and as a sustainable product. The oil, it claims, contains large proportions of bio-based raw material from the natural rubber used in tire manufacturing.

According to Enviro, the company extracts about 500kg of pyrolysis oil from a tonne of tires through its patented pyrolysis technology. Operating a plant with the processing capacity of 30 kilotones per annum (ktpa), the company can

produce 14ktpa of pyrolysis oil per year, Enviro CEO Thomas Sörensson noted. "The financial potential is therefore substantial."

China regulatory-enforcement pressure easing amid trade war

● The environmental regulatory clampdown by the Chinese government on chemical plants has seemingly subsided in 2019, according to Cabot Corp.'s CEO and president



Sean Keohane CEO & President Cabot Corp

Sean Keohane.

"I would say there was no change in the regulations, but the level of enforcement seems to have backed off a little bit," said Koehane in a 5 Nov earnings call. The reason for that, Keohane believes, was because China was "trying to find its footing" as the global trade disputes with the US intensified. "That being said they continue to do regular inspections and we have plenty of evidence of that," the Cabot boss added. The requirement for China to grow, while becoming a better environmental steward still remains, he stressed.

However, with the enforcement being "a little bit choppy", fewer non-performing sites were curtailed this year, leading to more competitive intensity. Keohane anticipates the curtailment story for 2020 to be similar to that of 2019, although economic issues will play a key part. If China begins to strengthen economically it would mean "a corresponding ratcheting of enforcement" in the country.

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DIARY OF WORLD EVENTS

DECEMBER 2019

▶ India Rubber & Tyre Show 2019

20-22 December, Gujarat University Exhibition Centre, Ahmedabad
Organised by Rubber Manufacturer's Welfare Association,
Contact: Yashodhar Kahate, Honorary Secretary
Tel: +91 9227972801
email: ykahate@yahoo.co.in
web:indianrubbershow.co.in

JANUARY 2020

▶ RubberTech India 2020

8-10 January, Chennai Trade Centre, Chennai, India.
Contact: Willow Sun (Ms) Senior Project Manager
China United Rubber Corporation, China
Tel : 0086 153779792
Email: rts@chrubber.com
Web: www.rubbertech-expo.com

FEBRUARY 2020

▶ Tire Technology Expo 2020

25 -27 February
Deutsche Messe, Hannover, Germany
Contact: Colin Scott, UKIP Media & Events,
Tel: +44-1306-743744E
mail: colin.scott@ukimediaevents.com
Fax: +44-1306877411
Web: www.tiretechnology-expo.com

▶ International Conference on Advances in Polymer Technology (APT'20)

26-28 February 2020
At Cochin University of Science and Technology
Contact : Andrew Jackson Luiz Organising Secretary (APT20)
Mob: +91 85890 15010
Email: ajacluiz@yahoo.co.in

▶ India Rubber Meet 2020

28-29 February, at Radisson Blu Resort Temple Bay, Mamallapuram, Tamil Nadu, India
Contact: Rubber Board Kottayam - 686 002, Kerala, India.
Tel:91-481-2571380
Fax:91-481-2571380
Email: indiarubbermeet@gmail.com
Web: www.indiarubbermeet.in

MARCH 2020

▶ Global Rubber, Latex & Tyre Expo 2020

11-13 March 2020, Bangkok International Trade & Exhibition Centre, Bangkok, Thailand
Contact: Peram Prasada Rao - TechnoBiz
Tel: +66 2 933 0077
Fax: +66 2 955 9971
Email: peram@technobiz-asia.com
Web: www.rubbertech-expo.com

▶ Tyre & Rubber Indonesia 2020

18 - 20 March, Jakarta International Expo (JIExpo), Kemayoran, Jakarta, Indonesia
Contact: Paramitha Rahayu
Telephone Numbers: +62 21 5435 8118
Fax Numbers: +62 21 5435 8119
Email Id : info@gem-indonesia.net
Web site : www.tyre-indonesia.net

▶ Tyrexpo Africa 2020

March 24-26 at Gallagher Convention Centre, Hall 2 Johannesburg, South Africa
Contact: Zann Lee (Ms) Manager (Events Marketing), SingEx Exhibitions
Tel : DID (65) 6403 2531
Email: zann.lee@singex.com
Web: www.singex.com

MAY 2020

▶ International Rubber Study Group - IRSG - 2020 World Rubber Summit

04-08 May, Abidjan, Cote d'Ivoire.
Contact: Christina Ho
Tel.: +65-6837-2411 (Extn.:201)
Email: christina@rubberstudy.com
Web: www.rubberstudy.com

▶ Recovered Carbon Black 2020

13-14 May 2020
Berlin, Germany -
Contact: Amara Devereux Senior Marketing Executive
Tel.: 0044 1372 802015
Email: adevereux@smithers.com
Web: www.carbonblackworld.com/recovered

JUNE 2020

▶ Rubber & Tyre Vietnam 2020

17-19 June 2019
SECC, Ho Chin Minh City, Vietnam
Contact: Minh Vi Minh Vi Exhibition & Advertisement Services Co., Ltd.
Tel : +84 28 3848 8561
Fax : +84 28 3848 8564
Email: info@veas.com.vn
Web: www.rubber-tyre.com.vn

SEPTEMBER 2020

▶ RubberTech China 2020

16-18 September, Shanghai new International Expo Centre, Shanghai, China
Contact: CURC - Ella Liu / Willow Sun
Tel: +86-10-58650277
Fax: +86-10-58650288
Email: expo@chrubber.com
Web: http://en.rubbertech-expo.com

▶ 10th International Rubber Glove Conference & Exhibition

08 - 10 September: Kuala Lumpur Convention Centre, Malaysia
Contact: Desmond Tang, MARGMA
Tel: +603 7727 3197
Fax: +603 7727 3191
Email: ceo@margma.com.my
Web: www.margma.com.my

OCTOBER 2020

▶ IRC 2020

15 - 17 October, Chennai Trade Centre, Chennai, India
Contact: KJ Janakar, Chairman, IRI C/o. Helar Marketing & Consultants Pvt. Ltd.
Contact: 044 24480324
Email: helar@vsnl.com
Web: www.iri.net.in

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Challenging times ahead for both rubber producing and consuming sectors -

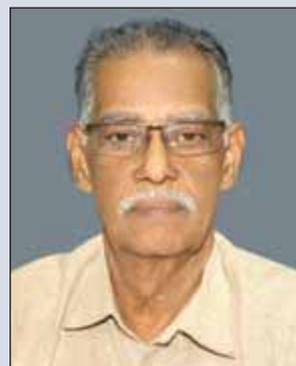
Dr. Sawar Dhanania

●The outlook at present is not very optimistic for both rubber producing and consuming sectors, Dr. Sawar Dhanania, Chairman, Rubber Board said at the 179th meeting of the Rubber Board held at Kottayam. The world economy is passing through a difficult time and the economic horizon is overcast with uncertainties adversely affecting investor sentiments and consumer confidence. This would have its downbeat effect on all economic and industrial sectors. There could be volatility in natural rubber (NR) market responding to weather conditions, currency movements, oil price variations, speculative factors etc. However, the expectation that developing and emerging economies would recover and would be in a sustained growth path is a consoling factor, he added.

According to the Association of Natural Rubber Producing Countries (ANRPC) world NR production and consumption during the first half of 2019 amounted to 5.85 million tonnes and 6.93 million tonnes respectively, with a production deficit of 1.08 million tonnes mainly due to the decrease in production in major producing countries like

T Rajendran Pillai re-elected Rubber Board Vice Chairman

●T Rajendran Pillai has been re elected as the Vice Chairman of the Rubber Board. The decision was taken in the 179th meeting of the Rubber Board held at Kottayam today. He was first elected as Vice Chairman in October 2018. Hailing from Chittethu Cheriyil Kunnathuvila family, Peruman, Kollam, T Rajendran Pillai has been serving as the State President of Kerala Pradesh Plantation Muzdoor Federation (B.M.S.) and National Committee member of Plantation Maha Sangh (BMS). He had served in Indian Air Force and Syndicate Bank.



T Rajendran Pillai, Vice Chairman, Rubber Board

Thailand, Indonesia and China. Global supply of NR in 2019 is anticipated at 13.81 million tonnes, with a decline of 0.5%. According to IRSG, synthetic rubber (SR) production and consumption during the first half of 2019 remained almost the same as the corresponding period of last year at 7.60 million tonnes and 7.70 million tonnes respectively. This is mainly due to the decline in car production and sale all over the world. Consumption of SR in 2020 is projected to grow by 1.9%.

Dr. K.N. Raghavan IRS, Executive Director, Rubber Board presented a report on current domestic status of NR. NR production during April - September 2019 was 308,000 tonnes with an increase of 11.2% as compared to the same period last year. The improvement in

production was mainly due to the efforts taken by the Board to bring more untapped areas into tapping through adoption of holdings and rainguarding. So far, 2800 ha of untapped area have been brought under tapping through adoption. Total area rainguarded during 2019-20 comes to 2.5 lakh ha with an increase of 40,000 ha compared to last year.

The production in 2018-19 was 651,000 tonnes, a negative growth of 6.2% as compared to a slight positive growth of 0.4% in 2017-18. The projection of NR production for 2019-20 is revised as 730,000 tonnes. Consumption of NR decreased during April- September 2019 by 7.6% as compared to April-September 2018. During this period, consumption of NR declined from 614,040 tonnes in 2018 to 567,120 tonnes. Consumption of NR is projected at 1140,000 tonnes in 2019-20.

Import of NR decreased during April-September 2019 by 13.9% as compared to the same period in previous year and 73% of the import was through duty paid channel. 82.6% of import of NR during April-September 2019 was in the form of block rubber. Import of NR during April-September 2019 is provisionally estimated as 257,943 tonnes. Projection of import of NR in 2019-20 is revised downwards from 500,000 tonnes to 415,000 tonnes. The stock of NR at the end of September 2019 was 296,000 tonnes.

The Executive Director also gave a short account of the major activities of the Board and other developments in other sectors from June to October.



Dr. Sawar Dhanania, Chairman, Rubber Board addressing the 179th meeting of Rubber Board, held at Kottayam

Board hopeful of rubber being kept out of RCEP purview

● A top official of the Rubber Board is hopeful that the crop will be kept out of the purview of the Regional Comprehensive Economic Partnership (RCEP) agreement.

Replying to the queries of rubber growers on RCEP's impact on the crop at a meeting organised by the Karnataka Rubber Planters' Association (KRUPA), KN Raghavan, Executive Director of the Rubber Board, said NR has been kept out of the purview of all trade agreements till now.

Noting that NR attracts an import duty of 25%, he said the Rubber Board has been asking the government to ensure that the crop is kept outside the purview of the RCEP.



Natural rubber has been kept out of the purview of all trade agreements till now since it can impact 13.2 lakh farmers

Quoting the example of the ASEAN agreement, he said four major rubber-growing countries — Indonesia, Thailand, Vietnam and Malaysia — are part of it. There was sufficient pressure to bring rubber under the purview of the ASEAN deal when it was signed. But the Indian government did not succumb to it.

The RCEP negotiation is not in the public domain. Therefore nothing can be ascertained, he observed. "But the stand that has been consistently taken is that any measure that includes rubber will cause a lot of financial strain and even penalty for 13.2 lakh rubber farmers who depend on this crop. That is very clearly brought to the notice of the government. I am sure that the government will consider that," he said.

Stating that the negotiators from

India always ensured that rubber remained outside the purview of talks, he said: "We are confident that this time also it will be so. So far there has not been any problem on that front. I would say — don't worry about that right now."

KRUPA's demand

Referring to the demand of the Karnataka Rubber Planters Association (KRUPA) to extend minimum support price for rubber growers in Karnataka, Raghavan said the Board will try to follow it up with the Karnataka and Central governments. Though the Board had made an effort earlier in this regard, it did not materialise. "We will again take up this matter with the government," he said.

Indian researchers develop polyols from rubber seed oil

● Researchers from Cochin University of Science and Technology have developed a bio-based polyol for polyurethane (PU) from rubber seed oil. "Polyols are derived from petroleum-based source but, once petroleum is used up, there is going to be acute shortage of feedstocks," according to research leader Reghunadhan Nair.

"This is why we looked for alternate, green and sustainable sources," said Nair, an emeritus scientist in the university's department of polymer science and rubber technology.

Nair's team has developed a way to convert rubber seed oil into polyols by reacting double bonds in the rubber seed oil with a dilute oxidant. The reaction happens at low temperatures, and generates hydroxylated rubber seed oil. This single-step process gives polyols that contain between two and 14 hydroxyl groups. The process is patented, with the IP documentation foreseeing applications for the polyols in rigid, insulation applications.



Rubber plantation

"As it replaces the petroleum-derived polyol, in future, we can look at the rubber trees for polyols," Nair added. Nair said that if the polyol takes off, it could help to strengthen the state's agricultural sector.

Tire industry bemoans the shortage of natural rubber

But Board data show production is rising

● Faced with a natural rubber crunch, the tire industry is in touch with the Rubber Board to increase domestic production and improve quality.

Domestic produce usually arrives in the market at the onset of peak season mid-September. But this year, even in mid-November, supply has not increased. This is also indicative of the effect of climate change in the traditional growing areas, said Rajiv Budhraj, Director General, Automotive Tyre Manufacturers Association (ATMA).

The tire industry has always aspired to have a competitive domestic natural rubber sector. Almost the entire production is consumed domestically, especially by the industry, as there are hardly any natural exports from India. The domestic NR sector is a beneficiary of complete off-take by the consuming interests even though domestic prices have been ruling higher than international rates, he said.

What is equally disturbing is that this year the demand for natural rubber is less in view of the ongoing slowdown, so imports have contracted due to the increased dependence on domestic rubber. Imports in September contracted by 40%," he said.

"Had it been a year of normal tire production, the impact of late and limited arrivals and overall tightness in availability would have been even

more severe," Budharja added.

Rubber Board data

However, production figures available from the Rubber Board contradicts the industry claim. According to the statistics, natural rubber production during April-September 2019 was 3, 08,000 tonnes, compared with 2,77,000 tonnes in the corresponding period last year.

Industry sources said the Rubber Board figures point to increased production, but natural rubber arrivals in the market are squeezed. They said production has gone up in the first half, while consumption reported a declining trend in the same period.

Official sources maintain that the continuing rains – right from the South West monsoon to the North East monsoon in the growing regions till date – has hindered tapping in several plantations in a big way. Normally rains during the North East monsoon take place only in the evening. But the current spell, especially in the morning hours, has hampered tapping. This, coupled with lower price realisation of rubber, has forced many farmers to abstain from harvesting.

India Rubber Meet 2020 in Mamallapuram in February

●The Rubber Board and the stakeholder associations in rubber and related sectors are jointly organising India Rubber Meet 2020 (IRM 2020), the fifth edition in the series, at Radisson Blu Temple Bay, Mamallapuram, Tamil Nadu on February 28 and 29, 2020. The Meet will have representation of stakeholder associations from all segments of the rubber industry, the media and the Rubber Board. IRM is a regular forum for interaction, networking and exchange of information. IRM 2020 is organised under the aegis of India Rubber Meet

ANRPC appoints new Secretary General

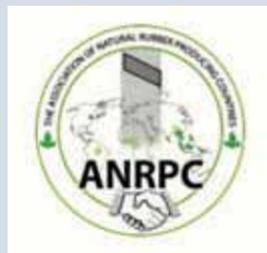
● The Association of Natural Rubber Producing Countries (ANRPC) has appointed RB Premadasa, director-general of the rubber development department of Sri Lanka, as the secretary general of the organization from December 1 2019.

Premadasa will succeed Dr. Nguyen Ngoc Bich of Vietnam who is completing his term at the end of the month.

The organisation appoints its secretary general based on a rotation programme among its member governments.

Established in 1970 in Kuala Lumpur, the intergovernmental organisation, currently has 13 member nations which produce 90% of the global production and 65% of the global consumption of natural rubber.

According to ANRPC, Premadasa has three decades of "leadership and managerial experience" in rubber development policies, formulation of smallholder-oriented masterplans for the rubber sector, and their implementation. Prior to becoming the head of Sri Lanka's rubber development department in 2009, Premadasa held high-ranking positions such as director, deputy director and regional director at the same organisation.



R B Premadasa



Forum (IRMF), a society formed by Rubber Board and the stake holder associations in rubber and related sectors.

The theme of IRM 2020 is 'Rubber Resurgence Through Innovation'. There will be invited talks by internationally- renowned speakers on various topics. There will also be panel discussions involving experts and key stakeholders from different segments of the rubber industry. Presentation on innovations for the resurgence of the rubber sector will also be discussed in the Meet.

The Meet will create an opportunity for interaction, networking and exchange of information among the participants and may also help in finding strategies to overcome the challenges in the rubber sector.

A national



Dr. K.N. Raghavan IRS, Executive Director, Rubber Board

level organising committee under the chairmanship of Dr. K.N. Raghavan IRS, Executive Director, Rubber Board with the representation of all segments of the rubber industry, is constituted to formulate and organise the event. The committee includes representatives of small and large rubber growers, rubber processors and traders, tire and non-tire sectors, auto component manufacturers, rubber product exporters, synthetic rubber and reclaimed rubber manufacturers, rubber research and skill development institutions, media dealing with rubber etc.

IRM 2020 is targeted to attract around 500 delegates from India and abroad.

Natural rubber snapshot		(In tonnes)			
	September		April to September		
	2018	2019(a)	2018	2019(a)	
Production	65,000	68,000	2,77,000	3,08,000	
Consumption	1,03,000	85,000	6,14,040	5,67,120	
Import	70,887	42,550	2,99,460	2,57,943	
Export	694	933	1,844	3,571	

(a) provisional Source: Rubber Board



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Specialised SR Market Outlook

The Future of Thermoplastic Elastomers to 2024



Duane Neidert
Director of Operations, Americas

Who we serve



Session Objectives

- Provide an overview of the global market of thermoplastic elastomers
- Outline where the growth is happening
 - Application
 - Geography
 - Technology

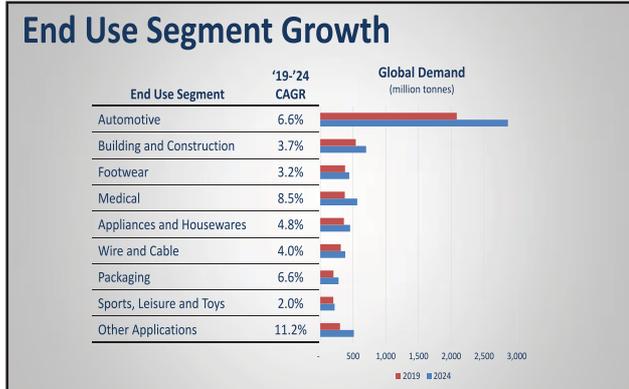
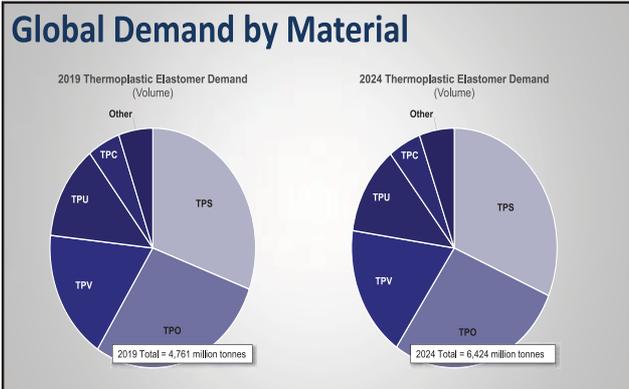
Thermoplastic Elastomer Focus

- TPS** SBS and SEBS-based compounds
- TPO** PP/EPDM and PP/EPM compounds, as well as plastomers
- TPV** Mainly polypropylene and cross-linked EPDM compounds, including those made from higher performing elastomers and thermoplastic matrices
- TPU** Thermoplastic polyurethanes
- TPA** Thermoplastic polyamide elastomers
- TPC** Thermoplastic copolyester elastomers

Global Demand

- Forecasted global volume demand growth = 6.2%
- Global demand will top 6.4 million tonnes by 2024
- Prices are expected to remain steady





Medical

- Medical applications for TPE's are expected to grow at roughly 8.5% CAGR
- Growth drivers include
 - Secular growth trends in healthcare
 - Health concerns over plasticizers in PVC

Automotive

- Automotive applications for TPE's are expected to grow at roughly 6.6% CAGR
- Growth drivers include
 - Electric vehicles
 - Improved high heat performance
 - Sound absorption

Packaging

- Packaging applications for TPE's are expected to grow at roughly 6.6% CAGR
- Growth drivers include
 - Wine consumption
 - “Cork Taint”



New Technology: High Heat TPVs

Bridges the gap between the so-called commodity TPEs (e.g. TPS, TPO, TPV) and the high-performance TPEs (e.g. TPU, TPC, TPA)

New Technology: TPE Foams

Potential applications

- Furniture and vehicle upholstery
- Foamed cable jacket
- More easily activated and sensitive piezoelectric sensor
- Acoustic properties can be enhanced

New Technology: Heat Conductive TPEs

Potential applications

- Electrical equipment
- Automotive heat shields



New Technology: Dielectric Elastomers

Potential applications

- Powering mobile phones
- Powering ocean beacons
- Artificial muscles for prosthetics, robotics and other micro actuators



New Technology: Flame Retardant TPEs

Potential applications

- Wire and cable
- Gaskets
- Automotive interiors
- Cable holders

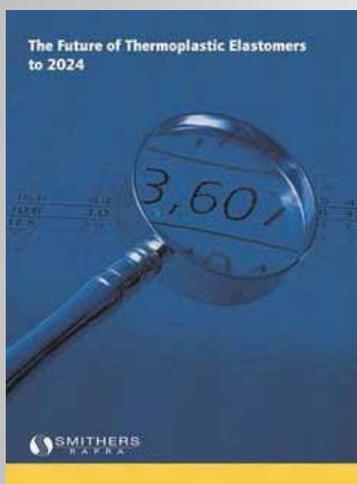


Conclusions

- TPEs as a whole are expected to experience strong growth over the next five years
- Specific applications will see higher growth especially
 - Automotive
 - Medical
 - Packaging
- TPEs are seeing significant investment in technology development



How do I learn more?

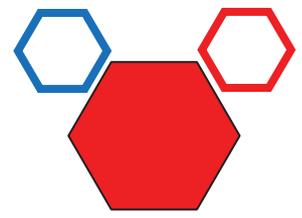


Our exclusive content:

- Quantitative data on the thermoplastic elastomer market segmented by type, end use and geographic region
- In-depth analysis of key drivers and trends shaping the industry and an overview of the competitive landscape
- Comprehensive review of cutting-edge technology developments and their applications

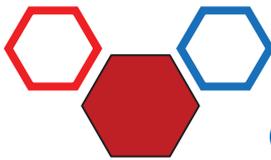
Who will benefit from this report?

- Individuals working in the appliances and housewares, automotive, building and construction, footwear, medical and packaging industries
- Compounders, producers, suppliers, end-users
- Thermoplastic elastomers processing and testing
- Industry consultants and analysts.



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- Standard Mechanical and Chemical Tests
- Material constant for FEA Modelling
- Dynamic Mechanical Properties under Shear/Tension mode with a temperature range of -100°C to +100°C
- Fatigue Crack Growth to predict Crack Propagation properties with Real Time Imaging
- Creep & Stress Relaxation properties of Rubber products under different environmental conditions
- Effect of different environment on aging characteristics of cured rubber
- Benchmarking and Reverse Engineering of Rubber products
- Poly Aromatic Hydrocarbon (PAH) Analysis of Rubber Process Oil/Rubber product
- Compound Development for customized application
- Specific Aging Performance/Life Prediction
- Thermal property Characterization

Tyre Testing

- Tyre Dimension Analysis
- Plunger Energy
- Endurance Test
- High Speed Test
- Footprint Pressure Distribution
- Structural & Sectional Analysis
- Stiffness [X,Y,Z]
- Bead Unseat
- Sidewall deflection Profile
- Electrical Resistivity
- Non-Destructive Testing
- Air Retention Test
- Rolling Resistance
- High Speed Uniformity
- F&M/PRAT/CRAT/Conicity & Plysteer/SWEEP
- Tyre Noise Measurement (Anechoic Chamber)
- Tyre Noise Analysis & Modeling
- Rubber Product Noise Measurement & Analysis

(as per IS /DOT/FMVSS/ECE/GS/ISO/SAE/Customer specified Standards)

Consultancy Services

- Contract Research
- Standard Testing
- Material Selection for specific application
- Customer Specific Test method development
- Process Problem – Root Cause Analysis
- Generation of Technical Specification
- Benchmarking for Rubber & Allied Industry
- Laboratory Quality management System as per ISO/IEC 17025
- Skill Development & Training for Rubber Industry

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- Force Measurement
- Pressure
- Volume
- Mass
- Length



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RubberTech China 2019: A Big Success

Rhe RubberTech China has been successfully organised for nearly two decades and has grown into a one-step hub which brings product showcasing, technical exchanges, trading and conferences services under one roof, and a bridge which connects production and consumption, enterprises and the society in China and the global community. It is also an important platform that helps build an open economic system," said Deng Yali, President, China Rubber Industry Association.

China United Rubber Corporation organised the three day 19th China Rubber Technology Exhibition, known as RubberTech China, on September 18-20, 2019, at the Shanghai New International Expo Center, Shanghai.

This year's edition surpassed the last year's event in terms of the exhibitors and visitors. RubberTechChina 2019 hosted 713 exhibitors and witnessed 31683 visitors across the globe. However, the space coverage by the exhibitors

Micropoise, VIPO a.s, Hankook Engineering Works and others displayed their latest products and solutions.

"This year, we will celebrate 70th anniversary of the founding of people's Republic of China. With 40 years of development following the reform and opening a policy, China has become the largest rubber producer and consumer in the world," said Deng Yali. "In recent years, despite of challenges in both and abroad markets, such as the Sino-US trade frictions, the increase of 'uncertainty' in the international environment, domestic pressure of economy adjustment and upgrading, China's rubber industry has braved all difficulties and forged ahead. Achievements have been made in technological innovation,



Wei Yun, Chairman & Managing Director, CURC



in 2019 was the same as last year. The expo showcased and promoted products from rubber raw materials, rubber chemicals, rubber machinery and testing equipment, non-tire rubber products, rubber recycling products and equipment, and provided a platform to participants to interact on various issues in the supply chain.

Exhibitors from over two dozen countries such as Germany, Hong Kong, India, Italy, Japan, Korea, Belgium, Brazil, Canada, Malaysia, Netherlands, Portugal, Russia, Saudi Arabia, Singapore, Slovakia, Sri Lanka, Taiwan, Thailand, and the US participated in the show. Industry majors such as HF, VMI, Mesnac, Altracon, Black Donuts Engineering, Mitsubishi, Rockwell Automation, Rishiroop Polymers, Red Avenue, Saferun, Schill+Seilacher "Struktol" GmbH, Sibur, TST, Cimcorp, Sinoarp, Tineso, Arlanxeo,

product development, intelligent manufacturing and green growth. a number of leading enterprises will demonstrate at this exhibition what they have got to meet the market demand for manufacturing safety, energy efficiency, and environmental production protection.

Trade war impact

The ongoing trade war with US and the overall slowdown in economy will have a severe impact on China's tire industry this year. "Both domestic and export growth of the Chinese industry are slowing down due falling auto sales in the country and the trade war and global slowdown," said Mary Xu, Deputy Chairman and Secretary General of China Rubber Industry Association. Last year

China produced 613 million tire units. According to Mary Xu, in 2019, the Chinese domestic and export markets are expected to have slower growth compared to the corresponding year. "China had given subsidies or special incentives on environmentally friendly vehicles two years back, now the subsidies are being withdrawn and that is also reflecting on auto sales in the country," said Mary Xu. Production of tire in China is also falling due to weakening demand and many tire companies are shifting their manufacturing plants outside China to avoid from stiff tariffs and get access to other markets. "Not only trade tensions, but many Chinese tire companies are setting up their base abroad to enhance their manufacturing, research and technology capabilities," said Mary Xu. The implementation of new regulations for environment already led to shutdown many small tire and rubber factories in China.

Arlanxeo, the world-leading synthetic rubber company, under the theme of "Future Mobility", Arlanxeo, together with two business units – Tire & Specialty Rubbers and High Performance Elastomers – showcased its high-quality product portfolio and solutions in mobility and other application fields, and participated in a joint discussion about the future development of the rubber industry against the backdrop of rapidly growing market demands. With consumption continuing to increase, and smart cities becoming an ever more important trend, the mobility industry is accelerating upgrade and transformation towards a safer, greener and more user-friendly future under the new concept of "Future Mobility."

Trinseo, a global materials solutions provider and

manufacturer of plastics, latex binders and synthetic rubber, made its debut exhibition at RubberTech China 2019 to showcase its innovative, easy-to-process and multi-functionalised S-SBR polymer products. UTH presented its latest range of products at the show. It showcased its further developed roll-ex fine mesh straining systems, the proven roll-ex gear pump technology and their new innovation- The TRP Reworker. This system is based on the UTH Two-Roll-Plasticiser (TRP) with integrated gear pump. MünchChemie International GmbH showcased its water-based semi-permanent Release Agent MK-67/11 that is free of any silicone. This ready-to-use product can universally be used for the processing of all common rubber types (including silicone rubber) and has proven ideally suited for the manufacturing of parts made of fluoro rubber (FKM and FFKM).

MESNAC launched TPRO-S Uni-stage Threedrum TBR Tire Building Machine. TPRO-S has the highest daily outcome compared to other similar models worldwide. "Productivity was increased by 40% compared with other traditional machines, and helps customers increase revenue by about 30 million RMB each year."

RubberTech China 2019 was held together with The International Rubber Products Expo 2019, the 16th International Exhibition on Rubber Recycling and Tire Retreading, China International Adhesives and Sealants Exhibition and China International Chemical Industry Fair 2019. The five exhibitions held in the same venue and at the same time will jointly make a comprehensive chain promotion platform, ready to serve about 30,000 professional visitors.

IRSG NEWS

Tyre Stewardship Australia joins IRSG

Tyre Stewardship Australia (TSA) has increased its global presence in the on-going campaign to find better uses for waste tyres. It has become an industry member of the International Rubber Study Group (IRSG), a vital source of all information relating to the rubber industry. "IRSG is the sole multinational body dedicated to discussing the many issues that affect natural rubber and synthetic rubber production, usage, trade and recycling," said the Secretary General of IRSG Salvatore Pinizzotto. "We welcome Tyre Stewardship Australia into our Group and look forward to hearing their ideas and sharing our knowledge," he said.

The Group has 36 member countries and over 100 members covering the whole natural and synthetic rubber value chain. "This will ensure TSA is connecting directly with Government officials from these countries and enables us to work on a global scale to understand, manage and end unethical uses of waste tyre products," said the CEO of TSA Lina Goodman.

"It gives TSA a far greater insight into current global trends and how this affects what happens to Australia's waste tyres," Ms Goodman said.

TSA is an industry-led product stewardship programme, established by leading tyre importers keen to find a solution for end of life tyres. TSA is a voluntary scheme, made up of representatives from across the tyre supply chain including tyre retailers, manufacturers, recyclers and

collectors.

At the moment only 10% of the 56 million tyres used by Australians each year are being used locally as a value-added product, like horse racing tracks, local roads, residential concrete slabs.

TSA is already working hard to ensure better outcomes for old tyres. It has committed \$5M to the establishment of local innovative projects.

It is also working with a global quality assurance organisation, Intertek, to verify what happens to Australian waste tyres that are currently exported overseas.

COAG recently announced plans to ban the export of certain waste products, including tyres.

"TSA's membership of the IRSG will mean we can help State and Federal Governments gain a better understanding of the current foreign trade in waste tyres," Ms Goodman said.

"This membership gives TSA and Australia better global connections, better information and will lead to better outcomes for waste tyres," she said.

IRSG World Rubber Summit 2020

At the invitation of the Republic of Cote d'Ivoire, the IRSG will hold its 2020 World Rubber Summit in Abidjan, Cote d'Ivoire from May 4 to 8, 2020.

NEW CARS AT LA AUTO SHOW 2019

As usual, the Auto Show in LA, USA was a huge success with introduction of some dazzling cars.



Porsche-taycan-4s



Chevrolet-corvette



Ford-mustang-mach-e

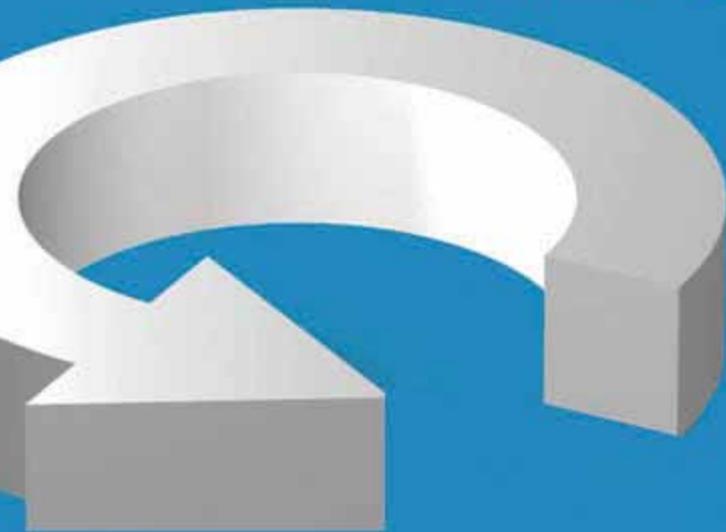


Hyundai-Vision-T



Mercedes-amg-gls-63

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- ◆ Butyl Reclaim
- ◆ Hightensile Reclaim
- ◆ Halobutyl Reclaim
- ◆ Crumb Rubber
- ◆ EPDM Reclaim

BALAJI RUBBER GROUP



Balaji Rubber Industries (P) Ltd.,
Namakkal, Tamilnadu, India



Balaji Rubber & Reclaims (P) Ltd.,
Tumkur, Karnataka, India



Eswar Rubber Products (P) Ltd.,
Penukonda, Andhrapradesh, India



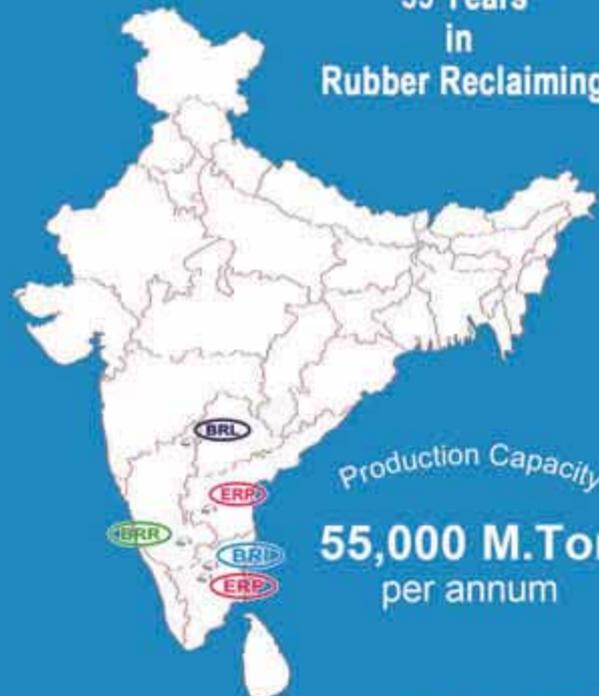
Bidar Rubber & Reclaims (P) Ltd.,
Bidar, Karnataka, India



Eswar Rubber Products (P) Ltd.,
Namakkal, Tamilnadu, India

(Unit - II)

35 Years
in
Rubber Reclaiming



Production Capacity

55,000 M.Ton
per annum





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info@gem-indonesia.net

+62 21 54358119

www.gem-indonesia.net





CONFERENCE ANNOUNCEMENT

INTERNATIONAL RUBBER CONFERENCE – IRC 2020

IMPORTANT DATES
Submission of Abstracts & CV 31st Dec 2019
Submission of full Paper Presentation: 31st May 2020

CONFERENCE FOCUS

Rubber Materials
Reinforcement and compounding ingredients
Processing technology and innovation
Innovation in rubber products and design
Thermoplastic elastomers
Miscellaneous (energy, environment etc)
India specific topics like New Technologies and Markets
Smart, Nano and Functional materials.
Advances in the testing and testing equipment.

Workshop on topics:

1. Tyre Mechanics
2. Rubber Mixing
3. Automotive Rubber Components & Speciality Synthetic Rubbers (at hotel Hilton on 13th & 14th October 2020)



To enhance the activities in the field of rubber science & technology, Indian Rubber Institute is setting up **Dr. D. Banerjee Centre of Excellence (DBCE)** in the premises of JSS science and technology University, Mysore, Karnataka, India for providing training, research and education to people to the people working especially in small and medium sector rubber manufacturing units. The construction of 32000 squarefeet building is under progress and expected to be ready by 2019.

EXHIBITION FOCUS

Nano, Smart & Innovative materials Equipment for
Laboratory
Tyre Testing & evaluation
Material Characterization
Microscopy, Failure analysis & Reverse engineering
Advanced rubber processing Automation related to rubber industries

Tyre simulation & modeling
Miscellaneous items interesting to rubber & allied industries
Books and periodicals

India's largest rubber stakeholder meet in **MAMALLAPURAM** Tamil Nadu



**INDIA RUBBER
MEET 2020**

MAMALLAPURAM, TAMIL NADU, INDIA.
28 & 29 FEBRUARY 2020

Theme: Rubber Resurgence
Through Innovations

Venue: **Radisson Blu Resort Temple Bay, Mamallapuram, Tamil Nadu, India**
28 & 29 February 2020

Registration fee*			
	INDIAN DELEGATES		OVERSEAS DELEGATES
	Small growers [#]	Others	
Registration upto 27 February 2020	Rs. 4,130 (including GST of Rs. 630 @ 18 per cent)	Rs. 8,850 (including GST of Rs. 1,350 @ 18 per cent)	US\$ 236 (including GST of US\$ 36 @ 18 per cent)
Spot registration at the venue	Rs. 4,130 (including GST of Rs. 630 @ 18 per cent)	Rs. 11,800 (including GST of Rs. 1,800 @ 18 per cent)	US\$ 295 (including GST of US\$ 45 @ 18 per cent)

(*Registration fee does not include travel and accommodation; # To be applied through and certified by the Rubber Board Regional Office concerned.)

ORGANISERS | The Rubber Board (Ministry of Commerce & Industry, Govt. of India) | All India Rubber Industries Association (AIRIA) | Association of Latex Producers of India (ALPI) | Automotive Component Manufacturers Association of India (ACMA) | Automotive Tyre Manufacturers Association (ATMA) | Block Rubber Processors Association of India (IBRPA) | CAPEXIL (Ministry of Commerce & Industry, Govt. of India) | ExxonMobil | GRP Ltd. | Harrisons Malayalam Ltd. | Indian Cycle and Rikshaw Tyre Manufacturers Association (ICRTMA) | Indian / International Rubber Journal | Indian Rubber Dealers Federation (IRDF) | Indian Rubber Growers Association (IRGA) | Indian Rubber Institute (IRI) | Indian Rubber Manufacturers Research Association (IRMRA) | Indian Synthetic Rubber Private Limited (ISRPL) | Kerala State Co-operative Rubber Marketing Federation (Rubber Mark) | Latex Rubber Thread Manufacturers Association (LARTMA) | National Federation of Rubber Producers Societies (NFRPS) | Reliance Industries Ltd. | Rubber Asia | Rubber Skill Development Council (RSDC) | The Cochin Rubber Merchants Association (CRMA) | United Planters Association of Southern India (UPASI) |



Organised by India Rubber Meet Forum - a forum of rubber stakeholders in India

For correspondence

Chairman, Organising Committee
INDIA RUBBER MEET 2020
Rubber Board, Kottayam-686 002, Kerala, India.

Phone: 91-481-2301231, Fax: 91-481-2571380
Email: indiarubbermeet@gmail.com
www.indiarubbermeet.in

The Trend

India is estimated to have produced 60,000 tonnes of natural rubber (NR) during July 2019 compared to 46,000 tonnes produced during the same month a year ago. The total quantity produced during April 2019 to July 2019 was up 6.4% at 183,000 tonnes from the same period a year ago. The production preliminary estimated for August 2019 is 57,000 tonnes. The country has consumed 95,000 tonnes of NR during July 2019, down by 3.1% from the quantity of 98,000 tonnes consumed during June 2019. The total quantity of NR consumed in our country during April 2019 to July 2019 was 389,620 tonnes, down by 4.9% from 409,540 tonnes. This represents 4.8% fall in auto tyre manufacturing sector and 4.9% fall in the general rubber goods sector. According to preliminary estimate, the country has consumed 92,500 tonnes of NR during August 2019. As per data available from the Directorate General of Commercial Intelligence & Statistics, the country imported 50,940 tonnes of NR during July 2019 as compared to 39,627

tonnes imported during July 2018. The total volume of NR imported during April'19 to July'19 was 157,572 tonnes as against 168,985 tonnes during the same period a year ago. India exported 509 tonnes of NR during July 2019 as against 202 tonnes during July 2018. The total quantity of NR exported during the four months of 2019-20 was 2,325 tonnes as compared to 733 tonnes exported during the same period in the previous year. A total stock of 254,000 tonnes of NR was estimated to have held with growers, dealers, processors and consumers in the country at the end of July 2019. The domestic synthetic rubber (SR) production was 133,018 tonnes compared to 128,821 tonnes during April 2019 to July 2019 with 3.3% hike. A total quantity of 225,150 tonnes of SR was consumed during the first four months of 2019-20 with a decline of 3.3% from 232,880 tonnes consumed during the same period in the previous year.

PRICE OF NATURAL RUBBER (Rupee per 100 Kg)

Month / Year	RSS-5	RSS-4	RSS-3	Latex	(60% drc)	ISNR 20	SMR 20
	Domestic		Intl.	Domestic	Intl.	Domestic	Intl.
September 2018	12683	13048	10451	17073	12077	12361	9638
October "	12314	12780	10556	16273	12015	11536	9748
November "	11676	12156	9772	13922	11092	11020	8902
December "	11831	12196	10116	14558	10810	11263	8914
January 2019	12018	12466	11202	14622	11435	11657	9568
February "	11820	12433	11554	13880	12140	11600	9903
March "	12433	12802	12248	13747	13695	12329	10273
April "	12561	12828	12229	14513	14157	12313	10522
May "	13341	13604	12563	15432	13710	12572	10626
June "	14717	15029	14003	15822	14038	13061	10581
July "	14726	14956	12555	16312	13442	12389	9836
August "	13972	14336	10766	16582	12568	11760	9315
September "	12913	13317	10908	17697	12653	10990	9551

Note: Domestic price refers to Kottayam market, international RSS 3 refers to Bangkok market and

international price of latex and SMR 20 to Kuala Lumpur market.

PRODUCTION & CONSUMPTION OF NR & SR

Type-wise Production & Consumption of NR & SR	(Metric Tonnes)			April 2018 to July 2018 (4)	April 2018 to March 2019 (5)	Percentage increase (+)/decrease (-) of (3) & (4) (6)
	July 2019 (1)	July 2018 (2)	April 2019 to July 2019 (3)			
PRODUCTION						
NATURAL RUBBER (NR)						
Ribbed Smoked Sheet (RSS)	42665	30560	123095	107490	430570	
Solid Block Rubber	9705	8450	35210	37040	119085	
Latex Concentrates(DRC)	5350	5150	18925	20950	78970	
Others	2280	1840	5770	6520	22375	
Total	60000	46000	183000	172000	651000	6.4
Note : Revised type-wise production of NR for 2017-18						
SYNTHETIC RUBBER (SR)^P						
Styrene Butadiene (SBR)	20732	19980	87282	84116	253859	
Poly butadiene (BR)	11280	10781	43596	43205	122081	
Others	540	320	2140	1500	4832	
Total	32552	31081	133018	128821	380772	3.3
Total NR & SR	92552	77081	316018	300821	1031772	5.1
CONSUMPTION						
NATURAL RUBBER (NR)						
Ribbed Smoked Sheet (RSS)	39985	43765	167310	172085	521495	
Solid Block Rubber	45985	51775	188360	197510	575115	
Latex Concentrates(DRC)	6850	7560	25180	30675	88330	
Others	2180	2390	8770	9270	27000	
Total	95000	105490	389620	409540	1211940	-4.9
Out of which Auto Tire Manufacturers	66484	76848	278692	292869	864022	-4.8
SYNTHETIC RUBBER (SR)^P						
Styrene Butadiene (SBR)	31150	31165	123065	117685	357180	
Poly butadiene (BR)	15965	17495	63425	67620	195835	
Others	9985	11770	38660	47575	133310	
Total	57100	60430	225150	232880	686325	-3.3
Out of which Auto Tire Manufacturers	37622	41651	151257	159786	468086	-5.3
Total NR & SR	152100	165920	614770	642420	1898265	-4.3
Out of which Auto Tire Manufacturers	104106	118499	429949	452655	1322108	-5.0

*: indigenous and imported

Note: Revised Typewise NR Production and Consumption for 2018-19

PRODUCTION & CONSUMPTION AND STOCK OF RR

(Metric Tonnes)

Production Consumption and stock of RR	July 2019	July 2018	April 2019 to July 2019	April 2018 to July 2018	April 2018 to March 2019
RECLAIMED RUBBER (RR)	(1)	(2)	(3)	(4)	(5)
Production @	12150	12650	46205	47080	142605
Consumption	12245	12500	46735	46620	141165
Out of which Auto Tire Manufacturers	4086	4792	16007	17777	52376
Stock with Manufacturers (end of the Month/Year	12775	12325			
@:Indigenous purchase by Manufacturers					

IMPORT/EXPORT & STOCK OF NR & SR

Import (P)

Natural Rubber	50940	39627	157572	168985	582351
Synthetic Rubber	27998	28284	109542	110024	330148
Total NR & SR	78938	67911	267114	279009	912499

Export (p)

Natural Rubber	509	202	2325	733	4551
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IMPORT OF DIFFERENT FORMS OF NR DURING JULY 2019^p

(Tonnes)

TYPE	Quantity	% Share
RSS Grades	8620	16.9
Solid Block Rubber	41450	81.4
Latex Concentrates (drc)	800	1.6
Others	70	0.1
Total	50940	100

p:provisional

TYPE-WISE EXPORT OF NR DURING JULY 2019^p

(Tonnes)

Type	Quantity	% share
RSS Grades	1	0.2
Solid Block Rubber	505	99.2
Latex Concentrates (drc)	1	0.2
Others	2	0.4
Total	509	100

p:provisional

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India's flourishing used-car business

●Rising cost of ownership of new vehicles is the key reason

The new car market may be trundling on the slow lane on a low gear, with sales down every month over the last 11 months, but on the fast lane alongside, the pre-owned car segment is on high gear and maintaining a steady clip.

By all accounts, the organised sector players in the used-car segment such as Maruti Suzuki True Value and Mahindra & Mahindra's First Choice Wheels are all smiles as they have grown consistently over the years and have not been impacted by the current slowdown.

"The used-car market has seen a positive growth. In fact, last year close to 4 million used-cars were sold. True Value (Maruti Suzuki's used-car unit) registered around 19% growth last year whereas the overall used-car market grew around 16%," says Shashank Srivastava, Executive Director, Marketing and Sales, Maruti Suzuki India (MSIL).

Maruti True Value Network has 581 outlets in more than 250 cities across India and Alto, WagonR and Swift are the bestsellers, aggregating over 55% of the total sales, he said.

Interestingly, a pre-owned car

sold through a True Value outlet is treated the same as buying a new car and the customer gets all the benefits. Also on offer are bank loans, but as the interest rate is high, buyers prefer not to take loans.

High rates

"Banks do fund used-cars. But bank loan financing is low, at around 20% (it is about 70% in new cars), mainly because the interest rate is higher compared that for a new car," Srivastava said. Ashutosh Pandey, Chief Executive Officer, Mahindra First Choice Wheels, agrees and says used-car loans can cost 300-400 basis points more. This is perhaps because many of the buyers are first-timers with no strong credit scores. Indeed, says Pandey, if this financing issue is addressed, used-car sales is sure to surge.

He estimates the sales of used-cars at 1.3 times that of new vehicles. It is only a rising number. "This trend has continued in the current financial year as well, with used-car numbers expected to grow 10% (from 4 million to 4.4 million units). Key reasons for this are: Increase in the total cost of ownership of new cars due to changes in insurance cost and taxes. Used vehicles offer a compelling price-value proposition," he says.



Used-cars sales are pegged at 1.3 times that of new vehicles and the numbers are rising. In the current financial year, used-car numbers are expected to grow 10% to 4.4 million units from 4 million last year

Auto sales remain in low gear in Oct: Utility vehicles buck trend

SIAM hopeful of better numbers in November-December

●The wholesale number of automobiles in the domestic market continued to fall in October, even though some of the segments grew marginally on a year-on-year (YoY) basis because of the festive season during the month.

In the total passenger vehicle sales, the numbers grew marginally to 2,85,027 units in October, as against 2,84,223 units in the corresponding month last year, led mostly by the utility vehicle (UV) segment that grew by more than 22 per cent YoY.

Sales of the UV segment grew to 1,00,725 units during the month as compared with 82,413 units in October 2018. The growth is mainly led by new launches like Kia Motor's Seltos, MG Motor's Hector, Hyundai Motor's Venue, Mahindra & Mahindra's XUV300, and some of the existing models like Maruti Suzuki's Vitara Brezza

However, in the passenger car segment, the sales fell 6% YoY to 1,73,649 units during the month, as compared with 1,85,400 units in the same month last year, the latest report released by Society of Indian Automobile Manufacturers (SIAM) said on Monday.

Two-wheelers, too, down

In the two-wheeler segment also, the overall sales declined by more than 14% to 17,57,264 units in October as against 20,53,497 units in the same month last year.

While, the sales of motorcycle declined by 16% YoY to 11,16,970 units in October as against 13,27,758 units in corresponding month last year, scooters sales fell by 10% YoY to 5,80,130 units last month, as against 6,43,382 units in October 2018.

CV sales halve

The sales of medium and heavy commercial vehicles declined the most by 50% YoY to 15,334 units, as against 30,752 units in October 2018. The total commercial vehicle sales also declined by 23% to 66,773 units during last month as compared with 87,067 units in same month last year, the SIAM report said.

Therefore, because of fall in all other segments, except UVs and passenger carriers, the grand total of all categories declined by 13% to 21,76,264 units in October, as compared to 24,94,345 units in October 2018.

However, SIAM is hopeful of better sales in November-December than last year and it is also expecting pre-buying to take off during the January-March period next year.



	October 2019	October 2018	% Change
Total Passenger	2,85,027	2,84,223	0.28
Total Commercial Vehicles	66,773	87,067	-23.31
Total Three Wheelers	66,985	69,483	-3.6
Total Two-wheelers	17,57,264	20,53,497	-14.43
Grand Total	21,76,136	24,94,345	-12.76

“Sales in the festive season have been better than the last year which is a good sign. We wish it continues in November and December as well and help us slowly come out of this slowdown,” Rajan Wadhwa, President, SIAM said.

Mega \$48 billion Fiat Chrysler / Peugeot Merger

● Fiat Chrysler and Peugeot owner, the PSA group, recently agreed to go ahead with a \$48 billion merger which will create the world’s third- largest automaker, in a 50:50 deal. The combined company would be based in the current headquarters of Fiat Chrysler- the Netherlands. The company will also maintain a head office for its North American operations near Detroit. John Elkann, the US-born scion of the Italian family that founded Fiat, is to be chairman of the combined company, while PSA chief executive Carlos Tavares is to be CEO.

The merger will lead to a combined company with about 410,000 employees and annual revenues of \$190 billion. In 2018, Fiat Chrysler and Peugeot sold a combined 8.7 million vehicles- as compared to GM, with sales of 8.3 million, and Volkswagen and Toyota, which each sold over 10 million.

The merger comes amid against a backdrop of slowing global auto sales, which could worsen as economies

around the world slow or even fall into recession. Automakers are competing to invest in the electric and hybrid technologies needed to meet strict new emissions targets in Europe and China, as well as to develop autonomous vehicles. The enormous capital required for the R&D needed to develop electric and autonomous vehicles has led some automakers to seek out partners in order to help share the cost.

The combined company formed by the merger has a greater chance of continuing to be viable and relevant as the industry evolves. Peugeot particularly stands to gain from this merger, since it lagged behind its competitors in developing electric vehicles. Clean cars account for less than 0.3% of the automaker’s overall sales and it had to pay Tesla for credits needed to comply with EU emissions standards. Fiat Chrysler has also been slow to develop electric vehicles.

Other automakers co-operating in R&D include Ford and Volkswagen, who are working together to develop electric and driverless technology, while German auto giants BMW and Daimler have formed a joint venture to develop self-driving vehicles and Honda has invested in GM’s self-driving vehicle unit.

Earlier this year, Fiat Chrysler made a merger proposal to Renault, but withdrew the offer, blaming the political conditions in France, which it said “do not currently exist for such

a combination to proceed successfully.” While the French government owns 15% of Renault and is its largest shareholder; it also owns 12.2% of PSA. The French government said at the time that it would approve the Renault deal, only if there were protections for French jobs and plants.

The road ahead will be rocky for Fiat Chrysler and Peugeot even if their merger is completed. Both companies have struggled to crack the Chinese market - the world’s largest for new cars. Sales have fallen by 10% as of November for this year, with the joint ventures of both Fiat Chrysler and Peugeot feeling the impact. Sales were down by a third for Fiat Chrysler in the first half of 2019, and more than half for Peugeot.

Peugeot has no footprint in the world’s second-largest car market - the US, while Fiat Chrysler’s sales of Fiat-branded cars are very modest. Automakers face a challenge bringing mass market European brands, as opposed to luxury brands, to the US.

South Korean auto industry slowing?

● There have recently been mixed signals from South Korea’s auto industry, with a slowdown in the domestic sales and decline in exports due to a trade dispute with Japan over the wartime labour issue. The country’s auto industry is the foundation of the nation’s manufacturing industry and is undergoing a crisis.

The number of employees in the South Korean auto industry declined by about 10,000 in 2019. The industry is said to be undergoing a crisis, as workplaces and jobs are disappearing at once, causing concerns that the trend could disrupt South Korea’s famed industrial ecosystem and even the collapse of the auto industry.



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IRSG For Research

Papers for the work shop:

IRSG for Research is a call for paper for rubber-related economic research. This award aims to promote high-quality research on emerging issue in the global rubber sector. More specifically, IRSG for Research seeks to achieve the following objectives:

- Promote high-quality economic and social research on rubber-related issues with emphasis on IRSG thematic focus
- Engage young economists and researchers in the assessment of socio-economic issues affecting the rubber sector globally
- Generate innovative approaches to address development-related issues in rubber-producing countries and the contribution of the rubber sector to the Sustainable Development Goals
- Stimulate debate in the area of “sustainable rubber value chain and sustainable development of the global rubber economy”

The research paper should cover a relevant topic related to the broader sustainability framework and sustainable development of the rubber sector. Some ideas for particular topics could include improving the contribution of the rubber economy to attaining the Sustainable Development Goals and/or the importance of rubber in social and economic development. While candidates have freedom to

choose their own topics, provided they are relevant for the rubber sector, preference will be given to those papers addressing research questions that fall under the IRSG thematic focus.

The thematic focus chosen by IRSG for this year is “How can rubber smallholders achieve sustainable development through rubber farming.”

Eligibility

The IRSG for Research is open to all economists and researchers in social sciences who are in the process of completing a PhD or who have completed their degree in the last five years and that have proven interest in the area of rubber economics.

The candidate should submit a paper in English which should not exceed 15,000 words.

Selection panel

The selection panel will comprise two university professors of economics, one editor of a specialised magazine and two senior officers of the main sponsor, Rubber Focus & Research organisation.

The funds for this project have been granted by R1 International, the world’s leading supplier of natural rubber headquartered in Singapore and headed by Sandana Dass.

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All submissions should be sent to IRSGforResearch@rubberstudy.com not later than February 20, 2020. Results will be announced on May 2, 2020. The winner of the award will be presented with SGD3,000 and an Award Certificate.

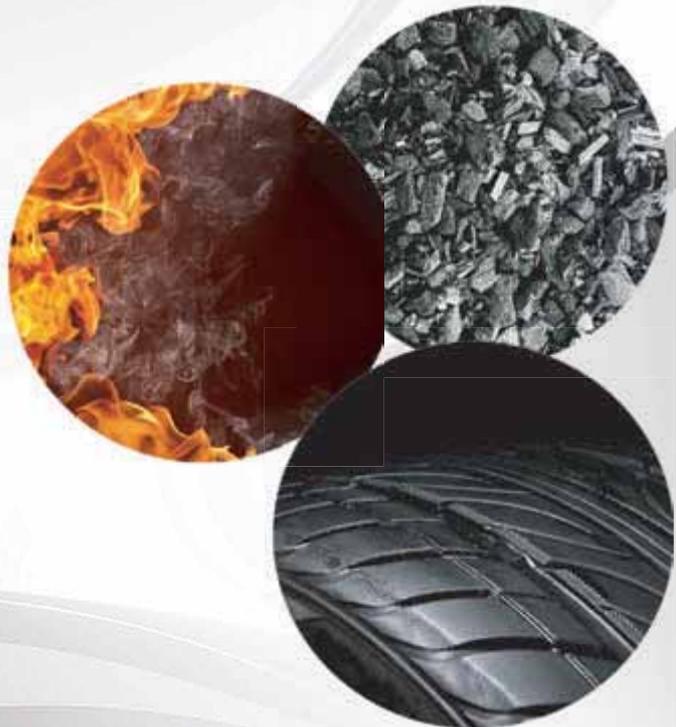


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SIAM
India's Report: Cumulative Production, Domestic Sales & Exports data for the period of April-October 2019 and Growth
Report I
 (Number of Vehicles)

Category	Production			Domestic Sales			Exports		
	April-October			April-October			April-October		
	2018-19	2019-20	% Change	2018-19	2019-20	% Change	2018-19	2019-20	% Change
I Passenger Vehicles (PVs)									
Passenger Cars	1,674,899	1,317,091	-21.36	1,354,897	988,806	-27.02	311,364	324,446	4.20
Utility Vehicles(UVs)	650,515	638,237	-1.89	546,806	547,572	0.14	87,925	89,632	1.94
Vans	121,986	84,215	-30.96	126,799	81,900	-35.41	2,244	1,671	-25.53
Total Passenger Vehicles (PVs)	2,447,400	2,039,543	-16.66	2,028,502	1,618,278	-20.22	401,533	415,749	3.54
II Commercial Vehicles (CVs)									
M&HCVs									
Passenger Carriers	24,166	22,132	-8.42	22,057	20,791	-5.74	4,748	5,203	9.58
Goods Carriers	242,557	127,770	-47.32	199,496	117,064	-41.32	24,305	8,471	-65.15
Total M&HCVs	266,723	149,902	-43.80	221,553	137,855	-37.78	29,053	13,674	-52.93
LCVs									
Passenger Carriers	31,629	27,234	-13.90	30,773	28,720	-6.67	2,292	1,628	-28.97
Goods Carriers	369,297	290,974	-21.21	322,060	275,678	-14.40	28,985	20,014	-30.95
Total LCVs	400,926	318,208	-20.63	352,833	304,398	-13.73	31,277	21,642	-30.81
Total Commercial Vehicles	667,649	468,110	-29.89	574,386	442,253	-23.00	60,330	35,316	-41.46
III Three Wheelers									
Passenger Carrier	683,173	615,764	-9.87	350,389	329,437	-5.98	338,730	297,401	-12.20
Goods Carrier	78,156	71,511	-8.50	73,373	68,244	-6.99	3,505	4,067	16.03
Total Three Wheelers	761,329	687,275	-9.73	423,762	397,681	-6.15	342,235	301,468	-11.91
IV Two wheelers									
Scooter/Scooterette	4,630,684	3,838,904	-17.10	4,396,446	3,697,553	-15.90	257,603	234,481	-8.98
Motorcycles/Step- Throughs	10,500,020	9,155,117	-12.81	8,698,044	7,363,858	-15.34	1,725,322	1,846,638	7.03
Mopeds	557,014	390,299	-29.93	527,505	392,586	-25.58	13,688	8,232	-39.86
Total Two wheelers	15,687,718	13,384,320	-14.68	13,621,995	11,453,997	-15.92	1,996,613	2,089,351	4.64
Quadricycle	3,262	4,339	33.02	163	903	453.99	3,156	3,834	21.48
Grand Total of All Categories	19,567,358	16,583,587	-15.25	16,648,808	13,913,112	-16.43	2,803,867	2,845,718	1.49

Society of Indian Automobile Manufacturers (11/11/2019)

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Forex reserves rise to \$449 billion

● Foreign exchange reserves continued the upward move, gaining by a modest \$347 million to touch a new high of \$448.6 billion in the week to November 22, according to the recent weekly data released by the RBI. Earlier, the reserves had increased by \$441 million to reach \$448.249 billion.

The gain in reserves was mainly on account of an increase in foreign currency assets, a major component of the overall reserves, which rose by \$254 million to \$416.725 billion in the reporting week

Core sector puts up worst show in 14 years, shrinks 5.2% in September

● India's core sector output contracted to 5.2% in September, posting its worst performance in 14 years and suggesting that the economy may have slumped further in the second quarter of the current financial year.

Economists said the sharp contraction showed the severity of the industrial slowdown and a recovery may take time.

The Index of Eight Core Industries, which measures output in coal, crude oil, natural gas, refinery products, fertilisers, steel, cement and electricity, grew 4.3% in September last year. The estimate for August was revised to 0.1% from a contraction of 0.5% earlier.

The eight industries have a 40% weightage in the broader IIP, which may now slump further from a 1.1% contraction in August, its worst performance in over seven years.

"We still have a long way for the economy to stabilise," said Upasna Bhardwaj, economist at Kotak Mahindra Bank, adding that Q2 growth could be marginally lower than in Q1.

IndiGo's record \$33 billion 300 planes order

● IndiGo placed an order for 300 Airbus aircraft – its largest so far – worth an estimated \$33 billion to replace old planes in its fleet and operate non-stop flights to long-haul

Flying High

Deal size based on listed prices: \$30-33 b

Cost expected to be lower

Order constitutes more number of medium and long-haul Airbus 321 (neo, XLR)

WHAT IT MEANS

Order will increase airline's ability to launch flights to long-haul destinations such as London and Tokyo

Sends signal to investors that the board and the mgmt are insulated from the wrangling promoters

destinations such as London and Tokyo.

The order, one of the biggest for Airbus from a single airline operator, is for a mix of A320neo, A321neo and A321XLR (Extra Long Range) aircraft, Airbus said in a statement.

Officials aware of the plan said a large number would be planes that will provide long-range flying abilities to IndiGo and help it expand overseas. Airbus 321XLR will increase IndiGo's ability to launch flights to London and Tokyo, they added on condition of anonymity.

IndiGo has previously inducted planes by selling them at a premium and taking the aircraft back on lease.

Livestock population in India rises 4.6% to nearly 536 million: Census

● The population of cows in the country has risen by 18% in the last seven years, while that of oxen dipped by 30% according to the latest census of livestock. The total number for livestock was pegged at around 536 million.

The provisional data of the 20th Livestock Census released by the Department of Animal Husbandry and Dairying showed that the livestock population increased by 4.6% from 512.06 million in 2012.

Besides, there was a spectacular 16.8% increase in the poultry population in the country to 851.81 million, mainly on account of a 46% rise in backyard poultry birds, whose numbers have gone up to 317 million.

The number of female cattle is 145.12 million, which is 18% over the 122.98 million in 2012. The number of male

cattle, on the other hand, dropped to 47.4 million as against 67.92 million in 2012. Significantly, the male to female cattle ratio in the 2019 survey dropped to 1:3 from 1:1.8 in the 2012 livestock survey.

Interestingly, there is a 6% decline in the total number of indigenous cattle over the previous census. On the contrary, the population of total exotic/crossbred cattle has increased by 26.9% in 2019 as compared to previous census.

How the male grooming market has grown to Rs 5,000 crore in urban India

● As youth icons like ace cricketer Virat Kohli and actor Ranveer Singh shape their styling and grooming choices, the Indian metrosexual male is geared to experiment with a wide range of products.

This is seen from consumer product companies having launched as many as 177 new male grooming brands or variants between April 2018 and March 2019.

According to market research and insights firm Nielsen, the size of the male grooming segment has now touched the Rs 5,000-crore-mark in urban India, clocking a growth of about 12.3% over the previous year. While shaving and face care products continue to account for over 50% of the male grooming segment, new categories such as body care and hair care are also fuelling growth. The Nielsen report estimates that the body care category, which includes deodorants, soaps and body washes, accounts for 41% of the overall male grooming segment.

Hair care products like styling gels, oils, dyes, shampoos and conditioners, contribute 6% to the segment, and is pegged at Rs 300 crore. "Though the emergence of male hair care products category may be a new trend, it is growing at 20.4%" the report added.

RATES OF INDIAN RUPEE			
Currency	05.12.2019	04.10.2019	16.08.2019
1 US \$	71.3046	70.9518	71.1747
1 Euro	79.0568	77.7838	78.8843
1 Pound	93.6738	87.2913	86.4103



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APPEAL

DR. D. BANERJEE CENTRE OF EXCELLENCE FOR RUBBER TECHNOLOGY EDUCATION, TRAINING, RESEARCH, TESTING AND SKILL DEVELOPMENT AT JSS SCIENCE & TECHNOLOGY UNIVERSITY, MYSORE

Indian Rubber Institute (IRI) is a non-profit organization involved into education of Rubber Industry Operatives and Professionals for several decades. The experience and knowledgeable faculty of Rubber Industry, Polymer & Rubber Institutes have come forward voluntarily to participate and impart knowledge to the professionals.

IRI also conducts regular courses and have instituted Diploma (DIRI) and Post Graduate Diploma (PGD-IRI) courses for upgrading knowledge of people associated with Rubber & Allied industry while working. The examinations are conducted at eight branches all over India. The Controller of Examination is Rubber Technology Centre, IIT Kharagpur. So far more than 3000 qualified rubber technologists were provided to Indian Tyre and Rubber Industries since its inception.

In order to substantially enhance this activity and to impart knowledge as well as to support rubber industry, small and medium scale in particular, IRI has undertaken setting up this "Centre of Excellence" which will house all types of facility for training, education, hands on experience besides undertaking development and testing for various industrial rubber products and tyres. This centre will be one of the approved training providers in India for Skill Development for the rubber sector under RSDC/NSDC, Govt. of India and an NABL accredited Rubber Product and Tyre Testing Centre.

This centre is being set up at the premises of JSS Science and Technology University, Mysore who were kind enough to provide IRI 10000 sq.ft area on long lease (62 years).

The construction of 32000 sq.ft building is under progress. It will have an auditorium with a seating capacity of 250, training halls (three Nos.), full-fledged Library cum Documentation centre, different laboratories for On the job training & testing like Rubber Processing Lab (Intermixer, 2 Roll Mill, Extruder, Baby Calender, Moulding, Auto clave etc.), Physical Testing Laboratory, Chemical testing Laboratory, Analytical & Characterization Laboratory, Rubber Product Failure Analysis Lab, Rheology Lab, Reverse Engineering facility, Tyre Testing Lab, Pilot Plant for new product development etc. The estimated cost of establishing the centre is Rs. 500 million (Rs. 100 million for Building, Furniture/fixtures, utilities etc. and Rs. 400 million for equipment & machinery).

The construction, commissioning and smooth running of this institute will be possible only with whole-hearted support from well-wishers from the global rubber fraternity. We are appealing individuals/organisations/society/ Universities/ Institutes/raw material suppliers/ equipment suppliers to whole heartedly support this noble cause by way of donation or adopting a Laboratory/Lecture Hall/Library cum Documentation Centre etc.

Your contributions in the form of cheque/DD in favour of "INDIAN RUBBER INSTITUTE", payable at Kolkata may please be sent to above address or may please transfer to account through NEFT/RTGS.

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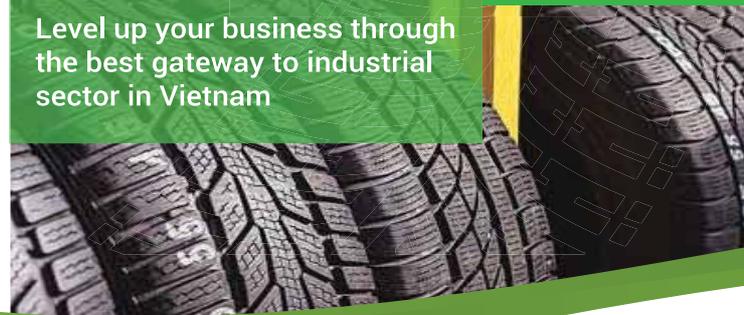
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China's 6% Q3 growth slowest in 30 years

● During the July to September 2019 quarter, China's economy expanded at 6% compared with the previous year — its slowest pace in about 30 years, according to the country's National Bureau of Statistics. The effects of China's prolonged trade war with the US, as well as slowing manufacturing and investment sentiment reflected in the data.

US added 128,000 jobs in October

● Despite the strike at General Motors, the US economy added more jobs than expected in October, with non-farm payrolls up by 128,000 jobs, according to data from the country's Bureau of Labor Statistics.

US Q3 growth rate slows to 1.9%

● During the third quarter of 2019, economic growth in the US fell slightly to the slowest pace of the year. GDP grew at annualised 1.9% rate during the July to September quarter, according to the US commerce department, compared to 2% in the previous quarter.

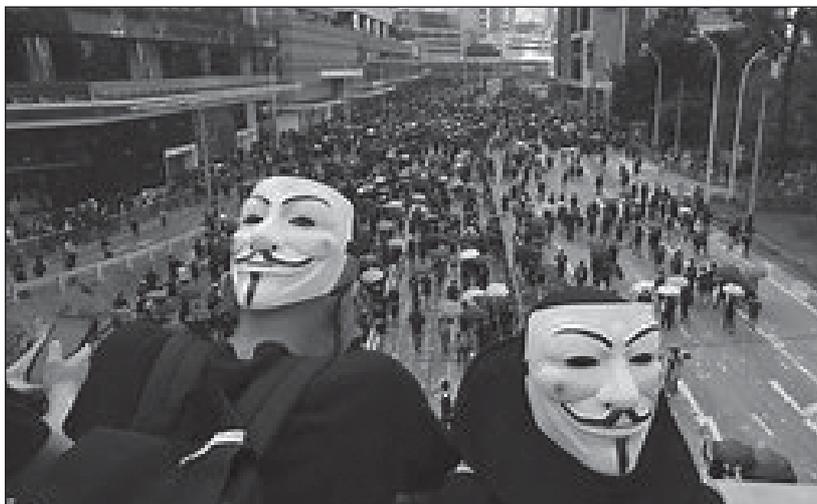
Hong Kong plunges into recession as protests, trade war take toll

● On November 1, Hong Kong confirmed that it had plunged into its first recession since the global financial crisis as months of seething pro-democracy protests and the US-China trade war exact a heavy toll on the financial hub.

The semi-autonomous Chinese city has been upended by nearly five months of huge, often violent, pro-democracy demonstrations with little end in sight as Beijing and city leaders adopt a hardline approach.

Clashes between protesters hurling bricks and petrol bombs at police wielding tear gas and rubber bullets have become a weekly occurrence, hammering the city's once-solid reputation for stability and safety.

The unrest has hit the city's tourist and entertainment industries hard, compounding economic woes that



Anti-government protesters wearing masks march during Halloween in Hong Kong

were already being caused by the global trade war.

Figures released by the government showed gross domestic product shrank 3.2% in the third quarter compared with the previous period, when it saw a 0.4% drop.

That means the city is experiencing a technical recession, with two back-to-back periods of contraction.

It is the first time the city has witnessed a recession since early 2009 at the height of the financial crisis.

Year-on-year GDP also shrank 2.9%, its sharpest drop in a decade. Hong Kong's economy was already facing strong headwinds at the start of 2019 as it was hit by the US-China trade war, battering a city that is hugely reliant on the world's two largest economies.

In the first quarter the city was growing at a lackluster 0.6%

Financial Secretary Paul Chan warned it was "very likely" the city would end the year in a full-blown recession.

UN report: India on track to meeting greenhouse gas emissions target

● Global emissions of greenhouse gases, which are responsible for global warming, are growing rather than declining as they should.

Even if all countries meet the unconditional commitments they made at the Paris conference in 2015,

GHG emissions will be way more than what they should be. India is among the few countries that are on track to meeting their Paris targets (called 'nationally determined contributions' or NDCs).

This is the central message of the United Nations Environment Programme's 'Emissions Gap Report, 2019'.

Total GHG emissions, including from land-use change, reached a record high of 55.3 GtCO₂e (Giga tonnes of Carbon dioxide equivalent) in 2018. Fossil CO₂ emissions from energy use and industry, which dominate total GHG emissions, grew 2% in 2018, reaching a record 37.5 GtCO₂ per year.

By 2030, emissions would need to be 25% and 55% lower than in 2018 to put the world on the least-cost pathway to limiting global warming to below 2°C and 1.5°C, respectively," the report says.

"The scale of transformative global climate commitments needed to prevent runaway climate change are clearly missing," says Aarti Khosla, Director at Climate Trends, a Delhi-based strategic communications body that specialises in building narratives around climate change. Countries need to triple their level of commitments they made at Paris if the world should stay safe, she observes.

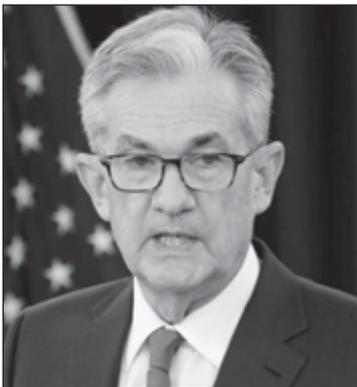
India had made three promises at the 21st Conference of Parties meeting in Paris, in December 2015. Firstly, to lower emission intensity of GDP (or how much emissions per one

unit of GDP) by 33-35% from 2005 levels; secondly, to create more forests and lastly, 40% of installed capacity for electricity generation based on non-fossil fuels.

UNEP's report says that India is not only on track but will over-achieve its target by about 15%. It calls upon India to revisit its target and make it more ambitious.

Fed's Powell says US economy's glass is 'more than half full'

●Federal Reserve Chairman Jerome Powell struck an upbeat tone in gauging the ability of policy makers to extend the record US economic



Jerome Powell, Chairman, Federal Reserve

expansion, while signaling interest rates would probably remain on hold.

On his outlook for borrowing costs, Powell repeated the message he's hammered since the Fed lowered rates for the third time this year on Oct 30, signaling the policy is on hold for now. "We see the current stance of monetary policy as likely to remain appropriate as long as incoming information about the economy remains broadly consistent with our outlook," he said, adding that it would support a strong labour market and "return inflation decisively to our symmetric 2% objective."

Powell followed up with the well-worn caveat that policy "is not on a preset course" and the Fed would adjust if there were a "material" change in its outlook.

Fed officials cut rates from July to October by three-quarters of a percentage point as global growth deteriorated, businesses sentiment was rocked by uncertainties over trade and

inflation remained stubbornly below target. Powell cast those cuts as designed to keep the US economy strong and provide insurance against a more serious downturn.

He said the cuts have already proved successful at preventing the year's woes from significantly eroding the overall outlook for growth in the US. The Survey of Professional Forecasters, he said, showed forecasts for growth are nearly unchanged from where they stood at the beginning of the year.

With \$78bn, India still highest overseas remittance receiver

●India continues to retain its position as the world's top recipient of remittances, with its diaspora sending back \$78.6 billion in 2018. Considering that India's diaspora is

\$ 68.91 in 2015 – an increase of nearly 29%. The increase in remittance between 2015 and 2018 is 14%. As compared with the remittance in 2010, the latest figure of \$78.61 billion shows a rise of nearly 47%. These statistics were disclosed in the World Migration Report 2020, which was released by International Organization for Migration (IOM), which is United Nation's migration unit.

High income countries are almost always the main source of remittances. For decades, the US has consistently been the top remittance – sending country, with a total outflow of \$ 68 billion, followed by UAE (\$44.4 billion) and Saudi Arabia (\$36.1 billion), the report states.

The raw data set that had been released by UN earlier, which is now contained in the migration report. At

TOP COUNTRIES RECEIVING REMITTANCES



Country	2015 (% of total)	2018 (% of total)	Increase over 3 years (in %)
India	68.9 (11.6%)	78.6 (11.4%)	14
China	63.9 (10.7%)	67.4 (9.8%)	5.4
Mexico	26.2 (6%)	35.7 (5.1%)	35.9
Total	595	689	15.8

Notes: All figures are in US \$ (billion); Ranking is based on 2018 statistics (In 2015, Philippines had ranked third with remittances of US \$ 29.8 billion)

the largest in the world, at 17.5 million (as of mid-2019), this ranking in terms of remittances is not surprising. India's remittances were 14% of the global remittance figure of \$689 billion. China was next in line, with remittances of \$ 67.41 billion (which is 5.4% of the global remittance figure).

Even in 2010 and 2015, for which data is available, India was the top recipient of remittances. Remittances during 2010 were \$53.48 billion, rising to

17.5 million, India's diaspora was the largest in the world during 2019, with majority of Indians in UAE (3.4 million), US (2.7 million) and Saudi Arabia (2.4 million). Mexico's diaspora of 11.8 million was the second largest, followed by China at 10.7 million.

US DOLLAR RATES

	05.12.2019	04.10.2019	16.08.2019
1 INR	0.0140243	0.0141136	0.0140425
1 Euro	0.901667	0.0128636	0.0126724
1 UK £	0.761040	0.0114256	0.0115679
1Yen	0.009180	0.663957	0.669715

NATURAL RUBBER (INDIA)

(Rs. /Quintal, Ex-Kottayam)

Grade	Dec 2019	Oct 2019	Aug 2019	July 2019
RSS 4	13050	12000	14600	15000
RSS 5	12700	11800	14300	14750
ISNR 20	11950	10400	11900	12500
Latex (60% drc)	9090	10780	10145	9825

(Source: Rubber Board)

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Product	Price (Rs. /Kg)
Accelerators	
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Pilcure MBTS	330.00
Pilcure F	360.00
Pilcure CBS	400.00
Pilcure MOR	440.00
Pilcure ZDC	210.00
Pilcure ZMBT	325.00
Pilcure ZDBC	280.00
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Pilcure TBzTD	500.00
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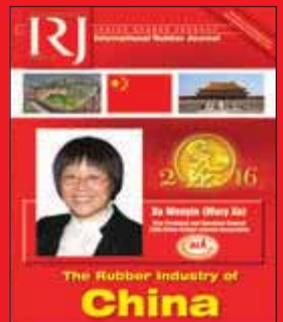
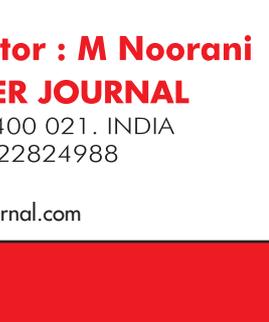
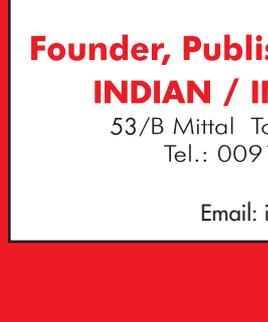
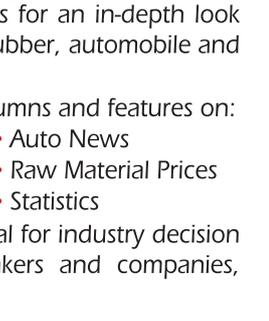
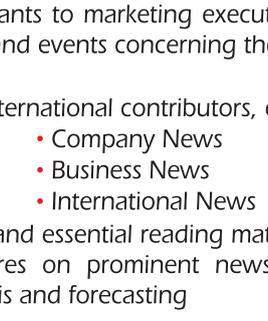
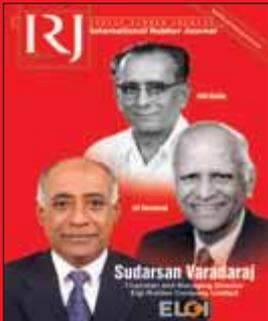
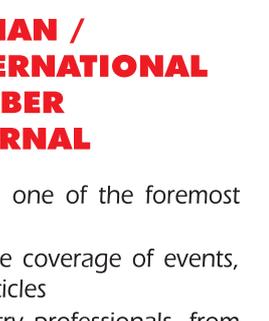
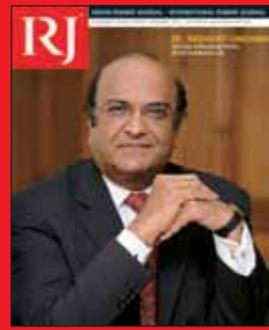
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Rubo Chem Industries Pvt. Ltd.

(Price of Rubber Chemicals as on 15-07-2019)

ALUMINIUM / CALCIUM SILICATE	12/ 15
BLOWING AGENT	100
BARYTES	22
BROWN/WHITE FACTISE	95
CBS/CZ	410
CHINA CLAY / WHITING POWDER	7/10
CI RESIN / PETROLEUM RESIN	135
CARBON BLACK HAF/GPF/FEF/ISAF/SRF	90
CRUMB RUBBER / TRC	20
DPTT	450
DPG /DBP/DOP/DEG	20/150
EBONITE DUST BLACK/BROWN	45
FRENCH CHALK / TALCUM POWDER	12
INSOLUBLE SULPHUR / SULPHUR	150/25
IPPD /6PPD	450/350
LIGHT MAGNESIUM CARBONATE / OXIDE	65/150
MBT / MBTS	260
PRECIPITATED /ACTIVATED CALCIUM CARBONATE	15
PARRAFIN WAX / CHLORINATED(CPW)	100/125
PROCESS OIL	85
PETROLEUM JELLY YELLOW /WHITE	100/125
PIGMENTS	450/500
PRECIPTATED SILICA	55
RECLAIM RUBBER / RAW RUBBER	36/130
RED /YELLOW OXIDE	80
RE/PVI/CTP	350/450
SILICONE EMULSION /STYRENATED PHENOL	90/190
STEARIC ACID	60
TMTD/TMTM	175/330
TITANIM DIOXIDE ANATASE /RUTILE	185/200
TMO/TDO	260
TBBS/ZC/4020	400approx.
WOOD ROSIN	130
ZDC / ZDBC/ ZMBT	200/250
ZINC HYDROXIDE / STEARATE / OXIDE	35/90/180

**Please note it is difficult to stick to prices especially minerals and petroleum products as they fluctuate widely on weekly basis.



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